Varazdin Development and Entrepreneurship Agency and **University North**
in cooperation with
ECEO – Universidade Lusofona
Faculty of Management University of Warsaw
Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat
ENCGT - Ecole Nationale de Commerce et de Gestion de Tanger/ Abdelmalek Essaadi University
Polytechnic of Medimurje in Cakovec

Economic and Social Development

86th International Scientific Conference on Economic and Social Development

Book of Proceedings

Editors:
Ana Lorga da Silva, Zvonko Merkas, David Resende

ISSN 1849-7535

Lisbon, 23-24 September, 2022

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Title ■ Economic and Social Development (Book of Proceedings), 86th International Scientific Conference on Economic and Social Development

Editors ■ Ana Lorga da Silva, Zvonko Merkas, David Resende

Publishing/ Digital Editors ■ Spomenko Kesina, Domagoj Cingula

Publisher ■ **Design** ■ **Print** ■ Varazdin Development and Entrepreneurship Agency, Varazdin, Croatia / University North, Koprivnica, Croatia / ECEO – Universidade Lusofona, Lisbon, Portugal / Faculty of Management University of Warsaw, Warsaw, Poland / Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat, Morocco / ENCGT - Ecole Nationale de Commerce et de Gestion de Tanger/ Abdelmalek Essaadi University / Polytechnic of Medimurje in Cakovec, Cakovec, Croatia

Printing ■ Online Edition

ISSN 1849-7535
The Book is open access and double-blind peer reviewed.
Our past Books are indexed and abstracted by ProQuest, EconBIZ, CPCI (Web of Science) and EconLit databases and available for download in a PDF format from the Economic and Social Development Conference website: http://www.esd-conference.com

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RELATIONSHIP BETWEEN PROFITABILITY AND OPERATING CYCLE OF SMALL AND MEDIUM ENTERPRISES: EVIDENCE FROM CENTRAL AND EASTERN EUROPE

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ABSTRACT
The small and medium enterprises (SMEs) play a crucial role in modern economies. At the same time, there are a lot of barriers limiting the development of this sector. Despite the above, studies of financial performance of SMEs are conducted less frequently than those concerning large enterprises. Paper analyzes the relationship between the SMEs' profitability and the operating cycle and its components (the inventory turnover cycle, the accounts receivable and payable periods and the cash conversion cycle). The empirical study is based on financial data of 15,694 SMEs from Central and Eastern Europe operating in the years 2014-2017. The results show negative dependencies between the profitability and all components of the operating cycle. This means that the longer the operating cycle and its components, the lower the profitability of SMEs. These relationships are weakened by the growing indebtedness of enterprises. This observation is similar as among large enterprises. However, results of our study indicates that the larger the enterprise, the stronger dependencies between its profitability and all components of the operating cycle. Contrary to large enterprises, the strength of the relationship between profitability of SMEs and the components of the operating cycle increases with decreasing GDP growth. This means that SMEs for improving their profitability should shorten the operating cycle and its components. Especially in the event of a downturn in the economy.
Keywords*: Central and Eastern Europe, , operating cycle, profitability, small and medium enterprise, working capital management*

1. INTRODUCTION

The profit maximization is a short-term financial goal of an enterprise the most often mentioned in literature. Therefore, skilful shaping of profitability, understood as maintaining the company's ability to generate profit, is an important task of managers. It belongs to the decision-making area related to the working capital management. These decisions relate to the levels and speed of turnover of current assets and current liabilities (Brealey et al., 2016). They constitute: (i) the volume and effectiveness of sales, (ii) the operating risk resulting from the quantity, quality of inventory held and its adjustment to market conditions, and (iii) the financial risk related to servicing current receivables and liabilities (Raheman & Nasr, 2007). In terms of time, the working capital management translates into the structure of the company's operating cycle. This cycle is determined by: (i) the inventory turnover cycle plus (ii) the receivables collection period. Inclusion of the debt repayment period within the operating cycle results in the determination of the cash conversion cycle, during which the company operates with a cash deficit (Brealey et al., 2016). The mutual relationships of these periods and their length have a significant impact on the increase in the company's profitability (Binti Mohamad & Mohd Saad, 2010; Hyun-Han Shin & Soenen, 1998; Raheman & Nasr, 2007).

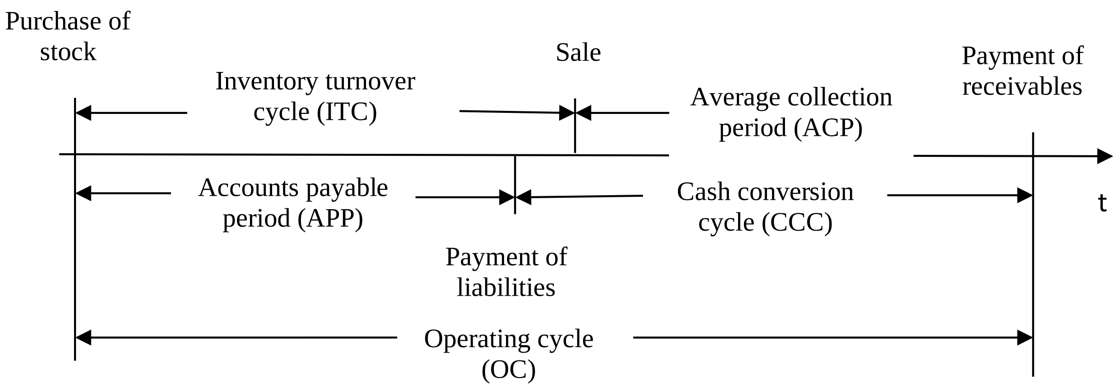
The small and medium-sized enterprises (SMEs) are the most numerous and also the most significant group of enterprises in modern market-oriented economies. In 2015 SMEs in the European Union constituted 99.8% of all 23.5 million enterprises and generated 55.8% of the turnover and employing 66.3% of staff (*Eurostat*, 2021). In comparison to large companies, there is prevalent in literature that development of SMEs are limited by a lot of barriers. One of them (difficult access to capital) results in maintaining relatively low level of current assets in SME in comparison with high level of current liabilities (Fazzari & Petersen, 1993). This implies that building working capital and shaping operating cycles in SMEs runs under conditions of high financial distress. At the same time, as it is shown by the literature reviews conducted by Singh & Kumar (2014) and Prasad et al. (2019), the studies on relationships between SMEs' profitability and working capital management indicators are conducted less frequently than those concerning large enterprises. The main aim of our study is to identify the impact of the company's operating cycle and its components on the profitability of SMEs. The study was conducted applying panel model analysis based on the financial data of 15,694 companies from Central and Eastern Europe (Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovakia) operating in the years 2014-2017. The study has contributed to the literature by confirming the negative impact of operating cycle and its components on SMEs profitability. These realtionships have been stronger for larger enterprises and they have deacresed with the increase in indebtedness of SMEs. At the same time the impact of operating cycle on SMEs' profitability has been strengthened by the weakening dynamics of GDP growth. The paper consists of four parts. First part includes theoretical background related to the operating cycle and its impact on profitability of enterprise. In this section, the research hypotheses are formulated on the basis of the review of previous empirical studies. Second part presents the research metod applied and the research material used in the study. The results of the empirical study are presented in third part of the paper. The paper closes with conclusions.

2. LITERATURE REVIEW

2.1. Theoretical background

Figure 1 presents the structure of an operating cycle in the enterprise activity.

Figure 1. Structure of enterprise's operating cycle



Source: Own elaboration based on (Brealey et al., 2016).

The operating cycle of an enterprise (OC) is determined by the moments of purchase of inventories and the collection of receivables. The moment of sale divides this cycle into two periods: (i) the inventory turnover cycle (ITC), which is the average duration of inventory storage in the warehouse, and (ii) the average collection period (ACP), i.e. the average waiting time for the collection of receivables. The moment of purchase invoice payment is determined by the average payable period (APP), i.e. the average time of trade liabilities payment.

The cash conversion cycle (CCC) is the period being the difference between OC (ITC+ACP) and APP. During CCC company operates with a cash deficit. This deficit may be financed with employed capital or short-term bank loans (Brealey et al., 2016). Three fundamental views on the relationship between the working capital indicators and the profitability of an enterprise are prevalent in literature. According to the first concept, longer CCC allows the company, on the one hand, to increase sales, and, on the other hand, to negotiate higher discounts for cash payments during the purchase. As a consequence, the company increases the realized margin, improving its profitability (positive relationships) (Gill et al., 2010; Opler et al., 1999). The second concept is based on the thesis that companies financing long CCC usually incur higher financial costs, as well as the costs of maintaining relatively high levels of current assets. This may reduce their profitability (negative relationship) (Hyun-Han Shin & Soenen, 1998; Kieschnick et al., 2013).

According to the third concept, the relationship between working capital and the profitability of the enterprise is non-linear and based on a Gentry curve similar in shape to the inverted U. In the case of a short CCC, enterprises are inclined to invest most of the retained earning in its extension (positive relationship between profitability and CCC). After exceeding a certain limit of CCC, further investments in its extension cause a decrease in profitability (Jaworski & Czerwonka, 2021; Li et al., 2014). As it is shown in Figure 1, the length of the CCC determines the relationship between APP and sum of ITC and ACP. This means that, on the one hand, by investing in CCC, the company affects all components of the operating cycle. On the other hand, by extending or shortening individual periods, it generates or reduces the demand for these investment.

2.2. Empirical studies on relationship between profitability and components of operating cycle in SME sector

The relationship between profitability and CCC is very often studied among large copmanies. As meta-analysis conducted by Singh et al. (2017) showed, negative dependence is the most frequently identified. For a first time, this direcition was identified by Shin and Soenen (1998). On the basis of data from 58 985 enterprises in the period 1975-1994, they detected that increasing the profitability of an enterprise is most often associated with shortening CCC. A similar relationship was identified by Deloof (2003) analysing the data of 1009 Belgian companies in the years 1992-1996. This author also attempted to explain this dependence theoretically. Moreover, he found that there is also a strong negative correlation between profitability and the length of the rest of periods constituting the operating cycle. Strong negative relationships between profitability and the operating cycle and its components were also confirmed by Raheman and Nasr (2007). These authors examined the relationship between CCC and the profitability of 94 enterprises in Pakistan. The results of studies conducted by Mohamad and Saad (2010), Dong and Su (2010), as well as by Ahmadiand et al. (2012) confirmed the above relationships for Malaysian, Vietnamese and Israeli companies, respectively. The positive relationship between profitability and CCC is relatively less frequently identified (Singh et al., 2017). It was detected in the research conducted, among others, by Gill et al. (2010), Charitou et al. (2012), Mathuva (2010) and Nobanee et al. (2011). Moreover, Gill et al. (2010) and Mathuva (2010) identified the same direction of the relationship between profitability and ITC. In turn, the positive effect of APP on the company's profitability was detected by Den & Oruc (2009) and Wöhrmann et al. (2012). This means that under certain conditions, enterprises may increase their ability to generate profits by delaying payment of liabilities and accumulating more inventories. Empirical studies on the relationship between profitability and components of operating cycle were also conducted among SMEs. Table 1 presents their results.

Author	***Research sample and period***	***Profitability versus***			
		CCC	***ITC***	***ACP***	***APP***
Padachi (2006)	58 Mauritian SMEs, 1998-2003	+	+	-	-
García-Teruel & Martínez-Solano (2007)	4,076 Spanish SMEs, 2001-2005	-	n/a	-	-
Ugurlu et al. (2014)	3,053 Czech SMEs, 2009-2012	+	-	n/a	n/a
Yazdanfar & Öhman (2014)	13,797 Swedish SMEs, 2008-2011	-	n/a	n/a	n/a
Pais & Gama (2015)	6,063 Portuguese SMEs, 2002-2009	-	-	-	-
Lyngstadaas & Berg (2016)	21,075 Norwegian SMEs, 2010-2013	-	-	-	-
Gorondutse et al. (2017)	66 Malaysian SMEs, 2006-2011	-	-	-	+

Table 1: Empirical studies on relationship between profitability and operating cycle in SMEs (Source: own elaboration)

The previous empirical research conducted among SMEs shows that small enterprises, like large enterprises, improve their profitability by shortening the operating cycle and its components and reducing the costs associated with investing capital in current assets. However, there are indications that under certain conditions this rule may change. Majority of studies on relationship between profitability and CCC assumes that there are three fundamental factors which can moderate these dependencies (Baños-Caballero et al., 2010; Deloof, 2003; García-Teruel & Martínez-Solano, 2007; Hyun-Han Shin & Soenen, 1998; Mathuva, 2010; Nobanee et al., 2011; Pais & Gama, 2015): (i) the size of the enterprise, (ii) its indebtedness and (iii) GDP growth. Larger companies seem to be more profitable than smaller firms, which may be due to scale economy. The influence of indebtedness on profitability is substantiated by the pecking order theory (Myers, 1984). Debt is applied in financing of enterprise after retained earnings. Therefore, lower indebtedness means higher profitability. The macroeconomic cycle may also have an impact on the level of investment in working capital and profitability. More dynamic GDP growth creates more opportunities to sales development and increase in profitability.

Therefore, the following hypotheses can be formulated:

> *H1: The relationships between profitability and SMEs' operating cycle and its components are negative*
>
> *H2: There are moderators which exert influence on strength of the relationships between profitability and operating cycle and its components in SME sector*

3. METHODOLOGY

3.1. Research methods

The variables used in the empirical study are defined in the table 2.

Variable	***Abbr.***	***Definiion***
Profitability (return on assets)	ROA	$\frac{EBIT}{total\ assets}$
Inventory turnover cycle	ITC	$\frac{average\ value\ of\ inventory}{total\ sale} \cdot 365$
Average collection period	ACP	$\frac{average\ value\ of\ accounts\ receivable}{total\ sale} \cdot 365$
Accounts payable period	APP	$\frac{average\ value\ of\ accounts\ payable}{total\ sale} \cdot 365$
Cash conversion cycle	CCC	$ITC + ACP - APP$
Operating cycle	OC	$ITC + ACP$
Size of enterprise	SIZE	$\ln(total\ sale)$
Indebtedness	LEV	$\frac{total\ debt}{total\ assets}$
GDP growth	GDP	Annual % of GDP

Table 2: Variables used in empirical study
(Source: own elaboration)

The return on assets (ROA) was adopted as the profitability (dependent variable). ITC, ACP and APP were measured in days on the basis of financial statement data. CCC and OC were calculated in accordance with the structure presented on figure 1. They are independent variables. SIZE, LEV and GDP were applied as control variables. First variable is related to scale of sale. The second presents total indebtedness. The last is based on GDP growth in percentage.

In order to find the significance and direction of the influence of independent variables on the dependent variable, linear static panel models were applied:

$$ROA_{it} = \beta_0 + \beta_1 ITC_{it}|\beta_1 ACP_{it}|\beta_1 APP_{it}|\beta_1 CCC_{it}|\beta_1 OC_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 GDP_{it} + \varepsilon_{it}|\mu_{it}|(\varepsilon_{it} + \mu_{it})$$

The Ordinary Least Squares Method (ε_{it}) is used for homogeneous samples. The Breusch-Pagan test was applied in finding individual effects. In order to identify fixed (μ_{it}) or random ($\varepsilon_{it} + \mu_{it}$) characteristics of effects the Hausman test was applied (Greene, 2003).

3.2. Data

EMIS database[1] was the source of financial data of enterprises. The research sample includes enterprises that meet the definition of SME in the EU Commission Recommendation 2003/361/EC. Due to the lack of reliable financial data, microenterprises were excluded. Finally, the sample consists of 15,694 SMEs with the following breakdown: Bulgaria (1829), Czech Republic (3138), Hungary (3395), Poland (1730), Romania (3681), Slovakia (1921). Period adopted in the study covers years of 2014-2017. In order to avoid the influence of outlier observations, we performed 98% winsorization by restricting the study sample by 1% in each tail, yielding a total of 49,932 observations. The values of GDP growth were taken from the World Bank database. Descriptive statistics of data applied in th study are presented in Table 3. For the PROF variable and the variables constituing the operating cycle and the operating cycle itself, due to very high extreme values, the mean values are significantly higher than the median values. For the variables SIZE, LEV, GDP the differences are not noticeable. The values of ITC, ACP, APP, OC, and CCC are expressed in days, the values of GDP growth in percent, PROF and LEV as a decimal fraction. SIZE is a natural logarithm, i.e. the value above zero means that the revenue of each company is greater than one million euro.

Variable	***Mean***	***Median***	***Std. error***	***Min.***	***Max.***
PROF	0.1024	0.0773	0.1012	- 0.1357	0.5649
ITC	46.3470	32.0730	50.5200	0.0000	309.8000
ACP	78.2130	64.0080	58.7850	3.9612	392.5200
APP	52.2900	40.8070	51.6060	0.0000	327.8200
CCC	73.2550	59.3670	76.3990	-112.9800	435.0300
OC	124.3500	107.2500	76.0930	3.9818	657.8600
SIZE	1.8586	1.8001	0.7353	0.1484	3.7148
LEV	0.5160	0.5261	0.2409	0.0402	0.9749
GDP	3.9041	3.8715	1.1658	1.8375	6.9914

Table 3: Descriptive statistics of the research sample
(Source: own elaboration)

Test of multicollinearity between the explanatory variables was based on Pearson correlation coefficients. The results of the calculations are contained in Table 4.

ITC	ACP	APP	CCC	OC	SIZE	LEV	GDP	
1.00	- 0.03	0.16	0.49	**0.64**	- 0.11	- 0.01	0.01	ITC
	1.00	0.26	**0.52**	**0.75**	- 0.16	0.02	0.01	ACP
		1.0	- 0.27	0.31	0.09	0.30	- 0.12	APP
			1.00	**0.76**	- 0.26	- 0.20	0.09	CCC
				1.00	- 0.20	0.01	0.02	OC
					1.00	0.13	0.01	SIZE
						1.00	0.04	LEV
							1.00	GDP

Table 4: Correlation matrix
(Source: own elaboration)

[1] EMIS database is provided by ISI Emerging Markets Group Company. It includes data from firms and markets of 168 emerging economies all over the world. More details: https://www.emis.com

Pearson coeficients indicate relatively high correlation between following pairs of variables: (OC, ITC), (OC, ACP), (OC, CCC) and (CCC, ACP). This means that between these variables the multicollinearity effect may exist and for this reason they cannot be applied in the same model.

4. RESEARCH OUTCOMES

Table 5 shows the results of estimating the parameters of panel models.

Model	**1**	**2**	**3**	**4**	**5**	**6**
Individual effects	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
const	0.0838*** (0.0048)	0.0843*** (0.0048)	0.0655*** (0.0050)	0.0855*** (0.0054)	0.1031*** (0.0051)	0.1575*** (0.0030)
ITC	- 0.0003*** (0.0001)					- 0.0003*** (0.0001)
ACP		- 0.0002*** (0.0001)				- 0.0001*** (0.0001)
APP			- 0.0002*** (0.0001)			- 0.0002*** (0.0001)
CCC				- 0.0001*** (0.0001)		
OC					- 0.0002*** (0.0001)	
SIZE	0.0669*** (0.0021)	0.0675*** (0.0021)	0.0687*** (0.0050)	0.0654*** (0.0022)	0.0619*** (0.0021)	0.0206*** (0.0010)
LEV	- 0.1552*** (0.0055)	- 0.1551*** (0.0056)	- 0.1422*** (0.0063)	- 0.1683*** (0.0061)	- 0.1481*** (0.0055)	- 0.1035*** (0.0030)
GDP	- 0.0029*** (0.0003)	- 0.0033*** (0.0003)	- 0.0031*** (0.0003)	- 0.0029*** (0.0003)	- 0.2905*** (0.0002)	- 0.0002*** (0.0003)
Obs.	49 932	49 532	46 911	46 343	48 963	45 612
Joint test on named regressors	599 p < 0.0001	555 p < 0.0001	492 p < 0.0001	449 p < 0.0001	600 p < 0.0001	3 571 p < 0.0001
Breusch-Pagan test	LM = 21277 p < 0.0001	LM = 21150 p < 0.0001	LM = 18206 p < 0.0001	LM = 18229 p < 0.0001	LM = 20616 p < 0.0001	LM = 17045 p < 0.0001
Hausman test	H = 1 007 p < 0.0001	H = 1 086 p < 0.0001	H = 847 p < 0.0001	H = 1 887 p < 0.0001	H = 933 p < 0.0001	H = 783 p < 0.0001

* dependence is significant at the level of 0.1; ** dependence is significant at the level of 0.05; *** dependence is significant at the level of 0.01; (standard errors in parentheses)

Table 5: Estiomations of model parameters
(Source: own elaboration)

As indicated by the Breusch-Pagan and Hausman tests, a fixed-effects model was selected for all six analyses. The estimations of the models from (1) to (5) show that there is a statistically significant negative relationship between the profitability and the lenght of all analysed periods. Model (6) containing all explanatory variables (without these with high correlation) shows, as a robustness check, the lack of changes in significance and directions of dependencies for all factors applied. The results of this study confirm the observations of Pais & Gama (2015) and Lyngstadaas & Berg (2016) and do not contradict research results of García-Teruel & Martínez-Solano (2007) and Yazdanfar & Öhman (2014).

The positive influence of SIZE and negative impact of LEV on profitability are consistent with the previous studies conducted among SMEs and large enterprises as well (Baños-Caballero et al., 2010; Deloof, 2003; García-Teruel & Martínez-Solano, 2007; Hyun-Han Shin & Soenen, 1998; Mathuva, 2010; Nobanee et al., 2011; Pais & Gama, 2015). The negative relationships found for GDP growth shows that SMEs in CEE react differently to development phase in a business cycle than large enterprises and SMEs from more developed economies than CEE.

5. CONCLUSION

The results of our study support the H1 hypothesis. The relationships between profitability and SMEs' operating cycle and its all components are negative. This means that if SME wants to increase profitability it should confine investment in working capital and shorten all operating cycle periods. It should try to pay faster to its suppliers and collect its receivables in shorter time, subsequently. It is equally important to shorten inventory turnover. In the result, limited costs of inventory holding and servicing debt allow the enterprise to shorten cash conversion cycle and increase profitability. This is consistent with the concept developed by Hyun-Han Shin & Soenen (1998) and Kieshnick et al. (2013). Our study also supports the H2 hypothesis. Size of the enterprise, its indebtedness and the GDP growth moderate relationship between profitability of SMEs and their operating cycle. This relationship is weakened by the growing indebtedness of enterprises. The opposite direction was found for the size of enterprise. The larger company, the stronger dependencies between its profitability and all components of operating cycle. Contrary to large enterprises, the strength of the relationship between CEE SMEs' profitability and the components of the operating cycle increases with decreasing GDP. This means that working capital management aimed in shaping of operating cycle should be especially controlled in the the event of a downturn in the economy.

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CONSTITUTIONAL PROTECTION OF THE FAMILY WITH SPECIAL EMPHASIS ON DOMESTIC VIOLENCE - MISDEMEANOR OR CRIMINAL OFFENSE IN THE REPUBLIC OF SERBIA

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ABSTRACT
Domestic violence is not a new phenomenon. Everything that happened within one family, even if it was violence against the closest members of the family, was considered to be a private matter. Development of awareness of the devastating effects and the need to prevent domestic violence began only in the second half of the twentieth century, when studying domestic violence became more extensive and complex, both from a theoretical and normative aspect. So, the Republic of Serbia also had tried to resolve the issue of domestic violence with certain legal acts. In our legislation, the highest legal act - the Constitution of the Republic of Serbia, protects the family and its members. In addition to the Constitution, the normative framework for preventing and combating domestic violence consists of several laws and other regulations. One of the basic laws is the Family Law that regulates the whole matter of family relations, providing primary legal protection to the family. In our country, domestic violence is sanctioned through the criminal justice system, that is, through the Criminal Code of the Republic of Serbia and the Law on Prevention of Domestic Violence. Domestic violence is also regulated through the misdemeanor legal system through misdemeanors with elements of violence in the area of the Law on Public Order and Peace. Hence, the subject of this workpaper is the analysis of legislation concerning domestic violence.
Keywords: *family, protection, violence, legislation, Republic of Serbia*

1. INTRODUCTION

Until recently, the term domestic violence did not have a connotation so negative as it has today. Nowadays, domestic violence presents one of the greatest challenges in area of human rights protection**.** Domestic violence is no longer considered a "private problem" and the public is much less tolerant of such behavior. While this topic is a global problem, it is not possible to determine the whole scale of it, since domestic violence remains mainly hidden. The family is one of the oldest social groups and it has been present since the emergence of society up to the present day in all social systems (Počuča, Šarkić, 2012: 59). This is the basic community of living and the natural environment within not only physical reproduction is provided, but it is also realized through, extremely important, social functions for man (Bataveljić, Logarušić, Šipovac, 2019: 178).

Cvejić Jančić (2009: 49) state that the family presents a community of a narrower or wider circle of persons interconnected by multiple ties, and above all the community of life and kinship, between which there are certain rights and obligations provided by law, custom, morality or religion. It is also category that varies through historical development. The family has always been seen as a place of support and a very important resort for each person, in particular in times of important social changes. The comprehension of the family as a safe haven has been gravely undermined by the frequency of domestic violence. The consequences of domestic violence on the victims' physical, mental and social integrity are negative and long-term. For that particular reason, the protection of society, and above all the family, from this form of family pathology is an imperative of every legally and socially regulated community. Therefore, we can say that it is to be expected that the problem of domestic violence is approached multidisciplinary in order to answer questions about the prevalence, causes, forms, victims and perpetrators. Besides, it is important to stress that violent resolution of family conflicts belongs to the domain of human rights violations, that contributes to the effective resolution of domestic violence, and that is why during the recent years almost all countries in the world, including Serbia, work intensively on the adoption and implementation of laws intended to stop domestic violence.

2. DOMESTIC VIOLENCE

Nowadays, domestic violence makes one of the biggest challenges in terms of human rights protection. It is not limited by geographical, ethical, status and other factors, it is a global problem whose true dimensions are impossible to determine since it remains mainly hidden. Domestic violence is a behavior by which one family member endangers the physical and mental integrity or tranquility of another family member. It does not present the phenomenon of the modern age, but there is a new interest of the state to recognize it, to provide protection to victims of domestic violence and to fight against it (Krstinić, Vasiljković, 2019: 67). Violent behavior manifests as physical violence, sexual violence, psychological violence, and negligence or disregard (World Health Organization, 2002). There are no precise statistics that tell us about the extent of domestic violence. The reason for that is the fact that victims rarely report domestic violence to state prosecution authorities, because of patriarchal attitude that a woman is guilty of the violence she suffers, that she should be "loyal" to the family and the so on. If men appear as victims of domestic violence, they almost never report it, as they want to keep the myth of their "main" role in the family. Among victims of domestic violence there is a fear that they will not receive adequate protection and that reporting violence will further infuriate the perpetrator and make violence even worse. Their fear is very often justified, especially if the reaction of state institutions is not efficient and effective (Petrušić, Žunić, Vidić, 2018: 10). The harsh consequences of domestic violence affect the victim, who hides behind a wall of silence, fear and shame for a long time and "remains isolated". Likewise, children are the ones who suffer the consequences of domestic violence because it directly violates their right to a safe upbringing and education. Even when we do not have reliable data on this, it is not difficult to assume that there is a danger to the child's physical, emotional and social development due to domestic violence. In the same time, there are great chances that the child will sooner or later continue that cycle of violence. In the last twenty years, the focus has been on the perpetrator of violence, which is a consequence of the efforts to act on the causes of his behavior and in that way to prevent the recurrence of violence in the long run. It is understood that such intentions require more advanced legal solutions whose goal is, in addition to repressive, to act preventively on the perpetrator (Radić, Radina, 2014: 727). In the Republic of Serbia, a normative-legal framework has been developed that regulates the matter of domestic violence, and within this workpaper are going to present the framework of legal regulations which protect domestic violence victims.

3. LEGAL FRAMEWORK FOR DOMESTIC VIOLENCE VICTIMS PROTECTION

In the Republic of Serbia legislation - the Constitution of the Republic of Serbia, as the highest legal act, protects the family and its members. Beside the Constitution, the normative framework for preventing and combating domestic violence in Serbia consists of several laws and other regulations. One of the bases is the Family Law, which regulates the complete matter of family relations, providing primary legal protection to the family. The Criminal Code of the Republic of Serbia is the most relevant for the protection of victims of domestic violence since it determines criminal sanctions for domestic violence, which means that this law contains a special incrimination of the criminal offense of domestic violence. Also, the great importance has the Law on Prevention of Domestic Violence, from 2016, and which came into force on June 1, 2017. This Law is in line with the principles of the Council of Europe and the so-called Istanbul Convention, which is a legally binding instrument related to the issue of violence against women. And the Law on Public Order and Peace envisages a number of offenses in which family members can be found on the victim's side.

3.1. Constitution of Republic of Serbia

The family enjoys institutional guarantees through special protection provided to vulnerable categories, such as mothers, single parents and children. They oblige the state to undertake affirmative measures in order to provide adequate help and support and thus strengthen the institution of the family for all categories of persons. The principle of social care for the family, as the primary social group and an important element of the social structure, is proclaimed by the Constitution of the Republic of Serbia, according to which the family enjoys various types of legal, social, economic and other social protection and support social policy. The Constitution of the Republic of Serbia, as the highest legal act, protects the family and its members by prescribing the following: "The family, mother, single parent and child in the Republic of Serbia enjoy special protection, in accordance with the law." Special protection is provided to children who are not cared for by their parents and to children who are mentally or physically handicapped" (Article 66). The manner of exercising this protection is regulated by laws and regulations adopted on the basis of law. Fulfilling international standards for the protection of children from all forms of violence, the Republic of Serbia confirmed the rights of the child ratified by the Convention on the Rights of the Child, emphasizing that children are protected from psychological, physical, economic and any other exploitation or abuse (Article 64). We can say that in this way the importance and place of the family in the Serbian socio-political system is stressed out. The protection of the family that presents a basic human right is regulated by other provisions of the Constitution of the Republic of Serbia, which are contained in the chapter "Human Rights and Freedoms". The Constitution of the Republic of Serbia stipulates that the state guarantees equality between women and men and develops a policy of equal opportunities (Article 15), prohibits direct and indirect discrimination on any grounds, especially on the basis of sex (Article 21, paragraph 3), guarantees the right to life (Article 24, paragraph 1), guarantees the inviolability of physical and mental integrity (Article 25), prohibits slavery and a position similar to slavery, as well as any form of trafficking in human beings (Article 26). Also, the Constitution guarantees the right to equal legal protection, legal aid, the right to rehabilitation and compensation for material or non-material damage caused by illegal or improper work of state or other bodies, legal protection of human and minority rights. Social protection of the family is also realized by the existence of rights from social insurance, such as: rights from health insurance, the right to a family pension, the right to child allowance, the right to inheritance, etc. This type of protection is reflected in the establishment and functioning of a number of institutions for the upbringing and care of children, other forms of organized assistance to the family, as well as in the creation of the most favorable conditions for running a family household.

And one of the basic forms of social protection of the interests of minors, and especially the interests of children, is the supervision of the guardianship authority over the exercise of parental rights. Therefore, for the protection of the family, the provisions of the so-called social legislation, which deals with issues of material, health and other assistance to the family and its members, and especially to the mother and child. When it comes to the normative framework concerning the prevention and suppression of domestic violence, in addition to the Constitution, it makes several laws, which will be discussed more in this work paper.

3.2 Criminal code

In the Republic of Serbia, domestic violence was first incriminated as a special criminal offense of "domestic violence" in 2002, when the Law on Amendments to the Criminal Code of the Republic of Serbia was adopted. Article 118a of this Law provides for the criminal offense of Domestic Violence. This article was included in the chapter "Crimes against marriage and family", as is the case today. By prescribing this criminal offense, the legislator emphasized its importance and provided enhanced criminal protection in this area (Đorđević, 2007: 56). The valid Criminal Code, by the provision of Article 194, envisages five forms of the criminal offense of domestic violence. The basic form of domestic violence consists of endangering the tranquility of the physical integrity or mental state of one's family by using violence, threatening to attack one's life or body with insolent or reckless behavior. For this form of criminal offense envisaged sanctions are three months to three years (Article 194, paragraph 1). As we see, the legislator envisages sanctions for endangering the peace of body integrity or mental state of a family member, committed in a certain way, by applying violence or threats. When it comes to the use of violence, it is clear that meaning is using physical force against a person, which endangers his or her physical integrity or mental state. In order for the threat to be criminally relevant, i.e., in order to be an element of this crime, it must be qualified. It means that the threat must be precisely determined, ie it must threaten an immediate attack on life or body. Besides, the threat must be serious, experienced and assessed as probable, which means that it must be possible and achievable. However, a threat will be considered serious even when it is not objectively feasible if the person being threatened had reason to believe in its feasibility (Lukić, Jovanović, 2003). This is of crucial importance when it comes to long-term domestic violence, since in that case there a post-traumatic disorder of the victim is often, and it can lead to a distorted ability to perceive reality. More serious, i.e. qualified forms exist relating to the manner and means of execution. In that sense, according to Article 194, paragraph 2, if during the execution the perpetrator used a weapon, dangerous tool or other means suitable for seriously injuring the body or seriously damaging health during the commission of violence, the sanction is imprisonment from six months to five years. The legislator especially paid attention to the age of the victim, and provided punishment for a perpetrator who commits violence against a minor to imprisonment from two to ten years (Article 194, paragraph 3).

Considering the consequence that occurred, i.e. if the criminal act of domestic violence resulted in the death of a family member, the perpetrator will be sanctioned by imprisonment from five to fifteen years, and in the case that family member is a minor, the perpetrator will be sanctioned by at least ten years of imprisonment of (Article 194, paragraph 4). The fifth form exists when the perpetrator violates the measures of protection against domestic violence that are determined by the court on the basis of law and in that case he can be sanctioned by imprisonment from three months to three years (Article 195, paragraph 5). A novelty in the Criminal Code is the provision of security measures, interdictions on approaching and communication with the injured party (Article 89a). Such security measure can be imposed if the perpetrator has been fined, work in the public interest, revoked his driver's license, suspended sentence or court reprimand.

The court may prohibit the perpetrator from approaching the injured party at a certain distance, prohibit access to the injured party's place of residence or place of work and prohibit further harassment of the injured party, i.e. further communication with the injured party, if it can be reasonably considered dangerously damaged. The criminal offense of domestic violence is prosecuted ex officio, which means that the public prosecutor starts criminal proceedings. The Criminal Code in Article 112, item 28 determines which persons are considered to be family members. A family member is considered to be: spouses, their children, ancestors of spouses in the direct line of blood relationship, extramarital partners and their children, adoptive parent and adoptee, breadwinner and foster parent. Family members are also considered to be siblings, their spouses and children, ex-spouses and their children and parents of ex-spouses, if they live in a joint household, as well as persons who have a child together or the child is about to be born, even if they have never lived in the same family household. We believe that the above definition of a family member is too broad and not sufficiently precise, since e.g. it is not clear what is meant by extramarital partners and their children, whether they are children of extramarital partners or children they have together. Also, this definition is not in agreement with the notion of a family member from Article 197, paragraph 3 of the Family Law.

3.3 Family law

With the adoption of the new Family Law in 2005 in the Republic of Serbia, the system of legal protection was completed by prescribing and regulating family protection measures. In accordance to the Family Law (Article 2, paragraph 1), the family enjoys special protection of the state, and the state has the obligation to take all necessary measures for protection of a child from neglect, physical, sexual and emotional abuse, and any kind of exploitation (Article 6, paragraph 2). The provision of Article 10 of the Family Law, entitled "Domestic Violence", prohibits domestic violence and everyone has, in accordance with the law, the right to be protected from domestic violence. This declarative prohibition, i.e. law, is further elaborated by the law through a number of provisions. A special chapter with a title "Protection from domestic violence", the legislator covers the greatest number of provisions related to domestic violence. In terms of this law, i.e. Article 197, domestic violence is defined in a way that the first paragraph determines that domestic violence means behavior by which one family member endangers the physical integrity, mental health or tranquility of another family member, while in the second paragraph the same article lists the characteristic types of violence. These are: inflicting or attempting to inflict body injury, inciting fear by threatening to kill or inflict body harm on a family member or a person close to him, coercion into sexual intercourse, inducing sexual intercourse or sexual intercourse with a person under 14 years of age or incapacitated, restriction of freedom of movement or communication with third parties and insult, as well as any other insolent, reckless and malicious behavior. The mentioned legal definition of domestic violence is very broad since it includes all types of violence, i.e. any arrogant, reckless and malicious behavior that endangers the basic values of the human being, i.e. his physical integrity, mental health and tranquility (Krstinić, Vasiljković, 2019: 69). Article 197, paragraph 3 stipulates that family members are considered to be: spouses or ex-spouses, children, parents and other blood relatives, and persons in in-laws or adoptive relatives, i.e. persons bound by foster care, persons living or who have lived in the same family household, extramarital partners or former extramarital partners, persons who have been or are still in an emotional or sexual relationship with each other, or who have a joint child or a child on the way to being born, even though they have never lived in the same family household. Protection measures are prescribed by Article 198 of the Family Law and are imposed in accordance with the type of violence and the purpose of protection, as a sanction, for the violation but for preventive reasons to prevent future harassment and violence and ensure peace and security not only of the victim but also other members of the families.

These measures are measures that temporarily prohibit or restrict the maintenance of personal relations with another family member, and may be determined by the court, and they are: issuing an eviction order from a family apartment or house, regardless of the right of ownership or lease of real estate, issuing orders for moving into a family apartment or house, regardless of the right of ownership or lease of real estate, prohibition of approaching a family member at a certain distance, prohibition of access to the area around the place of residence or place of work of a family member and prohibition of further harassment of a family member. The duration of these measures is one year maximally, and the time spent in detention, as well as any deprivation of liberty in connection with a criminal offense or misdemeanor, is included in the duration of protection from domestic violence. The measure of protection against domestic violence may be extended until the reasons for which the measure was imposed cease to exist (Article 199), but they may also cease before the expiry of the duration, if the reasons for which the measure was imposed cease to exist (Article 200). Besides protection measures, the Family Law also prescribes a special procedure for protection against domestic violence (Ćorac, 2021). The procedure in the dispute for protection from domestic violence is contained in Articles 283-289 of the Family Law, and it concerns the issue of local jurisdiction, initiation of proceedings, special urgency of the procedure, the role of guardianship authorities, deviations from the disposition principle, and the effect of appealing records and documentation of domestic violence. In that sense, according to the provision of Article 283 in a dispute for protection against domestic violence, in addition to the court of general local jurisdiction, the court in whose territory the family member against whom the violence was committed will have jurisdiction will also have jurisdiction. Proceedings in a dispute for protection against domestic violence are initiated by a lawsuit, and a lawsuit for determining a measure of protection against domestic violence, as well as for extending this measure, can be filed by: family member against whom violence was committed, his legal representative, public prosecutor and authority guardianship, and a lawsuit for termination of the same measure may be filed by a family member against whom the measure was determined (Article 284). According to Article 285 of the Family Law, the procedure in a dispute for protection against domestic violence is particularly urgent, so the first hearing is scheduled to take place within eight days from the day when the lawsuit was received in court, and the second instance court is obliged to decision within fifteen days from the day the appeal was served on him. There is a need to emphasize that in this procedure, the cooperation between the court and the guardianship authority is of great importance. The court may ask the guardianship authority to provide assistance in obtaining the necessary evidence and to express its opinion on the expediency of the requested measure even in the case when the guardianship authority has not initiated proceedings in a dispute for protection against domestic violence (Article 286). The court is not bound by the limits of the claim for protection from domestic violence and may determine the measure of protection from domestic violence if it assesses that such a measure best achieves protection. The court is obliged to deliver immediately the verdict in the dispute for protection against domestic violence to the guardianship authority on whose territory the family member against whom the violence was committed resides, or to the guardianship authority on whose territory he resides. That is, the residence of a family member against whom the protection measure has been determined. The guardianship authority is obliged to keep records and documentation on persons against whom violence was committed, as well as on persons against whom a protection measure has been determined, and the manner of keeping records and documentation is prescribed by the minister in charge of family protection (Article 289).

3.4 Law on Prevention of Domestic Violence

The Istanbul Convention as a legally binding act was signed by the Republic of Serbia on April 4, 2012. On October 31, 2013, the Assembly adopted the Law on Ratification of the Council of

Europe Convention on Preventing and Combating Violence against Women and Domestic Violence. Each signatory country obliged itself to harmonize its national legislation with the Convention, and in accordance with that obligation, the Law on Prevention of Domestic Violence was adopted in the Republic of Serbia, harmonized with the principles of the Council of Europe, i.e. the Istanbul Convention. The goal of the Law on Prevention of Domestic Violence is regulation in a general and unique way the organization and actions of state bodies and institutions and in that manner enable effective prevention of domestic violence and provide urgent and timely protection and support to victims of domestic violence (Sokolović, Simonović, Ranđelović, 2018). By Article 3, paragraph 3 of the Law on Prevention of Domestic Violence it is stipulated that domestic violence presents an act of physical, sexual, psychological or economic violence of a perpetrator against a person with whom he is currently or previously married or is in an extramarital or partnership relationship or with a person with whom he is blood relative in the direct line, and in the collateral line up to the second degree, or with whom the in-law relative is up to the second degree and to whom he is an adoptive parent, adoptee, foster parent or breadwinner or to another person with whom he lives or has lived in a joint household. This article clearly defines the circle of persons to whom this Law refers, who are all the titular who are subject to protection from violence. Observed normative-technical, and according to Article 5 of this Law, the priority of its provisions in relation to other laws is expressed. It means that it is a lex-specialis for the topic it regulates, i.e. it is applied primarily to the prevention of domestic violence, as well as in proceedings against perpetrators of crimes determined by this law and to provide protection and support to victims of domestic violence and victims of crimes determined by this law. Hence, the Law on Prevention of Domestic Violence is applied primarily, while secondarily, unless otherwise provided by this Law, the Criminal Code, the Code of Criminal Procedure, the Law on Civil Procedure, the Family Law and the Law on Police are applied (Kolarić, Marković, 2019: 90–93. By Article 7 of the Law on Prevention of Domestic Violence, the legislator defined the competent bodies and institutions, stating “The police, public prosecutor's offices, courts of general jurisdiction and the courts for general violence and misdemeanor courts, as competent state bodies and Centers for Social Work, as institutions”, which means that each of these competent bodies has its responsibilities, and the Law itself implies full mobility of all listed segments. Misdemeanor courts are the competent state bodies that participate in the implementation of the Law on Prevention of Domestic Violence. It is significant to stress that in accordance with the mentioned law, violation of urgent measures and extended emergency measures is a violation of Article 36 of the Law on Prevention of Domestic Violence, for which a prison sentence of up to 60 days is provided, with the possibility of summary proceedings which provides for the execution of the sentence even before the judgment becomes final. If the perpetrator violates the emergency measure, which lasts 48 hours or extended emergency measure, for 30 days and is reported to the police, the police will file a misdemeanor report, with which they will submit evidence of violation of the measure to the Misdemeanor Court, because the court will not be able to acts without them. If the perpetrator of violence physically attacks the victim, violating the measure, he not only violated the measure, but also committed a new act of domestic violence, for which he can be held accountable in criminal proceedings.

3.5 Domestic violence as a misdemeanor

In the positive legal system of the Republic of Serbia, the basic source of misdemeanor law is the Law on Misdemeanors, according to the provisions of which misdemeanor protection against domestic violence takes place, if its procedural character is taken into account. In practice, there are violent behaviors that do not contain the characteristics of any crime and represent a certain type of violence because they can be extremely disturbing and harmful to the victim and society as a whole. Such behaviors are usually violations of public order and peace, which are closer determined by adequate legal regulations (Mirić, 2014). While in the Republic of Serbia, domestic violence is not explicitly envisaged as a misdemeanour, the Law on Public Order and Peace envisages a certain type of misdemeanour that results in a violation of public order, and the perpetrator and the injured may be family members. These are mostly offenses that protect public morals and do not relate directly to the protection of domestic violence. This Law precisely defines the notion of offenses against public order and public place, as well as the fact that offenses under this Law can be committed only in a public place. When it comes to misdemeanour protection from domestic violence, certain provisions of this Law are of special importance, which provide protection from insults and harassment within the general legal norm. In that sense, the legislator prescribes the provision of Article 7, paragraph 1 of the mentioned Law "Whoever disturbs public order and peace by quarreling or shouting or creates harassment of citizens - shall be fined from 5,000 to 20,000 dinars." Article 8, paragraph 1 of the same Law prescribes: "Whoever, by indecent, insolent or ruthless conduct, violates public order or peace or endangers property or insults the morals of citizens - shall be punished by a fine of 10,000 to 150,000 dinars or by work in the public interest from 80 to 360 hours, ”While Article 9, paragraphs 1 and 2 prescribed“ Whoever insults another or violates public order and peace by insulting another or by committing violence against another, shall be punished by a fine of 20,000 to 100,000 dinars or imprisonment for a term of 10 to 30 days. Whoever, by provoking a fight or participating in it, disturbs public order and peace - shall be punished by a fine of 50,000 to 150,000 dinars or by imprisonment for a term between 30 and 60 days. From the cited provisions of Law, we can conclude that domestic violence is not explicitly predicted as a misdemeanor, but it can be qualified as a misdemeanor against public order and peace. It is relevant to state that the family connection is not important for the imposition of the envisaged punishment, but according to the Law on Misdemeanors, a protective measure "prohibition of access to the injured party, facilities or place of misdemeanor" can be prescribed (Article 61) and can protect against further endangerment. Also, when the legal grounds for bringing a perpetrator of violence are met on the basis of the Law on Misdemeanors, in some cases the misdemeanor procedure may be more efficient than other types of court proceedings because the perpetrator is brought to a misdemeanor court judge immediately upon the request the procedure, and a proposal to render a judgment that becomes enforceable, before it becomes final (Article 190). In this way, the victim of domestic violence can be effectively and quickly protected.

4. CONCLUSION

In the Republic of Serbia, the first step in building a comprehensive system of protection against domestic violence was made with the adoption of the Law on Amendments to the Criminal Code of the Republic of Serbia in 2002. With the entry into force of this Law, Article 118a, domestic violence was incriminated as a separate criminal offense, which established repressive, criminal protection from domestic violence. Then, the next step was taken in shaping the legal protection against domestic violence by passing the Family Law. The new Family Law, from 2005, defines domestic violence for the first time as a social problem, and not just as a personal problem. As we have already stated, Article 197 of this law states what is considered domestic violence, while Article 198 introduces civil protection. We believe that the adoption of the Family Law, with the appropriate criminal law regulations, has completed the system of legal protection against domestic violence. Ratification of the Council of Europe Convention on Combating and Preventing Violence against Women and Domestic Violence led to the adoption of the Law on Prevention of Domestic Violence in the Republic of Serbia in 2016, which began to be applied in 2017. With the adoption of this Law, Serbia has opted for a more intensive and decisive fight against domestic violence, placing special emphasis on the prevention of domestic violence. And when it comes to the area of misdemeanours, the Law on Public Order and Peace envisages a certain type of misdemeanour that results in a violation of public order, and it can happen that the perpetrator and the injured party are family members. Besides punishments as repressive measures to combat various forms of domestic violence, criminal and misdemeanour legislation for the prevention of domestic violence provides for other protective or security measures, which are reflected in the ban on approaching victims of violence at a certain distance, ban on access to space around the place of residence or place of work of the victim, as well as the prohibition of further harassment and further communication if it is assessed that further performance of such acts by the perpetrator would be dangerous for the victim. The purpose of the mentioned measures is to prevent the commission of new violence, to enable the free and safe movement of the victim of violence in private and public space and to perform regular life activities. Conclusion is that protective measures should significantly contribute not only to repressive, but also preventive action, as well as to influence the cessation of domestic violence to cease to be a pattern of behaviour. We believe that domestic violence should not be tolerated or treated as a family matter, because the right to life, physical and mental integrity cannot be suppressed by other rights, including the right to property and the right to privacy, but any knowledge of violence must be report, and it is up to the court to punish the perpetrators accordingly. And the improvement of the normative framework should contribute to the effective prevention and suppression of domestic violence. By improving the normative framework, we mean harmonizing and harmonizing the relevant solutions contained in the relevant laws, primarily in the Criminal Code and the Family Law, such as. unique determination of a family member, extension of protective measures, etc. However, the instruments and mechanisms prescribed to protect against domestic violence are not effective if citizens are not informed of their existence. Therefore, the state, competent authorities and institutions should focus their efforts on information regarding protection from domestic violence. Nevertheless, a review of the current legislation in the Republic of Serbia leads us to the conclusion that the issue of legal protection of victims of domestic violence is given much more attention today than in the previous period. Decades of pointing out the consequences and frequency of domestic violence have led to significant shifts in the context of the social response to this phenomenon. This is a huge step forward, because domestic violence has become socially visible and prohibited by legal norms. An insight into the legislation of the Republic of Serbia concerning domestic violence leads us to the conclusion that there are numerous mechanisms for the protection of victims and punishment of perpetrators of domestic violence. However, the question arises as to whether adequate mechanisms have been put in place for effective and adequate protection of victims of domestic violence? We believe that the answer to this question can be obtained by researching and analysing legal practice that can significantly contribute to understanding the application of existing laws, as well as all the shortcomings that arise from that application.

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LABOR MARKET GENDER DISCRIMINATION - CASE STUDY IN PRIVATE AND PUBLIC SECTOR COMPANIES

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ABSTRACT

This article focuses on gender discrimination in the labor market, in public and private sector companies, with the underlying research question - What are the factors that lead to discrimination against women in the labor market? As a central objective, the analysis of the factors that lead to discrimination against women in the labor market was defined. Regarding the organizational structures, which are under study, they can be considered as institutions that operate in a «gendered» ideology, differentiating individuals and creating inequalities between them based on the gender they represent. In the labor market, gender inequality crosses all stages of the employment contract, from recruitment, career progression, remuneration and the termination of the employment relationship. In the labor market, for example, there is a wage gap based on gender, the so-called "gender wage-gap". Women receive lower wages than men for performing the same tasks, having the same skills, experience and training. In this study, four starting questions were outlined: What are the explanatory factors of discrimination and gender inequality that persist in employment structures?; What are the factors where there is a lower presence of women in top positions, organizational or work contexts?; Is there equal pay in companies or is there just a policy of equality on paper?; According to the Equality at Work Law in Portugal, do public and private sector companies apply the Law in their human resources policy?The general objective of the study is: To analyze the factors that lead to discrimination against women in the labor market, having been defined as specific objectives: Understand what are the obstacles they currently face when they rise to top and management positions; Gender equality is something that can or cannot be achieved as long as we live in a society that sees women as "housewives". The methodology adopted is qualitative, materialized through the application of a case study, and quantitative through the application of a questionnaire survey, in which a sample of 114 respondents was obtained, of which 78% are women, 20% are men and 2% did not identify their gender. The main final considerations indicate that gender equality in organizations and their integration will not be achieved until the isolation of women in the workforce is reduced, that is, as long as male models continue to predominate in social and organizational structures, women will tend to always being isolated and sent to the private space, giving them the responsibility of taking care of home and families.

Keywords: *Gender discrimination;labour market; inequality; management*

1. INTRODUCTION: LITERATURE REVIEW

People in adulthood become the result of what they are and what they achieve throughout their lives. Men and women were once children, however, it is from childhood that society restricts them through the stereotypes created for each gender. One of the main questions of this study is how to explain the lower presence of women in certain organizational positions or in work contexts, which leads to the reflection if one of the factors that explains the lower presence of women in certain professions or positions within the organizational structure, could be or not be explained by the way in which female and male children are raised by their parents, or by society in the way it witnesses their birth, defining through gender the roles they will later have in society. It is important that from childhood we learn that the world of work is not separated into "professions of men and women", the "archaic" stereotypes of society need to be broken and the children who are educated in schools today need to be learn that men and women have exactly the same abilities, the same rights and the same opportunities. The report Academic Trajectories and Professional Integration of Graduates (1999-2003), carried out by the Lisbon University, reveals that young graduates earn less than €500 per month, compared to their male colleagues (Alves, 2005). According to several authors, in the 1st cycle gender education and citizenship guide, “in the labor market, wage disparities in many sectors of activity still persist” (Vieira, Cristina, Nogueira, Conceição, Tavares, Cláudia, 2015, p.7). This factor is called by many authors as the «Glass Ceiling Effect» in the professional ascension of the female career.

Gender concept

The word gender is one of the most important when women try to enter the job market, in a typically male profession, such as civil engineering. The concept has been debated for some time, and there are authors who argue that it was developed in feminist analyzes from 1979 onwards, being defined as a social construction of different attributes between men and women. For Amâncio (1994), the division of genders is nothing more than “a way that society has arranged for the creation of prejudiced stereotypes and discrimination that primarily affect women”. In order to support the idea that the differences observed between genders are not only justified by the biological issues presented since birth, but are, rather, the result of cultural constructions, Ann Oakley suggested that the distinction be made between the terms sex and gender, which later turned out to be a reference distinction for the Social Sciences. Ann Oakley says: “The sex we are born with concerns the anatomical and physiological characteristics that legitimize the differentiation in biological terms, between male and female. In turn, the gender we develop involves psychological attributes and cultural acquisitions that men and women incorporate throughout the process of forming their identity, and which tend to be associated with the concepts of masculinity and femininity” (Oakley, 1985). Oakley (1985) reinforce the idea that sex refers to biological issues beyond our control and that gender is intertwined with the social and cultural issues of societies. As such, it is natural that society expects men and women to behave differently, as they have different conceptions of how they should behave in society. As already mentioned, the discussion around this concept dates back to ancient times, in 1949 Simone de Beauvoir, in the book “The Second Sex”, a writer and feminist, argued that “we are not born women, we become women” (One is not born, but rather became a woman) (Beauvoir, 1949; p. 273) The way women are socialized, the characteristics attributed to them, according to the female gender roles, are transmitted throughout their lives, making them increasingly women, learning to build their identity in society. Simone Beauvoir, in her two-volume work (Facts and Myths and The Vivid Experience), was a source of inspiration for many feminist authors, such as for Betty Friedan. Author of her book The Second Sex, she anticipated the so-called “second wave” feminism, which emerged almost three decades later with the women's liberation movement, and developed in the late 1960s.

Beauvoir in an interview, in 1976, with John Gerassi stated that "the dispute will last as long as men and women do not recognize themselves as similar, that is, as long as femininity is perpetuated as such" (Beauvoir, 1976). Through this statement, it can be conveyed that as long as society does not look at men and women as equals, there can always be a woman willing to fight to be heard, and for the rights to be treated as an equal being to men. We can therefore conclude that despite the intensive work of feminist scientists, who hope to one day contribute to the elimination of gender inequalities in society, discrimination continues, the cultural complexity of gender stereotypes, referring to masculinity and femininity are too rooted in society, as can be seen today, there is still a low representation of the female sex in professions that are not traditionally female. Luísa Saavedra states in one of her studies that "there will continue to be difficulties in changing gender stereotypes associated with the professions" (Saavedra, 2001).

Genders in Organizational Structures

With regard to gender inequality, in organizational structures, most of the responsibility lies with companies. There is, even today, the concept that there are jobs that are inappropriate for women and vice versa. Strictly speaking, it is the companies themselves that create «a specific type of people» Mercedes Alcañiz: "Thus reproducing the differences that exist between men and women, through the creation of normative gender standards, expressing a gendered institutional logic that reproduces gender relations between men and women and the order of hierarchy and power" (Vincent, 2013). Within an organization men and women are evaluated in different ways, having as a criterion the perception that society has, thus ending up generating differences between the genders. As long as the mentality of society does not change, with men working, with control over their emotions and with an «instrumental rationality», and the woman, who represents «emotionality and sensitivity», then she will always be considered «weak» for power positions and authority (Connell, 1987 / 1995; Lorber & Farrell, 1991; Kimmell, 2000; Oliveira & Amâncio, 2002). Adler (2002, p.747) reinforces the idea discussed above by stating that "according to his research, the way of approaching things, on a day-to-day basis, and of judging, distinguishes men from women. The profile of men characterizes them as aggressive, competitive, independent, logical, active, made for the business world." In relation to women, Adler, states that they stand out as being "communicative, kind, democratic, participatory and submissive". According to the author, the problem with women is that, most of the time, they do not know how to value themselves, because they do not feel the need to show their conquests and victories. For Fischlmayr (2002, p.773-783), these very distinct characteristics transfer a "weak and inadequate image of them to the business world". Fischlmayr believes that such characteristics are like a barrier created by woman, in relation to her personal development, as if she were "sabotaging" herself. This happens because they continue to behave according to the "gender role" that society, over the years, has predefined for them. The author argues that the fact that some women doubt their abilities means that, when performing executive positions, they copy the positions of men, ending up neglecting their "natural qualities". Gender inequalities have marked women's careers, namely discrimination, pre-defined stereotypes and prejudice. Gina Santos, inspired by Ann Morrison and Mary Von Glinow, defines the barriers created by women in their professional lives as the Glass Ceiling Effect, stating that this is: "A subtle and invisible but nevertheless very strong barrier that prevents women from ascending to the top and most responsible positions in the organization simply because they are women is the metaphor commonly used in the literature to explain discrimination" (Santos, 2010, p.100). Santos also mentions that there are three explanatory dimensions, which justify a lower presence of women in top positions. The first focuses on individual differences as a justification for gender inequalities, that is, attitudes, behaviors, knowledge and personality traits are what place them in a minority position in relation to men. For Santos, the main focus of this dimension "is that men and women are essentially different due to a process of socialization that is different" (Santos, 2010, p.103). The second dimension attributes to organizational structures the blame for the inequality that women suffer in companies, that is, "it is the characteristics of the situation, and not personality traits or intrinsic motivations, that define the behavior and attitudes of women in management" (Santos, 2010, p.103). Contrary to the first dimension, it assumes that the cause of gender inequality is not found in the differences in the socialization process of each sex, but in the situations that each one goes through throughout his career. It can be assumed that it is the characteristics of the situations that will define the behavior of each one. The fact that women are seen as "weak and sensitive" does not help in positions that are seen as being "typically masculine". This dimension has a flaw because it only considers the organizational structure as a variable, forgetting factors such as "the social context and subordinate status of women in society, or organizational cultures that end up influencing management practices and policies within of the organization" (Santos, 2010, p.103). What the author wants to say is that the social factor and the organizational structure are separate but influence each other. Finally, we have the third dimension that focuses on "the patriarchal value system that sustains organizational cultures in the concept of gendered organization" (Santos, 2010, p.103). In this dimension, patriarchy is referred to, through the "patriarchal value system". This can be defined as a structure on which all contemporary societies are based. It is characterized by an institutionally imposed authority of the man over the woman and children in the family environment. It can be assumed that this dimension of guilt, patriarchalism for the discrimination that women face in their daily lives, was with the liberation of women from the power of men, with their insertion in the paid job market, which shook the legitimacy of man's domination as a family provider. However, despite discrimination being illegal, we know that patriarchy and its values still endure. In conclusion, this phenomenon of differentiation, referred to by several authors as the «Glass Ceiling Effect» is used to define "the blocking of promotions to top positions by women, and was later extended to include, also, the inequalities observed in minorities" (Maume, 1999, p.484; Maume, 2004, p.250), "as well as the inequalities of access to intermediate management positions" (Zeng, 2011, p.312).

Equality in Portugal

Gender equality is represented as women's struggle for their economic independence, equal pay and power. The truth is that, in part, it is for these values that they fight, despite not being an issue that only concerns women, since the male gender has a lot to gain from this equality. Men are increasingly in the minority with regard to degrees, they continue to spend less time with their children, and in the field of accidents at work, they are the most affected. It is important to remember that they are the ones who occupy most of the management positions and that, in general, they earn more money than women, perhaps because they are more available and, therefore, have greater facility in performing overtime work. Gender equality should be a common goal for all, the struggle for equality can only be achieved if we work together to obtain equal projects and goals, agreeing that the usual socially defined functions are wrong and do not work. In Portugal, the formation of a legal and institutional framework for equality between men and women was an early, innovative and even progressive process. It is known that the country was under dictatorship for a long time, and it was after the 25th of April 1974 that the democratization process began, where fundamental measures were implemented that changed the role of women, in public and private life. With the 1976 constitution, laws were created, and an attempt was made to change the idea of the condition of women. One of the changes achieved, which we can consider grandiose, was the role played by women, both in private and public life. Freedom and equality was something that did not exist and at no time was the woman considered as "a human being as efficient as the man."

With the approval of the Portuguese Republic Constitution, the great step towards gender equality was taken. Nowadays, it is still the obligation of the state to promote this equality, as established in the V National Plan for Gender Equality, Citizenship and Non-Discrimination 2014-2017. However, as it is possible to prove throughout this study, the fact that inequality based on sex is illegal, the laws implemented are not enough to change the social mentality. Laws were created, attempts were made to change the idea of what it was to be a woman, despite this, social norms did not change, with women continuing to be considered inferior in relation to men. Despite being in a subtle way, this social normativity still persists. It is important to analyze the following question: "Can the law build equality between men and women? The truth is that the law is the foundation of the democratic state, but by recognizing that men and women are free human beings and equal in dignity and rights, it is contradicting the social normativity that presupposes that each sex has its role (gender roles) and, therefore, have different rights, making them unequal in the eyes of society. According to Rocha (2005), equality between people does not depend only on the legal norm, thus answering the above-mentioned question. Many forms of asymmetric differentiation existing in the functions performed by men and women escape the State and the Law, and these in themselves can be important diffusers of «segregation». In this sense, Portugal has been assuming international commitments in the area of equal rights and opportunities for women and men, as set out in the Lisbon Treaty and the Fundamental Rights Charter. However, taking into account the results of the 2015 edition of the gender inequality index, Portugal was considered by different national and international institutions as one of the countries with high wage inequality. The index included an evaluation of 145 countries, and globally confirms "the progress in terms of salary and participation in the labor market, relative to women, has been slow and that it is only now that women are starting to earn the same that men earned in 2006." This suggests "that the economic inequality between sexes, in the world, will still take at least 118 years or until 2133, to be eliminated." Brandolini et al. (2011), by calculating the Gini Index for gross monthly earnings, classified Portugal as the most unequal country among the 24 countries under analysis (EU-25 excluding Malta). Also, Rodrigues et al. (2012) placed Portugal in fourth place in the calculation of the Gini Index for the EU-27, in relation to gross monthly earnings.

2. METHODOLOGY

In these investigation, it was intended to explain and understand the concrete phenomenon referred to in the initial questions, based on the existing literature known on the matter, through a progressive process of empirical data collection, in public and private sector companies, so we assume a methodology in the form of a case study. For Yin (1999) "case studies are appropriate for investigating phenomena within a context, where the boundaries between context and phenomenon are not clearly defined". The present case study, which we adopt as intrinsic, is due to the fact that we have a particular interest in research, since "by studying it we learn about other cases or about a problem in general, but also because we need to learn about this particular case" (Stake, 2007, p.19). It is thus placed at the level of interpretation and understanding, deepening not only the concrete and singular phenomenon, but also its meaning, referring us to a qualitative investigation. The methodological strategy chosen in this case study is qualitative, materialized through the application of a case study, and quantitative through the application of a questionnaire survey. In data collection, a detailed bibliographic research was chosen on the themes involved in this investigation, and a questionnaire survey distributed to public and private sector workers. It is important to note that the questionnaire survey was distributed using electronic tools, with the aim of reaching a greater number of people, regardless their geographic area.

Of the 310 questionnaire surveys distributed, the sample of this study consists in 113 people, of which 78% are women, 20% are men and 2% did not want to identify their gender, being a non-probabilistic sample for convenience, taking into account that responses from individuals who were available to respond to the questionnaire were used.

3. RESULTS DISCUSSION

For analyzing and structuring the data, distinguish percentage of men and women working in the different sectors and who responded to the questionnaire, we create two categories were previously chosen for study, and emerged from the concepts investigated, the Concept of Gender and Genders in Organizational Structures, where gender always plays a very important role. As such, it is pertinent to join the two categories to understand the percentage, in the public and private sector, of responses obtained from the female gender and the male gender. About men and women from the public and private sector who responded to the questionnaire, the sample is the "gender" of each one, it can be considered that in 100% of the female gender 49% are from the private sector and 48% are from the public sector, and that in 100% of the male gender 74% are from the private sector and 26% represent public sector. The predominant theme of the study in question was gender equality in the labor market, with a focus on the Portuguese labor market and the initial theme being "Gender Discrimination in the Labor Market", centered on the Portuguese public and private sectors, considering it relevant understand which factors explain discrimination against women in the labor market. After analyzing the questions for this question, it was concluded that it is in the public sector where gender discrimination is most noticeable. The explanatory factor that we considered first concerns organizational development. According to the results obtained, we can say that equality among workers is not a priority in organizational development, however it is something that can help to eliminate gender discrimination in an organization. The human resources of a company have the objective of supplying and maintaining the organization with people, in quantity and quality, as well as keeping them willing to carry out the objectives defined by the company. However, it is not difficult to understand that workers treated differently by their superiors just because they are different genders do not feel motivated to fulfill objectives defined as a goal by these companies. How can human resources change this situation? Through organizational development, which is directly related to the study of organizational behavior, being an activity with a defined beginning and end, developed within organizations. Organizational development aims to improve the organizational structure, transforming the organization more effectively, through a process of organizational change, planned, and encompassing the entire company. This has already been implemented in some companies, which have begun to feel the need to face the environmental, cultural and social changes that are becoming faster, more frequent and more profound. Companies and society have to keep up with these changes, initiating organizational development with the aim of making the company more flexible, or flexible enough, so that it can adapt to changes in the system it depends on and with which it relates. In short, organizational problems can originate in the various subsystems that make up your organizational environment, technical, social, educational, economic, etc., which will consequently affect the company, forcing it to make internal changes. However, many companies are not aware of these changes, thus running the risk of reducing their effectiveness, compromising their objectives and their survival in the market. Directly associated with organizational development, the second explanatory factor follows: companies do not provide funds to raise awareness among their workers about gender equality at work. According to the WEF (World Economic Forum) it will take 170 years for women and men to be considered equal. This situation does not help until companies develop measures and actions that promote equality.

As a third explanatory factor, and following the above, we considered that one of the causes that could also explain gender discrimination in companies is the investment spent on training workers equally. According to the Labor Code, professional training is an employer's duty to ensure the workers' individual right to training. However, after analyzing the results, in 100% of the respondents from the private sector, 57% considered that their company, when preparing a training plan, does not have in mind the principle of equality, mainly with regard to qualification, progression in career and access to leadership positions. In the public sector, out of 100% of respondents, 58% shared the same opinion. We can consider that gender discrimination within an organization is known to managers, however they do nothing to solve the problem, ignoring it most of the time. As mentioned earlier, it is in the top positions that the percentage of discrimination is higher. After analyzing the results of the questions in the questionnaire carried out, we can conclude that this happens because companies do not offer the same opportunities to women, do not invest in their training and do not believe that women have what it takes to reach a top position in the organization. offering them the same opportunities for career advancement, simply because they are women. In 100% of the respondents, 61% said yes, that they are not given the same opportunities to rise to top positions, just because they were born women. Analyzing the results obtained, it appears that the skills of male and female workers, within the organization, are not accepted by the leadership in the same way. However, it is considered that the sample under study is not enough to reach a plausible conclusion about the reality of the Portuguese sector of activity. Based on the results obtained in the question: Performance evaluation is based on objective criteria, common to women and men, in order to exclude any discrimination based on sex, we considered that no, that performance evaluations do not exclude discrimination 50% of respondents from the private sector and 56% of 100% of respondents from the public sector stated that within their organizational structures performance evaluations do not exclude gender discrimination. Finally, an explanatory factor of gender inequality that persists in employment structures is wage inequality. According to 2016 WEF report, women continue to earn less than men (just over half), sometimes working longer hours.

To conclude this question, after analyzing the data, we considered as explanatory factors of discrimination and gender inequality, persistent in employment structures, the following:

- Weak commitment to organizational development by organizations human resources;
- Negligence, on the part of companies, in relation to the development of measures that aim to make workers aware of gender equality;
- Higher investment in male workers training, neglecting female workers, thus considering the inferior capacity of women, not offering the same opportunities for career progression;
- Discriminatory and non-objective criteria in performance evaluations;
- Lack of formal rules and procedures that allow the presentation of complaints in discriminatory situations, thus making employees within the organization not feel supported by leadership;
- Wage inequality between workers performing the same function.

As we can see from the results obtained in the previous question, there is still a long way to go in order to achieve gender equality in the labor market. It is difficult to explain the “why” of this discrimination, bearing in mind that women are discriminated against simply because they were born female. The cultural complexity of gender stereotypes regarding masculinity and femininity are too ingrained in society. The lower presence of women in certain organizational positions or in work contexts can be explained by the values that are transmitted to us throughout life and, by the way in which we are socialized, since the concept of gender results from the social construction of what it is to "be man" and "being a woman", archaic stereotypes that defend the existence of male and female professions, thus resulting in a low representation of women in professions that are not traditionally female. This question is intended to help us understand the reduced number of women in certain positions within an organization. As previously mentioned, the study focused on public and private sector companies, and after analyzing the results we can say that, once again, it is the public sector that presents the worst results. Following the logic of the analyzed questions, we can start by mentioning that, both in public and private sector organizations, equality between men and women is not considered as a priority for the organizational structure. Organizations do not present measures that specifically encourage the participation of men and women in decision-making processes. We can say that the fact that the company does not encourage the balanced participation of genders in decisions, discourages the promotion of women to top positions/decision bodies. Another issue is women's refusal to compete for top positions in organizations, as there are no facilities for career interruption in companies, if they decide to continue their training or if they want to be mothers. Many women end up giving up their career in favor of their family life. It is important that in the organizational structure, where they fit, there is the facility, for both men and women, to interrupt their careers, with a valid justification, without reprisals or consequences. We then analyze this question: respondents in the private sector 60% considered no, in the public sector, respondents, 58% said the same. We can see, once again, that the public sector presents worse results. The questions that we are going to analyze next turn out to be interconnected with each other, allowing us to reach a conclusion. That is, if there is a principle of gender equality, present in the organizational structure, from the beginning, there will be a greater probability of having an equal number of men and women in leadership positions or decision-making bodies, however, it can only be an option if the skills of all workers are recognized equally and not according to their gender. Finally, if the principle of equality is present in all decisive steps, the evaluation of workers' performance will be carried out using objective, non-discriminatory criteria. However, as we can see after analyzing the results obtained, such a scenario does not happen, and is far from being a reality. In conclusion, we consider that the lower presence of women in certain organizational positions or work contexts can be explained by the following factors:

- Gender equality is not a priority for the organizational structure, so the company will not feel the need to implement measures that make its workers aware of gender equality;
- The participation of women in decision-making processes is not encouraged from the beginning, so it will later affect their candidacy for top positions/decision bodies;
- The candidacy of workers is not encouraged for positions where they are under-represented, that is, where they are inferior;
- Same opportunities for career advancement are not offered within the organization, as a woman;
- There are not the same opportunities for career interruption;
- When companies appoint a worker to a leadership position, they take into account discriminatory criteria, considering women to be fragile and weak for leadership positions;
- Performance appraisals in organizational structures are based on discriminatory criteria, with workers' skills being recognized in different ways.

Let us now address the issue of gender pay inequality. According to the WEF's The Globel Gender Gap 2016, we will only have equal pay in 170 years, however women will continue to earn less by working longer hours and will be in a minority in positions of responsibility.

There are several national and international institutions that consider Portugal to be one of the countries with high wage inequality. But what exactly is the pay gap? This represents the difference in gross hourly pay between workers, men and women as a percentage. According to the Portuguese Labor Code, "workers who are in the same position within a company, with the same working hours, with the same functions, with the same qualifications and with the same type of employment contract", must have the same remuneration. However, we can consider that men and women who perform the same function may have a different remuneration, this difference being based on objective criteria and not only on the basis of sex. The European Commission believes that the pay gap reflects three types of disadvantage that women are faced with: lower hour pay; fewer working hours and lower employment rates. In short, women earn less than men, working the same workload and performing the same function. We can also add that you are given fewer job opportunities due to the fact of a possible pregnancy, which will imply prolonged absence, which in turn implies replacement, resulting in more costs for the company. As we can conclude, from the results obtained, wage equality does not exist, it is not a reality. In the private sector (100% of respondents) 50% stated that their company does not guarantee compliance with the principle of "equal pay or equal value"; whereas in the public sector (in 100% of respondents) 52% are of the same opinion. This one presented, once again, worse results. We also have to consider whether wage inequality among workers came from skills, whether or not these are recognized equally by the organizational structure. According to the results obtained, we can consider that the equal recognition of competences in companies, in the public sector and in the private sector, does not happen taking into account that (in 100% of respondents) in the public sector 73% and that (in 100% of respondents) from the private sector 63% said that the skills of workers, men and women, are not recognized in the same way by management. But it is also important to mention that in 2016 history was made, because women occupied a third of the seats in the Republic Assembly, and in the legislative, of the 230 parliamentary seats, 76 were occupied by women. In conclusion, based on the results obtained, we can say that it is in the public sector where the worst results and a greater delay in terms of salary equality are found. It is also important to mention that none of the sectors presents satisfactory results. In this last question, the analysis of all the results obtained during the study was taken into account, as a summary of all the work mentioned above. The idea of gender equality is associated with the question that men and women are equal. However, this equality does not exist, and what is different should not be treated equally. Something contradictory? Yes, it is a contradictory idea, but correct. Although sexes are different, both are human beings, so they must have the same respect, same rights and same opportunities. This study focused on gender inequality in Portuguese labor market, focusing on the public and private sector. The inequalities that women have always suffered are the result of a long path of production and reproduction of gender stereotypes that later created the concepts: glassceiling and glasswalls. The first concept, glassceiling, mentioned earlier, reflects the difficulty of women to access top positions in the hierarchy of organizations and, the second concept, glasswalls, reflects the barriers in relation to some sectors or professions. In short, historically women are represented by exclusion in the public sphere, in the economy and in politics. During the Estado Novo period, the moral principles of the family were defended, and the married woman should take care of the home, work would become incompatible with the roles that society reserved for her. Later, the family disappears from the Civil Code, being a very significant change for woman. The period 1974-1979 consolidated Portuguese democracy and created changes that constitutionally assumed equality between men and women at work, in the family, in society, namely, women's access to all professional careers; maternity leave extended to 90 days; the right to vote: and the right to be able to leave the country freely, without the husband's authorization (Ferreira, 1999).

According to Portuguese Constitution, it is the obligation of the Portuguese State to promote gender equality. However, as we can see from the results obtained from the questionnaire, the public sector showed the worst results, where gender inequality is more accentuated, although the private sector also did not have encouraging results. The Portuguese Labor Code is clear with regard to gender equality, being referred to in several articles, however, sometimes these rules are “lost” in human resources policies. The truth is that companies are made up of men and women, and it is up to human resources management to adapt social responsibility policies to reality, seeking to differentiate responses to the needs of one and other, in benefit of the organization's success. There is a need to “make structural readjustments so that women, in equal circumstances, can prove their ability to perform positions of leadership, prestige and high responsibility” (Loureiro & Cabral-Cardoso, 2008). However, Dickens (1998) states that women “are often invisible to the management of human resources, even when management is ensured by a professional group, strongly feminized, as is the case in Portugal”. According to Dickens (1998), companies that assume a commitment to equality should develop human resources management practices that contribute to the process of becoming aware of the nature of gender in organizations, seeking to adapt their policies, values, norms and formal and informal structures to this reality, instead of adopting gender-neutral practices that reflect socially masculine attributes, needs and work patterns. It cannot be said that public and private sector companies present in the Portuguese labor market are not implementing the Equality Law in their human resources policy, however, based on the results obtained, it can be assumed that the inequality of gender is more pronounced in the public sector, governed by the Portuguese State, which in turn should be an example for the private sector, enforcing the Portuguese Constitution Law. According to the results obtained, this does not happen, since it presented, in practically all aspects, negative results. Through this study it is not possible to say whether gender discrimination is direct or indirect.

4. FINAL CONSIDERATIONS

With the present case study, we aimed to verify if there is gender equality in the sector of Portuguese activity, public and private sector. Women's struggle for equality dates back to the 1960s, and it was with that feminist movements emerged. The truth is that gender inequality affects both men and women, they are also disadvantaged when they do not choose «typically masculine professions», for example, stylists, hairdressers, and designers. Men in this kind of professions are, more often than not, labeled with «clichés» attributed to the profession they chose to practice. It was in the 1970s that the Law on Equality in Work and Employment was developed, but women continue to face the same difficulties. We sought to provide a theoretical framework on gender the state of art (in)equality by selecting some empirical studies that we considered relevant to focus on the topic under study, we intended to use qualitative and quantitative data collection techniques, which would allow us to understand whether in organizational structures, in the public/private sectors, there is or is not gender equality, provided for Portuguese Law. The legislation on equality between women and men at work enshrines the right to equal pay between workers for work or equal value, provided to the same employer. Rodrigues, Figueiras and Junqueira (2012) identified professional qualifications and educational qualifications, variables related to the worker, the region and the size of the company are variables related to the company, they are therefore important variables in the definition of wage inequality in Portugal. Taking into account Guerreiro's statement “the promotion of gender equality, as an internal dimension of social responsibility, is an indicator of a responsible human resources management policy, as it tends to be concerned with men and women working in the organization”. The negligence, on the part of companies, in relation to the development of measures that aim to make workers aware of gender equality; higher investment in the training of male workers, neglecting female workers, considering women inferior, not offering the same opportunities for career progression; discriminatory and non-objective criteria in performance evaluations; the lack of formal rules and procedures that allow the presentation of complaints in discriminatory situations, making employees feel unsupported, and finally, the inequality of pay between workers performing the same function. As for the lower presence of women in management or top positions, through the results, it is concluded that it is due to the fact that gender equality is not a priority for the organizational structure, and in this case the company will not feel the need to implement measures that sensitize workers to gender equality; women's participation in decision-making norms is not encouraged, which will later affect their candidacy for top positions/decision bodies; the candidacy of workers is not encouraged for positions where they are under-represented, that is, where they are inferior; women are not offered the same opportunities for career advancement; there are not the same opportunities for career interruption. When companies appoint a worker to a leadership position, they take into account discriminatory criteria, considering the fragile and weak woman for leadership positions and, finally, performance evaluations, in organizational structures, are based on discriminatory criteria, being skills of male and female workers recognized in different ways. According to Steinberg (1992), gender inequalities are related to the predominance of male models in the design of organizational structures, conferring advantages to men. Women, on the other hand, face obstacles when trying to integrate into a social structure that was not built taking into account their characteristics and social roles. These revealed above all the difficulty in reconciling professional demands with family demands. In conclusion, organizational structures are institutions that operate on a “gendered” ideology, differentiating individuals and creating inequalities among them based on the gender they represent. These inequalities relate, for example, to access to power positions, recruitment policies and the renumbering of male and female roles. Although more and more women break down barriers in organizations to occupy roles at higher levels in organizational structures, many professions continue to be dominated by just one of the genders (Baunach, 2002). The literature presents numerous studies that fall into different levels of analysis, individual, institutional and social, and that seek to explain the inequalities of power between men and women in organizational structures. However, they all have an explanatory power for the phenomenon. Also, the differentiation in remuneration reveals the predominance of male ideology in organizations, considering that male workers are more competent to perform functions designed in their image, and for which they recruit in a homosocial reproduction logic (McPherson et al., 2001). According to this perspective, higher remuneration is justified, as their contribution to the organization will be larger. Such an ideology conditions the assessment of women's potential to perform functions, considering them, in most cases, as less suitable (inferior) candidates for positions, either because they present different characteristics from the group they are recruiting or because they do not have the same experience (as advocated by Human Capital Theory) nor the same capacity for long-term commitment. We agree with Baunach (2002) when he states that gender equality in organizations and their integration will not be achieved until the isolation of women in the workforce is reduced, that is, while male models continue to predominate in social and organizational structures, women will always tend to be isolated and sent to the private space, giving them the responsibility of taking care of home and family.

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A REVIEW OF THE INFLUENCE OF INFORMATION TECHNOLOGIES ON CONTEMPORARY TRADE

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ABSTRACT

The paper deals with modern trade, in the context of information technology development. Analysing the challenges and circumstances facing workers and companies during the adaptation to changes in modern trade in the context of the development of information and communication technologies, considers ways to contribute to reducing and / or avoiding crises during the first phase - adaptation, ensuring implementation of necessary communication strategies and modern information technologies. Over the past few decades, the rapid development of information technology as well as communication science has confirmed the thinking that technological development i.e. the use of information technology will continue to develop unstoppably. Rapid growth and development on the one hand provides new opportunities in the context of technology development, while generating certain problems. The development, especially of information technologies in the field of trade, in addition to modern communication techniques and methods, affects society as a whole. The importance of information technology for the development of trade is indisputable. The fact is that trade has undergone a transformation thanks to modern information and communication technology (online trade, contactless payments, etc.), which had to change the communication approach, which ultimately results in a complete transformation of traditional forms of trade, but also partially abandoning certain communication methods i.e. direct communication based on the skill of personal communication seller-buyer.

Keywords: *information technologies, communication, trade, technological progress, labour force, labour market, transformation.*

1. INTRODUCTION

When it comes to economic development, it is important to point out that it includes economic disruptions, and it is inevitable to make a compromise between economic growth on the one hand and the cost of adjustment on the other. Global economic development, driven by the development of information technology and the expansion of markets, in principle results in improved living conditions for billions of people around the world. On the other hand, there are changes in certain markets and migration of the population, which directly and indirectly results in certain disturbances, creating enormous pressure on individuals and societies to adapt if they want to keep pace with change and share in prosperity and economic progress. Work from the communication aspect problematizes the impact of information technology development and trade on the labour market in developed and developing countries, which leads to the conclusion that, as far as the progress of information technology and globalization (online trade, contactless payments, etc.) and the development of trade as a whole brings great benefits to economies, possible and negative impact on groups (populations, labour force) and regions, which is a real problem that many countries are trying to mitigate and solve through timely planning and appropriate stakeholder communication. It is considered that the main reason for this problem is non-compliance or the so-called “friction” between newly acquired knowledge and skills required by the information technologies sector and technology-driven global economy, compared to traditional knowledge and skills that are insufficient or non-existent, and which many workers in the labour market at the time of change, generally do not have (World Trade Organization, 2020). Finally, it should be noted that the main policy objectives of labour market institutions are to reduce the disadvantage of at-risk groups (women), reduce unemployment, reduce segmentation in the labour market, achieve regional, qualification and sectoral mobility, at the same time increasing labour productivity.

2. METHODOLOGY

The paper summarizes, analyses and presents data that are crucial for understanding changes in trade in correlation with the development of information technologies and communication strategies, mutual influence and interdependence. Emphasis is placed on the contribution to raising awareness of the importance of connectivity and the great mutual influence of trade and information and communication technologies, which irrefutably and irreversibly affect the structure and modality of the labour market and jobs, jobs and, consequently, wages. The aim is to investigate in more detail and analyze the correlation of relations and the connection between the development and progress of trade and information technology (digitalization) and its impact on modern trade. The method of analysis (analysis and definition of terms), synthesis, description (description and interpretation of facts), induction and comparison analyze trade, information and communication technology and technological progress, their interrelationships and mutual influence, review their advantages and disadvantages.

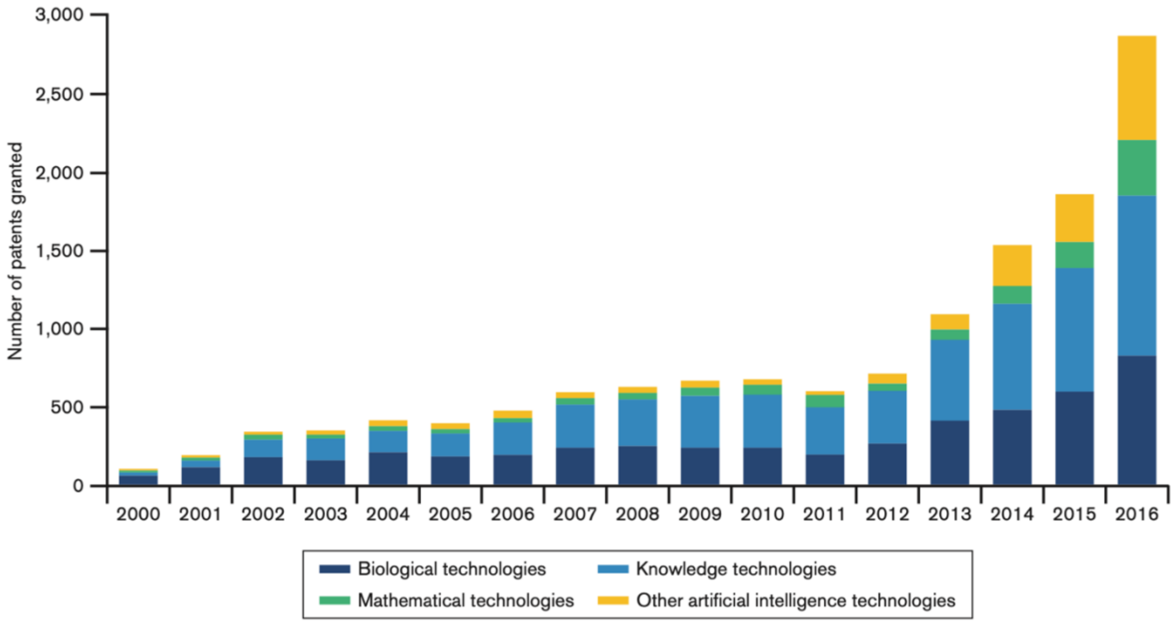
3. TRADE, INFORMATION AND COMMUNICATION TECHNOLOGY AND TECHNOLOGICAL PROGRESS

Communication in trade as an economic activity is becoming interpersonal and even intercultural, and more and more often, thanks to modern information technologies, it is taking place online. As a result, the demand as well as the evaluation of skills in the labour market is changing and the share of women in the total labour force is increasing. The labour market has evolved in a number of different ways in the national economies of countries, leading to the conclusion that country-specific factors play an important role. Furthermore, technological progress and trade have contributed to a positive impetus and development of the economy as a whole, but certain segments of workers and/or regions may have negative effects at a certain, crucial transition moment, due to insufficient preparation for the transition process. Although trade and information technology are interlinked, it is clear that the development of technology leads to a reduction in the need for labour, especially for workers with secondary education compared to those with a high level of qualification. Ultimately, it is clear that support for the transformation of the workforce in adapting to the changes brought by the modern labour market in the field of trade is necessary and if it is approached systematically and systematically through retraining and retraining of existing workforce, monitoring the development and continuous implementation of new information technologies. modern communication techniques and tools (persuasion) can ultimately result in synergistic action and development of trade, but also specific, trade-oriented information technologies, creating space for open trade and technological progress as a whole. The question of the impact of trade on workers' wages and employment is raised, and special emphasis is placed on variables such as employment and wages. Millions of jobs depend on international trade and the international market, which today are determined by rapid technological changes in the processes of globalization and deregulation, and the removal of barriers to international investment (Lazibat and Kolaković, 2004). Imports boost companies' competitiveness, while exports allow companies to gain greater market shares. The share of export-related jobs in employment within a country can increase by up to 30% in some national economies. Importers and exporters as employers largely provide higher wages than domestic market-oriented companies (World Trade Organization, 2017). For example, the increase in exports of manufacturing goods from developing countries is one of the major changes in the world economy over several decades (Krugman and Obstfeld, 2009). The opening of trade stimulates an increase in wages and employment, but not all workers' benefits, because regional and individual differences determine how profits will be realized and shared. Domestic policy, macroeconomic conditions and barriers to worker mobility play an important role in achieving and sharing benefits (World Trade Organization, 2014). Trade strengthens the demand for specific skills and can be a factor in accelerating structural change. This is also the case in economies with a comparative advantage and low educational level and skills of workers, because trade leads to upgrades and wider use of technology. Trade supports a greater representation of the female workforce in developing countries through the expansion of sectors and services that generally employ a larger proportion of the female population. By providing opportunities for additional skills, trade encourages education or schooling, which can be particularly beneficial for women in some developing countries, where women traditionally have fewer and fewer opportunities for education and even employment (World Trade Organization, 2019). Technology can be broadly defined as a set of knowledge about how to turn assets or tools into realizations themselves or as machines and equipment made from the application of scientific knowledge. There are two types of processes involved in the production of new technology: inventions and innovations. Inventions involve the formulation of scientific principles or processes, and innovation involves the direct application of that knowledge to utility in response to presumed profit or profit opportunities (World Trade Organization, 2018). Inventions and innovations continuously lead humanity to continuous technological development that can affect society differently, and the fact and question is how strong the impact of new technology on society (Dal Molin-Kränzlin, Schneuwly and Stojanovic, 2019). Digital transformation as an impulse of technological progress has affected all economies of the world, changed the ways of doing business, people's habits and enabled greater availability of products and services (Broz, 2020). Technological advances can be extremely helpful to workers, primarily through the use of technology that doubles or increases workforce performance, or changes the workforce, by introducing an automation process. But in both cases the overall effects on the workforce are two-way. Technological advances have led to higher relative demand for skilled workers and low relative demand for workers performing routine activities. The use of computers in the workplace was once the basis or driver of changes in the wages of skilled workers compared to the wages of unskilled workers. Different methodologies have been developed to estimate the share of jobs at risk of automation itself. Therefore, the estimated share of jobs in the so-called the risk is often higher in developing countries than in developed countries due to the higher share of employment in routine occupations. Automation does not necessarily correspond to future unemployment, as the development, adoption and widespread use of future technologies will depend on a number of factors, including feasibility and affordability, as well as the legal and regulatory framework in individual countries and the general acceptance of new technologies. It is assumed that automation will affect in the future so that the skills of workers will be considered obsolete, which will lead to the risk of losing jobs and replacing the workforce in these jobs (job loss). The use of computers, information technology, and the Internet has far-reaching effects on productivity (World Trade Organization, 2018). Nevertheless, it is necessary to take a step back in the historical development of the trade system. What most countries have in common is that traditional business models are changing under the influence of disruptive technology – the first innovation – retail, the emergence of department stores, the second - mail order (introduction of catalogues), the third - expanding discount sales, and the fourth disruptive innovation e-commerce (Kozák, 2019). Digital commerce and international commerce, e-commerce reduce transaction costs and increase market transparency, provide consumers with greater availability and efficiency, shopping experience, raising living standards. The use of information and communication technologies increases the availability of information markets, which lead to better and more stable functioning of the market - available information on wages, vacancies, labour market requirements (World Trade Organization, 2018). There is an increasing availability of different information at every step, supported by advances in technology and science, almost 15% of working time is spent on collecting new (timely) information that is transformed into knowledge (Hasanbegović, 2012). The effects of increasing labour and future technologies on labour market demand can have a two-way effect, e.g., the introduction of technology in and agriculture. Increasing labour productivity may be associated with declining employment in the sector. On the other hand, automation saves manpower and less work is invested by automating work processes. Technological changes are necessarily related to the redistribution of labour outside and within a particular sector, but also companies. Automation tends to affect routine activities more than non-routine activities or jobs, for the reason that machines still don't do jobs and do not work like humans, when it comes to communication and dexterity. Technology has a relatively more favourable impact on skilled workers, those who possess certain required skills and knowledge. It is often emphasized that workers with specific skills and very demanding jobs are more difficult to automate (their jobs). Advances in smart technology, artificial intelligence, robotics and algorithms are often highlighted as the Fourth Industrial Revolution. Throughout history, technological change has often been a source of concern and fear for many workers. In England between 1811 and 1816, a group of workers nicknamed "Luddites" destroyed machines they believed to be a threat and would lose their jobs and be replaced by machines, opposing the automation of textile production, cotton and wool fabrics). Individuals of the time argued that disruptive technologies reduced the demand for labour and the work of workers in one, permanent job. The consequences, as we know from history, were not what they seemed at first. With technological advances instead of reducing the number of people employed in industry, the number has increased over time to increase the efficiency that progress has made possible. The use of the steam engine in mines for material extraction and water extraction did not reduce the number of employees in mining, but increased efficiency and thus the opening of new mines and the number of employees (Jutarnji list, 2015). The introduction of technology and labour savings is not a young phenomenon. The positive link between technology and employment is expressed when it comes to research and development and / or product innovation (World Trade Organization, 2017). Technological progress and economic globalization are defined by relevant causes (as risks and incentives) of deconstruction of the (social) state - regardless of the state model they change by activating the able-bodied workforce, encouraging competition and self-initiative of the population to ensure their own well-being (Khoma and Vdovychyn, 2020). Econometric research assumes that technological growth and international technology transfer are the result of advances in knowledge and differences in growth rates and income levels between countries, embedded in labour and capital, are not specific to a country (Kandžija and Lovrić, 2006).

4. THE IMPACT OF TECHNOLOGICAL ADVANCES ON THE FUTURE OF TRADE

Technological advances, digital technologies not only affect the creation and closure of jobs, technological advances are changing the job description and the way of working and performing those jobs (World Trade Organization, 2018). Job profiles could change greatly by implementing new work tasks or changing existing ones, which would, as expected, require employees to adapt to new work processes and methods, work organization and new tools. It is estimated that across countries 'economies, millions of jobs will be affected by the automation process, especially those seeking a low level of formal education, not including a complex social interaction variable, and those summarizing routine manual tasks.

Figure 1: Development of patents (innovations) based on artificial intelligence



Source: World Trade Organization,
https://www.wto.org/english/res_e/booksp_e/world_trade_report17_e.pdf
available 2022-05-18

Technology is also creating new types of jobs. It is predictable that by 2030, the number of jobs that require a high level of education, comprehension and interpretation skills, intensive use of social skills and necessarily at least basic knowledge of communication and information technologies will grow the most. Jobs that require a combination of social and digital skills (planning, communication, teamwork) will certainly be more in demand in the future. Such jobs are on the rise in advanced economies and are well paid. However, there is still a significant gap with digital skills and technological advances that dictate them, and there is a significant number of employees with low or no digital skills, while the number of highly educated in information and communication technologies is still below the required level in many economies. Learning social skills is still neglected, despite the growing importance in the current and future labour market. In emerging economies, changing access to the types of skills and knowledge being developed and upgraded is becoming as important as the ways in which these skills are acquired, through training, education, workshops, organized and facilitated by institutions and employers (European Commission, 2021). Technology is rapidly dictating the shaping of the industry, while the labour market is determining uncertainty. The types of skills demanded by employers are subject to frequent changes, and workers are under constant pressure of active learning and acquiring new knowledge, while new jobs are created, some jobs disappear. Very often new jobs require skills other than those that are disappearing. Traditional education in terms of developing the dynamic abilities of workers is generally poorly structured.

Most educational institutions provide and offer 20th century education, while the labour market has the needs and demand for a young workforce with specific skills and knowledge of the 21st century (Jakovac and Tomac, 2019).

5. CONCLUSION

Trade, especially international trade, affects the factors of employment and wages, which is undoubtedly of existential importance for employees and the labour force, i.e. participants in national economies and international and national trade. Trade imbalances and obstacles to labour mobility, and then to trade itself, can more than certainly have a significant impact on the representation and percentage of jobs created in the state economy. In much the same way that the benefits of technological innovation are recorded, the positive effects of trade are recorded. By increasing productivity, a country can produce more using the resources available to it, gross domestic product grows (this is actually a macroeconomic indicator of the value of all final goods and services produced in the country in a given period, expressed in monetary terms) and consumer prices fall, providing consumers with benefits. Trade allows any economy to specialize and export goods and services that it can produce much cheaper, and those that it cannot, it is allowed to import then. This encourages the growth of the most competitive sectors and companies in the economies, while at the same time giving consumers a greater opportunity and a range of choices at lower (more favourable) prices. Trade can also improve growth and productivity, and can boost innovation. In such cases, the impact of trade is even more pronounced, especially with the effects of technological change. It is clear that the adjustment of workers to changes that are not small or negligible is required here as well, but the cost of that adjustment itself, which is large and lasts for a certain period of time, is often not considered. Clearly, as companies adapt to the changes that are actually necessary, so do the workers themselves, who can thus further increase the productivity and competitiveness of companies in the market. With the further development of technologies, they dictate, create and extinguish jobs, change the conditions for certain jobs, work processes, and all of the above requires adaptation and requires a highly skilled workforce with specific knowledge and skills, thus further deepening the gap between low-skilled and highly skilled workforce. The areas and segments of trade, technological progress and the labour market (jobs and labour force) covered by this work clearly indicate the need to acquire knowledge and skills, because indeed, knowledge is power and very valuable capital, and it can be said that it enables and gives competitive advantage.

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CHALLENGES AND OPPORTUNITIES RELATED TO AGING POLICY TO ENSURE ECONOMIC GROWTH AND INNOVATION IN THE SLOVAK REPUBLIC

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ABSTRACT

Population aging is already one of the biggest challenges for all EU countries and hurts all spheres of society. That is why the European Commission, in its Green Paper on Aging 2021, also calls for a debate on new opportunities and opportunities for an aging European society. The projected growth in the number of elderly people and the decline in the economically active is perceived not only as an economic but also a social threat. We are unlikely to be able to reverse this undesirable process, so it is necessary to shift the negative perception of the aging process as a burden on public finances to the perception of aging as an opportunity for sustainable economic growth. Older people are able to make a significant contribution to creating social and economic value in our society. The elderly population is an important and essentially growing group of consumers. The financial situation of seniors is gradually stabilizing, as the vast majority of them no longer have obligations, their own housing has been paid for and their children are already insured. The Slovak Republic associates demographic development mainly with expenditures on the social and health system, but so far it abstracts from the penetration of aging into other areas and does not reflect on the possible opportunities of securing economic growth as the population ages. In this paper, we aim to identify selected sectors for socio-economic challenges and opportunities related to the aging population and outlining measures to ensure economic growth and innovation using the potential of a growing group of silver generation in the Slovak Republic.

Keywords: *Economic growth, Innovation, Population aging, Slovak Republic*

1. INTRODUCTION

Demographic development in the countries of the European Union accentuates the significant aging of the population, the consequences of which are reflected in the economy and increased pressure on sustainable public expenditures, especially on social and health care systems.An aging population results in changes in the age composition in favor of the old compared to the young, which already represents one of the biggest challenges today and which will have an impact on all areas of society in the future.The increasing number of elderly people presents many new challenges,but the potential and solutions are sought only gradually. According to Eurostat, Slovakia is going to be the second fastest aging economy in the EU by 2070, while currently, based on the ratio of the population aged over 64 to the population aged 20-64, we are one of the youngest economies in the European Union. Low fertility and increasing average life expectancy significantly changes the age structure of the Slovak population, but also in addition the economy. While in 2019 there were almost 4 people of productive age (20-64 years) for one person older than 64 years, in 2070 there will be only 1,6 of them. The aging of Slovak society is a long-term process, as since the beginning of the 1990s people's lives have been getting longer in the Slovak Republic, which is mainly caused by the stagnation of mortality rates. At the age of 65, the average further life expectancy for men has increased from less than 13 years to more than 15 years. For women, it went from almost 16,4 years to 18,8 years.

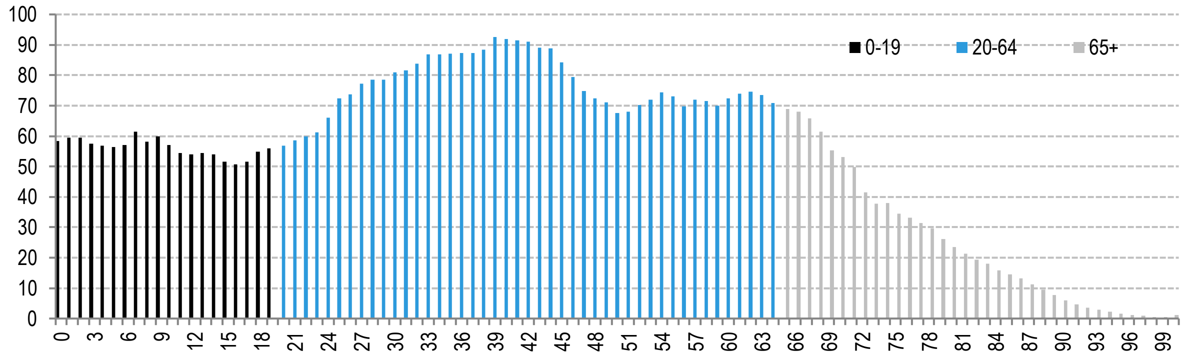

Figure 1: Age structure of the Slovak population (in thousands of inhabitants, 2019)
(Source: Institute for Financial Policy, 2021)

By 2060, according to Bleh & Šproch (2018), the average life expectancy at the age of 65 should increase by 22 years for men and by more than 24 years for women.This fact will be caused mainly by an improvement of mortality rates for the elderly. The fastest growth of the aging population will be between 2040 and 2060,as during this period the cohorts born in the 1970s and 1980s will reach the post-productive age. The aging of Slovak society represents one of the biggest challenges in the 21st century because it will cause significant societal changes, the impact of which will affect every citizen of the Slovak Republic. Despite the fact that population aging is considered to be a natural physiological process, which cannot be stopped by anything, it can be prepared for by effective public policies aimed at supporting all age categories. In the 2021 Green Paper on Aging, the European Commission calls for a discussion on the challenges and opportunities of an aging European society. Based on the above facts, it is therefore necessary to focus on a study of the aging process, not as a problem, but as a process with new possibilities and opportunities to ensure economic growth and innovation. The aging of the population leads to the emergence of the so-called silver economy, which the European Commission defines as economic opportunities resulting from public and consumer spending related to the aging of the population and the specific needs of the population over 50 (European Commission, 2015). Seniors will create a market, as they will become an integral group of clients, patients, customers and service users. Therefore, it is increasingly important to develop new concepts that support a new modern understanding of the aging process. The aim of this contribution is to identify selected sectors of opportunity for socio-economic challenges and opportunities related to population aging and to outline measures to ensure economic growth and innovation using the potential of the increasing growth of the silver generation in the Slovak Republic.

2. THEORETHICAL BACKGROUND

The beginning of demographic aging can already be observed in the demographic revolution, during which there was a transition from relatively high values of mortality and fertility rates to their relatively low levels. (Pavlík and Kalibová, 2005) Individual indicators which are included among the main causes of changed demographic development are especially the progress in medicine, technological and scientific progress, growth in productivity, striving for an increased standard of living, crisis of the institution of marriage, educational levels, changes in the labor market, etc. (European Commission, 2021; Pastor, 2015; Hvozdíková, 2012; Dováľová, 2011) Aging will affect competitiveness, economic growth and employment. Mládek and Káčerová (2008) consider demographic development as an event that does not take place in isolation from social development, but that it is closely connected with geographical, economic, political and social conditions. The impact of aging will gradually be reflected in the national economy, in the context of changes in sales and demand for services, products, and the workforce, to which the economy and business entities will have to respond with their solutions. (Sika, 2020) According to Matušovičová (2016), the older generation currently has significantly higher incomes than in the past and is willing to spend it. Demographic changes offer opportunities for economic growth, but only if they are supported by politics. (Feng-Mason, 2005) With a high probability, it will not be possible to reverse the aging process, and therefore it is necessary to shift the perception of aging as a burden to aging as a step in the progress of civilization and an opportunity, both for the citizens themselves and for ensuring sustainable economic growth. (Baláž, 2013) Failure to take advantage of opportunities and failure to respond to challenges that demographic change brings can lead to ineffective policies and insensitive services that do not use the potential and furthermore do not take the needs and aspirations of the growing proportion and number of older people into account.

3. METHODOLOGY

The aging of Slovak society is a fast and irreversible process, but also creates a challenge for society to prepare for the new reality. Sectors of the economy need reforms with respect to the new aging population. In this context, the aim of this contribution is to outline selected sectors of opportunities for ensuring economic growth in connection with the potential of the growing group of seniors. In order to achieve the goal of economic growth, classic scientific methods such as the method of comparing knowledge from available literary sources and the method of analysing existing approaches, extracting common and opposing opinions were used. At the same time, the deduction method was used to justify individual conclusions.

4. RESULTS

Historically, the market has largely neglected the age group of senior citizens with justification that it is an uninteresting segment of consumers. With the growing amount of senior citizens, this fact is to some extent surprising, as over the last 16 years there has been an increase in the number of beneficiaries of old age and early old age pension by a rate of almost 20%.

Year (until 31.12.)	2005	2010	2015	2021
Number of pensioners	924 285	954 661	1 032 197	1 096 225

Table 1: Number of pensioners receiving old-age and early old-age pensions (Source: own processing on the basis of data of the Social Insurance Agency)

According to the projection of the Slovak population by the year 2200 (Vaňo, 2015), a dramatic increase in the population aged 65 and over is expected by more than 90% by 2065, which will cause a change in the shares of age groups in the population to the values of 20% (children and youth), 50% (productive age) and 30% (seniors). Currently, the share of people in the post-productive age reaches the level of 17.39% (STATdat, 2022). The above projection shows the significant potential of this target group and it is expected that seniors will move from being marginal customers to being an equal group of customers, which will create a sufficient prerequisite for economic growth. It will be a more highly educated aging population with different requirements for spending their free time as their predecessors had. The challenge is for business entities to focus on innovating their products and services and adapt to individual needs and requirements, which is in line with the accepted concept of Society 5.0, which is human-centered and involves almost all industries and other areas of society using innovations and other innovative technology in order to support economic development and the creation of new jobs. Companies must take into account that the innovative products are adapted to seniors, which means that they should be easy to use, high-quality, safe and should have a longer lifespan, as the senior generation is less prone to the frequent replacement of goods.At the same time, companies must incorporate this group of customers into their marketing plans, which can create a competitive advantage over the competition. Demographic processes also affect labor market demand, as outgoing cohorts from the labor market are about 50% higher than incoming cohorts, creating pressure to extend the retirement age. Aging also affects the structure of the labor force, the lack of which is already felt in some professions (specialists in health and nursing, social workers). The shortage of labor is compensated by automation in order to maintain productivity. According to the National Program of Active Aging, Slovakia will lack up to 21% of its workforce in 2050. (MPSVaR SR, 2021) According to Lednárová (2021), the aging of the population will be reflected in the labor market in full force after 2040 and society will have to cope with higher public spending and at the same time look for opportunities concerning how to extend people's working careers, manage migration or restructure the economy. It is necessary to take measures to support greater involvement of selected population groups in the labor market. The change in the age structure of the population of the Slovak Republic will significantly affect the labor market, which will mean the need to adapt processes to meet this change and direct them to the specifics of the needs of the older workforce for employers. Support of this change by the state assumes an effective age-management policy. The applicability of the elderly in the labor market will create pressure to adapt working conditions to their specific conditions and health status, as well as to tax and levy barriers to their work activities. The highest number of people aged 60 and over are employed in education, industry and healthcare. For this reason, labor force replacement will play an important role in these industries. Employment growth is not expected in these industries, but it will not be able to satisfy the replacement demand from the labor force resources under the conditions of the Slovak Republic. The situation is very similar in the field of education, where the second highest average age of employees is 48,3 years. By 2040, the weakest cohorts, of the same age group, will enter the labor market in large numbers, so it must become a priority in which field the workforce will graduate and in which field they will be employed. Older workers can be an asset to employers compared to the younger generation due to years of work experience, maturity and lower job fluctuation. (Páleník et al., 2012)

Sectors of economic activity	Average age
Activities in the field of real estate	48,9
Education	48,3
Agriculture, forestry and fishing	48,2
Water supply; cleaning and drainage of waste water, waste and services	47,9
Mining and quarrying	47,4
Electricity, gas, steam and cold air supply	47,4
Other activities	46,7
Healthcare and social assistance	46,7
Construction industry	46,6
Public administration and defence; mandatory social security	45,7
Transport and warehousing	45,7
Arts, entertainment and recreation	45,7
Administrative and support services	43,6
Industrial production	43,4
Professional, scientific and technical activities	43,3
Wholesale and retail trade; repair of motor vehicles and motorcycles	42,8
Accommodation and catering services	41,8
Financial and insurance activities	40,9
Information and communication	40,2

Table 1: Average age in sectors of economic activities
(Source: own processing on the basis of data of the TREXIMA Bratislava)

The aging of the population also creates pressures on public policies. The role of the state in relation to aging is to ensure the stability of pension systems, social and health care, education and housing. The Slovak Republic will be one of the five countries of the European Union in which all expenses connected to aging will increase by 2070. For this reason, the Slovak

Republic will have to proceed with reform measures following the expected demographic trends.

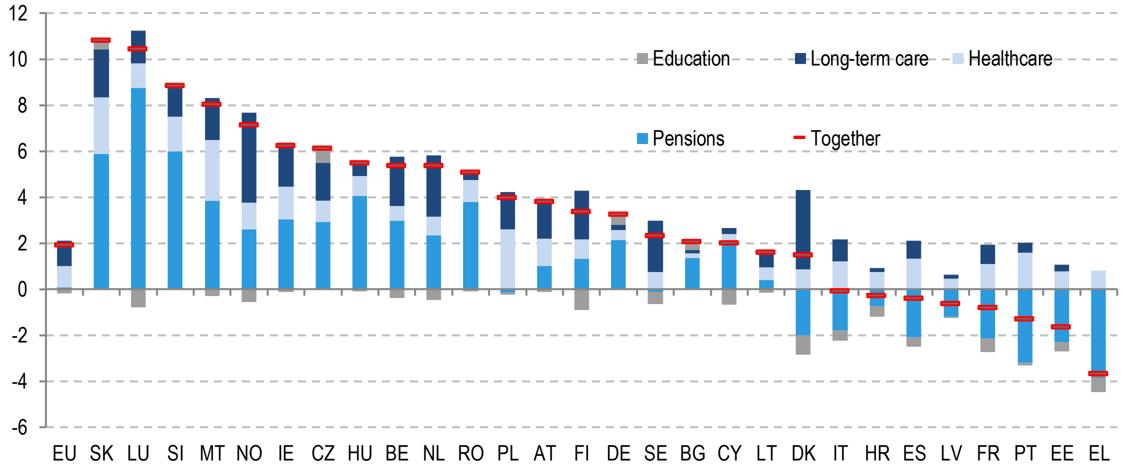

Figure 2: Increase in age-sensitive expenditure between 2019 and 2070 (in % of GDP) (Source: Institute for Financial Policy, 2021)

In 2030, there will be 1,2 million pensioners in the Slovak Republic and an average of 0,6 pensioners in comparison to 1 worker, which raises the question of adequate provision for old age and the sustainability of the pension system. Expenditure on pension benefits has more than tripled in the last 15 years, which affects the sustainability of the pension system and creates tension between generations, as pressure increases to reduce the level of solidarity in insurance systems and increase the level of subsidiarity. The projected increase in the number of old people and the decrease in tax payers is seen in society as a demographic time bomb. The effects of population aging on pension systems will differ depending on whether the main income is a public pension or a private pension in old age. (Sika-Vidová, 2022) In order to strengthen the financial sustainability of the public pension system, the Slovak Republic will have to incorporate the so-called automatic stabilizers, which will, however, cause a reduction in the compensation rate and will subsequently have a negative impact on the standard of living of Slovak pensioners. The reimbursement rate from the public pillar reached the level of 41,76% in 2021, but in 2070, according to the Financial Policy Institute (2018), it is expected to be only 38,4%. The compensation should be a private pension system, which accumulates and evaluates funds during the savings phase. At the end of December 2021, 1, 680, 220 savers were involved in old-age pension savings, and the amount of managed assets in pension funds amounted to almost 12 billion euros. A reduction in the reimbursement rate may create additional pressure in the future to increase public spending on long-term care, for which demand will grow due to aging. The demand for social services dependent on the help of another person, which includes the provision of nursing services and social services in facilities, will grow due to aging. At present, the Slovak Republic shows its physical and financial inaccessibility and therefore supports the process of deinstitutionalization of social services, which is, however, significantly slow due to procedural and financial obstacles. Despite the fact that in 2014 the creation of large-capacity facilities was legislatively limited, there was no adequate development of community services. In 2020, there were 6,863 applicants for the provision of social services in a facility for senior citizens, which means that over the past four years there has been a sharp increase in applicants by 24% and at the same time a sharp increase in the number of people waiting for the provision of social services. The process of deinstitutionalization opens up space for increasing the quality of provided social services as well as creating jobs. Caregiving services in 2020 were provided by 5,760 employees of cities and municipalities, and non-public providers employed 1,723 caregivers. In connection with the growing number of applicants, it is necessary to increase the number of specialized staff, introduce new types of community care and ensure regional availability of services, which will lead to increased employment and reduced poverty in the less developed regions of Slovakia. The change of generations and aging is the driving force behind the current decline in human resources on the labor market. The generation born between 1950 and 1955 has retired. This generation mainly had primary and lower secondary education. The next strong generation that will leave the labor market will be mainly after 2040. This generation already has a higher education, mostly with school leaving exams. In this context, the findings regarding the digital literacy of older people and the management of modern means of communication and technology in the digitalized era are also important. Digital literacy at a higher than basic level in Slovakia among persons under 74 years of age is comparable to the EU28 average, but digital literacy lags behind the EU28 average in persons 75+.The absence of digital literacy among older people can reduce their access to public resources and services and furthermore to the necessary information and tools for social participation. (MPSVaR SR, 2021) It is also an opportunity to cultivate human potential by creating opportunities for lifelong learning that is adapted to senior citizens. It is an essential element for improving their social adaptation and personal well-being. Lifelong education along with vocational training,can provide an opportunity for better integration of older people into the digital world. The acquisition of digital skills by older people is a means for online education, as well as for improving their access to health care and other digital services and will be the prerequisite for active part-time work or home office, which will contribute to prioritizing an independent life.

5. CONCLUSION

The aging of the population represents the most significant demographic change that is guaranteed to come and manifest itself in dramatic yet predictable ways.A company, when preparing its long-term plans, should not ignore this fact and should include an aging policy into its priorities. Older people are able to contribute significantly to the creation of social and economic value in our society. The elderly population constitutes an increasingly important and growing group of consumers. The financial situation of seniors is gradually stabilizing, as the vast majority of them no longer have obligations, their own housing is paid off and their children are already secured. The Slovak Republic connects demographic development mainly with spending on the social and healthcare system, however, it ignores the penetration of aging into other areas and does not reflect on the possible opportunities to ensure any economic growth from the aging of the population. It is necessary to realize that society will function differently as a result of aging. Growing expenditures on the social and healthcare system will create a need to re-evaluate these systems. Large-scale implementation of social and technological innovations such as e-health, mobile healthcare, remote care and integrated care, could improve the efficiency of health and long-term care systems. The changing composition of the population will put pressure on reforms of the labor markets. Increasing life expectancy will open up new business opportunities in the demand for goods and services, which companies should consider in their sales plans. This group of consumers can be of interest mainly for the business sector because they have considerable purchasing power and a willingness to use accumulated savings to maintain or increase their consumption even in old age. Customized housing solutions and smart homes with sensors can increase the safety of elderly people who live alone. The number and educational level of seniors changes the view of active old age, the educational system, consumer behavior, to state briefly, opens up a space for innovation and economic growth. Systematic coordination and coherence of individual policies applied at different levels and sectors are a necessary prerequisite for managing the penetration of the aging population into many areas of the economy and using this opportunity for economic growth. However, the aging of Slovak society not only concerns economic growth and adopted social measures. It is primarily related to society as a whole and how we interact between generations. We must realize that seniors are full-fledged members of society and that we cannot only prefer the opinion that the cult of youth expresses. At the same time, we must also discuss how to ensure that everyone participates in the life of our society, which presupposes the involvement of all layers of society in the discussion.

ACKNOWLEDGEMENT: *The paper is the output of the research grant VEGA no. 1/0251/19 "Investments of households in housing and the possibility of their alternative use as additional income at the time of receiving the pension benefit".*

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IMPACT OF DIGITAL TRANSFORMATION TECHNOLOGIES ON ERP SYSTEMS

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ABSTRACT

The digital transformation is a concept that represents a fundamental change in the way of traditional business using digital technologies and the application of new business models with the aim of improving the performance of the organization and faster adaptation to an environment that is constantly and rapidly changing. The most dominant digital technologies in this context are: Cloud Computing, Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML), Blockchain, Virtual Reality (VR) and Augmented Reality (AR). At the same time, digital transformation brings a significant shift in thinking when it comes to business strategies, business processes, business models and organizational structures, and introduces new disruptive models that in the future should generate a significant share of added value. On the other hand, the foundation of any business is information system, today known as an ERP system, that needs to respond to growing needs as well as radical changes in today's business such as advance analytics, proactivity and predictability. Under this influence, ERP systems are also being transformed. This paper analyses digital transformation technologies in the context of ERP systems that should provide support to a digitally transformed business. To be more precise, focus of paper is based on providing answer to research questions: How implementing digital transformation technologies through cloud ERP systems contribute to increase the business value and make business smart?

Keywords: *digital transformation technologies, transforming the business, cloud ERP systems, Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML)*

1. INTRODUCTION

The success of a company's business today largely depends on information systems and related ICT technologies. Nowadays focus is on digital transformation, which should enable companies to digitize, informatize and automate their business. ERP systems are also closely related to digital transformation. With the popularization and development of cloud computing, a new generation of ERP systems called cloud ERP systems have emerged. Including the benefits of cloud computing and the functionality of traditional ERP systems, ERP systems in the cloud have become the main focus of today's ERP solution providers. Also, customers have recognized the benefits that ERP systems in the cloud bring and are increasingly deciding to implement them to support their business. As the market for ERP systems is growing and organizations become more and more demanding, such systems are constantly being improved and connected with new and modern technologies brought by digital transformation. New trends are emerging in the ERP market, focusing on cloud ERP systems that should be integrated with digital transformation technologies like: Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML), Cognitive Services, Blockchain, Virtual Reality, Augmented Reality and Mobile Technologies. All this is combined with a new concept: an intelligent ERP system that focuses on large amounts of data.

In order to be able to collect, analyze and display all data as easily, quickly and efficiently as possible, and in order to meet the needs of the market, modern ERP systems should include digital transformation technologies.

2. RELATED WORK

2.1. The importance of digital transformation and related technologies

Digital transformation has been one of the topics that has been widely researched and has become an important topic in the scientific community. Creating Digital transformation strategy organization makes a radical change through a smart integration of digital technologies, processes and knowledge across all levels and functions. The conclusion of many studies is that companies need to find ways to successfully implement (and in some cases create before) strategy of digital transformation. Technology is just part of a complex puzzle that must be solved if company wants to remain competitive in the modern digital business world. Other parts of the puzzle relate to organizational change, organizational structure, processes and no less important organizational culture (Vial, 2019). Schwertner (Schwertner, 2017) propose one of the approaches to exploring digital transformation by grouping changes in three areas:

- customer experience - working on a more detailed understanding of customers, using technology to stimulate customer growth and creating more points of contact with customers;
- operational processes - improving internal processes by encouraging digitalization and automation of business, enabling development of employees using digital tools and collecting data for monitoring and analyzing business in order to facilitate better and better business decisions;
- business models - transforming business by increasing the physical supply of digital tools and services, introducing digital products and using technologies to provide global shared services.

Nicoletti (Nicoletti, 2021) stress that the digital transformation is part of larger change that is currently happening. The development and use of new technologies, primarily information technologies, has started a new revolution. Introducing and developing new technologies such as the internet of things, automation of machines, sensors, based on concept of Industry 4.0 makes connected systems and machines „smart". At the same time, great shifts are taking place in areas ranging from mobile to nanotechnology. The fusion of multiple technologies and the knowledge they bring is the foundation of the fourth industrial revolution. Digital transformation is actually a tool and product of the fourth industrial revolution. It combines different technologies and finds new applications that fundamentally change the way we do business. Implementing digital transformation organization’s aims is to improve the overall business by encouraging and implementing change through the integration of various technologies and systems. All definitions of digital transformation have some common base. All of them claim that at the core, it is the desire and opportunity for change, the use of modern technologies, solutions and tools (Vial, 2019). Digital transformation is not just the application of technologies to build new business models, redesign or create new processes, achieve higher profit or higher levels of work efficiency in the organization. As mention previously, defining strategy is also very important. The use of digital technologies affects organizations, changes their structure, processes, etc. There are organizational changes that need to be understood and it is necessary to reduce resistance to change. In the context of implementing digital transformation, it is not enough to just use as many modern technologies as possible. The strategy must not be based on one dimension - technologies. It is necessary to have a vision of development that will be supported by the technologies that are being implemented.

Only then desired effect will be achieved and the digital transformation will truly take place (Schwertner, 2017). Ziyadin at al. (Ziyadin et al., 2020) describe that impact of digital transformation is visible within organizations but also outside the organization. Internal changes are manifested in changes in business processes, changes in organizational structure, etc. The view of the organization from the outside refers to clients / customers, their habits and how their behaviour has changed and the way they do business with the company. Digital transformation technologies enable gathering large amounts of data and advanced data analytics.

Data analysis is the basis for various predictive analyses and analyses of the strengths and weaknesses of the current marketing, sales or production segments. Understanding data and their use help in deeper understanding of core business, customers and their habits, aligning with business strategies and better decision making. We are in an age when the use of many technologies such as mobile, location-based, virtual and augmented reality, digital twins, blockchain, artificial intelligence, chatbots, process automation, internet of things and other can lead to new possibilities. Innovations are built on top of each other and create a fusion of technologies that are gaining completely new applications (Ziyadin et al., 2020).

2.2. Relationship between digital transformation and ERP systems

Organizations decide to implement an ERP system for various reasons. The most common is the need to unify all current (and/or legacy) information systems, to one solution that will cover all business functions of the organization. Given that ERP systems provide support to the entire business, it is logical that the implementation of digital transformation is closely related to the ERP system. The ERP system is actually a platform on which the results of the digital transformation implementation should be visible.

The emergence of new technologies greatly affects ERP systems and it is logical that they are implemented in future versions of ERP systems. Cloud computing, artificial intelligence, mobile, internet of things, voice recognition, natural language processing, cognitive services, robotic process automatization, machine learning, predictive analytics and many other are becoming features in ERP systems (Sokač and Picek, 2019). New generations of ERP systems have the ability to bridge the gap between new technologies and business requirements. New ERP systems are a logical choice when implementing digital transformation. The most important thing that become a base layer for digital transformation are cloud ERP systems. ERP systems in the cloud have become the initiator of digital transformation and bring with them a number of advantages and new functionalities compared to traditional on-premise ERP systems. The transition to cloud ERP systems is no longer uncommon as such solutions help in reducing initial development costs, speed up implementation and eliminate the need for internal software and hardware (Sokač and Picek, 2019), (Jenab et al., 2019).

ERP systems have grown from static and large systems that focused on business functions and were very well organized when it comes to optimizing data and business processes, into strategically important component of organizations. The role of ERP systems has to be reconsidered under the influence of digital transformation. Asprion et al. (Asprion et al., 2018) presents shift from view where traditional on-premise ERP system is presented as "System of Record" (SoR) to new ERP system that has to include "System of Engagement" (SoE). Concept is presented on Figure 1.

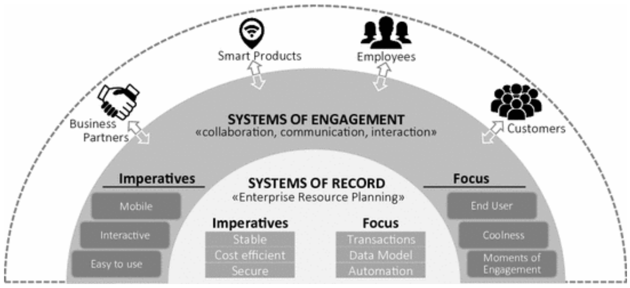

Figure 1: System of Engagement vs System of Records
(Source:(Asprion et al., 2018))

Traditional on-premise ERP system presented as SoR are stable, process-oriented with all information that is important for business. System of Engagement (SoE) are systems or application that are conceived and created to enable users, partners and employees everything they need to succeed in business based on digital transformation technologies. Integrating System of Records (SoR) and System of Engagement (SoE), a new generation of ERP systems is being created. This transformation of ERP systems isn't so easy and Asprion et al. (Asprion et al., 2018) propose two dimensional model of ERP transformation with four categories: Classical ERP, ERP separated from SoE, Enhanced ERP and ERP & SoE combined.

Also, for successful (digitally transformed) business, organizations will need focus on: defining and adopting strategies that will be based on new technologies implemented in ERP systems, human resources and process improvement. This is where the new ERP systems play a key role and the management has to decide about companies' future ERP landscape (Asprion et al., 2018).

3. OVERVIEW OF APPLICATION OF DT TECHNOLOGIES IN INTELLIGENT ERP SYSTEMS

More and more organizations shift from on-premise ERP systems to cloud ERP systems because cloud ERP systems are more technologically advanced and economically viable (Tongsuksai and Mathrani, 2020). Intelligent ERP systems (iERP systems) are a new generation of ERP systems in the cloud that have emerged under the influence of digital transformation (Jenab et al., 2019). Along with the new generation of cloud ERP systems, the upcoming digital transformation technologies are integrated with such ERP systems (Tongsuksai and Mathrani, 2020). The most significant technologies, which originate from the industry 4.0 framework are: internet of things, artificial intelligence, virtual and augmented reality, machine learning, blockchain and big data. These technologies provide companies with the opportunity to improve their business and start developing new products and services in the digital economy (Asprion et al., 2018). Intelligent ERP systems in the context of manufacturing companies form the basis of "smart factories" (Majstorovic et al., 2020). Thanks to digital transformation technologies, ERP systems have been transformed into flexible and smart systems suitable for today's modern business. Morris et al. (Morris et al., 2016) claim that intelligent ERP systems are characterized by progress through three dimensions: user experience, process and data (Figure 2). Data, gathered from different connected devices up to transactions and analysed by algorithms, are central part of intelligent ERP systems and directly related to processes and assistive and conversational user experiences (UX). Clients today are more in favour of those intelligent ERP systems that bring a combination of these three dimensions together in delivered products and services that can be configured based on current learning and then applied this learning to improve processes and user experience quality.

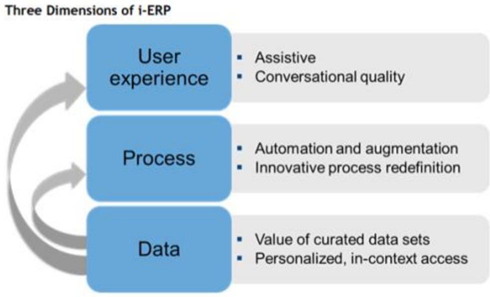

Figure 2. Three dimensions of intelligent ERP systems
(Source: (Morris et al., 2016))

The new generation of ERP systems brings more possibilities for increasing the efficiency and effectiveness of business. Anguelov (Anguelov, 2021) state that iERP systems brings opportunities for: integration and/or optimization of business process, integration of different activities that creates dashboard of doing business in real time and finding the "right" decisions by automation of decision-making through analysis of opportunities and alternatives. Tongsuksai and Mathrani (Tongsuksai and Mathrani, 2020) presented an extensive literature review with 16 studies of using different technologies in cloud ERP systems. They review 16 studies illustrated the benefits of integrating cloud ERP systems with new technologies. These are: improved information flow and real-time data as well as capital flow for easier decision-making; using mobile Internet technology and mobile phone operation functions as support for the system; integrative technologies can support mobile cameras to scan RFID or barcodes for managing information, real-time tracking management (inventory and intelligence purchasing; established network-based resource-sharing; increase in productivity; reduction of waste and facilitating maintenance operations; flexibility; improving quality; reducing manual human interactions; reducing product and labour costs; helping practitioners develop better insight and decisiveness for investing in advanced technologies in pursuit of manufacturing excellence; reducing errors around products; helping to obtain accurate forecasts concerning supply and demand of the product; and the management team can understand the market reaction and trends, adjust the enterprise strategy, and improve product competitive. There is no doubt that new technologies have influenced the ERP industry and open new possibilities that can give organization added value. Following sections present an overview of how the most important technologies integrated in iERP systems contribute to increasing the business value.

3.1. IoT in iERP systems

The technology with big potential in ERP systems that can creates added value is Internet of things (IoT). IoT "opens the door" to operational excellence, work automatization in the processes where it is applicable. Main characteristic is getting real time data from various sources via internet across organization and making analysis and plans that can serve as a basis for operational and/or strategic levels (Tongsuksai and Mathrani, 2020). Accessibility (gathering) and precision (large amount of data in real time) of information within organization also emphasize Kumar in his paper (Kumar, 2020). Potential of the IoT technology was recognize by ERP vendors IoT is becoming a standard ERP functionality. The most dominant reasons for integrating IoT with the ERP system are possibilities to gather meaningful data across the whole company then visualize collected data and control the IoT device through the ERP system (Sokač and Picek, 2019). The companies are aware that IoT gives improvements like: smarter analytics, better security in all segments, increased productivity, smart inventory, safer travel and real time demand visibility (Singh and Singh, 2015). With the integration of IoT and the ERP system, questions that always arise are about devices connectivity, APIs, data accuracy and reliability, heterogeneity, complexity and security.

Can company implement all technology at same time? No, company has to implement a new technology gradually according to priorities defined in ICT strategy. It should keep in mind that the data provided by devices does not necessarily mean that they are immediately usable so the question of data quality and quantity also arises. ERP systems that implement IoT have spread across several industries but the most value will be generated in manufacturing and construction. Some studies can be read in (Lee et al., 2018) and (Cioffi et al., 2020). IoT integration will be seen everywhere within the ERP software industry and become a valuable asset.

3.2. AI in iERP systems

One of the most dominant technology in modern ERP systems that creates many opportunities for business process optimization is artificial intelligence (with all areas like: Expert System, Fuzzy Logic, heuristic Methods, Machine Learning, Agents/ChatBot, Natural Language Processing, image processing and Data Mining) (Cioffi et al., 2020). Akturk (Aktürk, 2021) state that AI can be view from four groups: thinking like a human, acting like a human, thinking rationally and acting rationally. Using AI in ERP systems depends on the level of developed “intelligence” which is directly in correlation with significant resources which can exceed the total cost of ERP system. But since there are many segments in ERP systems where artificial intelligence can add value each of them has to be viewed separately. (Cioffi et al., 2020). Some segments of that potential use, where significant added value can be created are optimization of business processes, making optimal or suboptimal decisions (advising), getting insight of human preferences and values, image recognition and recognizing anomality’s (Anguelov, 2021). But that potential is in the hands of management who need to make a decision to implement them in everyday activities. (Anguelov, 2021) distinct approaches in the implementation of AI, where in one approach AI makes decisions and then proposes actions for their implementation and the other one where AI offers different options/alternatives for a solution, but the final decision is taken by a human. In the context of implementing AI in ERP system, the second approach is more acceptable because AI automates the work of the manager and the same time allows him to make more adequate decisions based on current circumstances. Akturk (Aktürk, 2021) presents comprehensive systematic analysis of studies on AI in ERP systems emphasizing use of AI in demand forecasting, supply chain planning, and optimization problems. Especially he stresses efficiency in supply chain management for: early preparation of products with AI, prevention of faulty product shipment, and reduction of delivery. AI applications in supply chain management aim to solve problems such as selecting suppliers, estimating sales and purchasing demands, and determining transportation network. But artificial intelligence is applicable in each module of intelligent ERP system.

3.3. *Machine Learning* in iERP systems

As a subset of Artificial Intelligence which gives computers the ability to learn without being explicitly programmed, machine learning (ML) enhances ERP systems. Goodison (Goodison, 2021) presents 4 ways where machine learning could work with data from ERP system: customer segmentation, customer churn, recommendations and fraudulent transactions. Very interesting segment of applying machine learning is identify unexpected customer behaviours. More useful data can lead to organizations progress (Jenab et al., 2019). As a technology, machine learning can drastically enhance ERP systems. Marsh (Marsh., 2021) identified the similar areas but also emphasizes some others like: Simplifying Immense Data, Automating Repetitive Tasks, Proactive Problem Solving, Unparalleled User Experience and Customer Service, Enhanced Marketing Solutions and Department Integration within the Organization. Panorama Consulting Group adds (Panorama Consulting Group, 2020): Higher Product Quality, Improved Production Capacity, Predictive Analytics, Personalized Data Insights and

Quicker Root Cause Analysis. Machine learning would help to identify unexpected customer behaviors. Effective analytics can help a company to locate more useful information and progress further than ever before (Jenab et al., 2019). Some areas of application: (1) Designing machine learning algorithms for track-and-traceability to predict which lots from which suppliers are most likely to be of the highest or lowest quality. (2) Improving demand forecasting accuracy and enabling better collaboration with suppliers. (3) Improving product quality by having machine learning algorithms aggregate, analyse and continually learn from supplier inspection, quality control, and product failure data. All that bring us to conclude that integrating ML capability into ERP system rise the value of business.

4. CONCLUSION

The core of digital transformation is not only disruption or use as many technologies as possible. It's about crating added value, resources, optimization and the capability to rapidly adapt when is needed through technologies that are coming and data they provide. All those elements are connected by strategy, so focus has to be on strategy before technology. The focus of paper was based on providing answer to research questions: How implementing digital transformation technologies through cloud ERP systems contribute to increase the business value and make business smart? The integration of digital transformation technologies and ERP systems certainly raises the level of business value and will be reflected in: increasing the efficiency of ERP systems, new business models, harmonizing physical operations with digital assets in real time. The direct consequence of this is better decision-making, and thus business. It is clear that all digital transformation technologies can't be integrated at the same time in ERP system. Currently, primary technologies potentially used in ERP systems that can create added value are: CC, IoT, AI and ML. Also, it is worth to mention upcoming Augmented Reality and Virtual Reality as a set of technologies that are still in their infancy and are constantly evolving and the business value is already identified. In addition, digital natives are entering the job market with different mindsets and expectations, not least regarding how they want to learn and work (Asprion et al., 2018).

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PERFORMANCE EVALUATION AND MANAGEMENT IMPORTANCE IN ORGANIZATIONAL MOTIVATION

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ABSTRACT

Employees are the ones who control and sustain an organization. The secret of a successful organization is in the people management. And so, it is also in social organizations that employees play a fundamental role in their functioning and success. Therefore, the motivation of employees is crucial. This research is based on people management practices, namely the performance evaluation and management and organizational motivation aiming to understand the importance of performance evaluation and management in motivating employees. The present study was carried out in a Integrated Continuing Care Unit, through a mixed methodology, using different methods of data collection: in the qualitative approach, a semi-structured interview with the technical director was used, whose function is managing people; and in the quantitative approach, a closed-type questionnaire to 58 of the organization's 63 employees was applied. The interview contains ten questions and the questionnaire has nine questions, both divided into the research themes: People Management, Motivation Factors at Work, Performance Evaluation, and Performance Evaluation and Management. The results obtained show that the employees consider the following factors as the most important contributors to their motivation: good relationship with colleagues and the salary reward as extrinsic factors and the personal growth and personal achievement as intrinsic factors. Both employees and technical director consider that performance evaluation is a motivating factor, that performance evaluation and management is an important process and that, when implemented in the organization, it would be a motivating factor.

Keywords: *management; people management; performance evaluation and management; motivation.*

1. INTRODUCTION: CONTEXTUALIZATION

Management function is a typical function in an organization, having the primary objective of acquiring the necessary people for the organization, integrating and developing them so that the objectives previously outlined by leaders are achieved. Thus, People Management intends to approach the purpose inherent to the function, that is, the manager aims to optimize human capital so that the pre-designed objectives are achieved, also considering external and internal factors to the organization (Reis & Silva, 2014).

Assuming that an organization is a social system composed by individuals with personal goals and who see their collaboration and contribution in the organization as a way to satisfy them, the main objective of the manager is to reconcile organizational and personal goals, restructuring the organization, the interpersonal relationships, the relationship of the individual with his task, in the attempt that the individual, when trying to fulfill his personal interests, contributes effectively and efficiently to the objectives proposed by the organization (Sousa, 1999). Sotomayor et al. (2014) argue that organizations do not only need raw materials, but also knowledge, and it is in this sense that people management gains increasing importance, and from the management of organizations a concern with the use and development of human capital. Considering people as humans beings, endowed with their own personality, with personal histories, endowed with knowledge and fundamental skills for the functioning of the organization; people capable of endowing the organization with intelligence, talent and learning that allow it to be in constant learning and innovation; and, people as partners of the organization, capable of making investments in the organization that allow it to reach excellence and success (Chiavenato, 2015). Parente (2010) says that in Non-Profit Organizations, this function gains added importance, since these organizations depend exclusively on human work and the people performance in their functions, and it is therefore essential that people manager is able to perform them, satisfy and motivate, as these are factors that are reflected in the subsequent performance of employees. In the same way that, on a day-to-day basis, we are constantly evaluating something or someone's behavior, in organizations it is important to evaluate the performance of a certain individual in a certain position. This performance is, in a way, very relative, as it differs from individual to individual and results from several factors (Chiavenato, 2015). This performance is understood as the result of the effectiveness and efficiency of the employees and as the achievement of results based on objectives outlined by the hierarchical superiors as beneficial to the organization (Reis & Silva, 2014). The Performance Assessment emerges as the only way to determine whether the organization-individual relationship is satisfied, through the application of assessment instruments (Bergamini & Beraldo, 1988). Performance evaluation, as an isolated act, is important, but managing this process has become, nowadays, a priority. This is because the Performance Assessment, by itself, consists of evaluating whether an employee has reached a certain objective, not guaranteeing that he is aware of what was proposed to him. In this sense, Performance Assessment and Management emerges as the people management practice responsible for identifying, measuring and managing that performance (Bilhim, 2009), requiring a prior establishment of individual objectives for a given function and organizational objectives and continuous monitoring of performance (Sotomayor et al., 2014) that is, it ceases to be just an assessment instrument and starts to assume itself as a continuous process. The implementation of a Performance Assessment and Management System in Non-Profit Organizations, in accordance with the organization's strategy, is an essential tool for strategic guidance. These systems must be designed in accordance with the organization's strategy, and allow for medium and long-term planning. However, there is a risk that these will fall into a purely bureaucratic assessment, which will enhance the probability of a management reflected in the power and interest established (Parente, 2010). Robbins and Judge (2016) have been relating the implementation of performance evaluation systems with organizational motivation. Motivation can be understood as a system of many variables that are related inside and outside the organization, and therefore cannot be a simple and quick process, with simple and quick answers. In general, motivation appears as an impulse that the person himself has to act on something, because he wants to. If an individual is motivated, he makes a positive choice to do something because he sees this practice as meaningful to him. Otherwise, when people are pushed to do something, they are merely reacting to pressure and act only because they think they have to.

Motivation is often incorrectly seen as a personal characteristic, which does not correspond to the truth, since motivation results from the interaction of the individual and the situation. Motivation varies from person to person and from circumstance to circumstance. In the present study, the objective of the investigation was to understand the importance of performance evaluation and management in the employees motivation of an Integrated Continuing Care Unit of Santa Casa da Misericórdia. There will be two sets of samples in the study, which will be explained later, so the objectives will also be organized according to this division. With regard to the specific objectives for the group "employees", the following were defined to: Identify the motivating factors for employees; Determine whether performance evaluation is identified as one of the motivating factors for employees; Verify the importance of performance evaluation and management for employees; Determine whether the performance evaluation and management system is identified as a potential motivating factor for the employees. Regarding the specific objectives for the "technical director" group, the following were defined to: Understand the importance of people management in motivating employees; Identify the motivating factors for employees, from the perspective of the technical director; Understand whether performance evaluation is identified as one of the motivating factors for employees, from the perspective of the technical director; Understand the importance of performance evaluation and management, from the perspective of the technical director; Understand whether performance evaluation and management could be a potential motivating factor for employees, from the perspective of the technical director. In these investigation, the following five hypotheses are formulated: Employees prioritize intrinsic factors over extrinsic factors when it comes to their motivation; Performance evaluation, as an isolated act, is identified as a motivating factor for employees; Performance evaluation and management is an important process for employees; Performance evaluation and management, as a process, is identified as a potential motivating factor by employees; The sociodemographic characteristics of employees influence the perception of the importance of performance evaluation and management.

2. METHODOLOGY

The present investigation was based on the Positivist/Interpretivist paradigm, allowing a mixed approach of the methodologies used. This study will be followed by a mixed methodology, through a qualitative approach and a quantitative approach. Once the paradigm is defined, it is important to delimit the path to a certain end, as well as the set of intellectual and technical procedures determined to achieve knowledge, that is, the study method (Gil, 2008). It is possible to identify convergences and divergences between the data collected qualitatively and quantitatively. Thus, the mixed methodology allows the researcher to analyse deeper into the problem and to provide a broader response to the research problem or phenomenon (Santos et al., 2017). Often, quantitative research alone cannot collect enough information to explain a specific context of the observed units, just as qualitative research cannot guarantee replicability in interviews or observations (Paranhos et al., 2016). Thus, both approaches were applied so that they could complement each other. In this way, and according to the adopted paradigm, the hypothetical-deductive method was followed, which results from the combination of deductive and inductive methods, since the collected and known data are insufficient to clarify the phenomenon. In these investigation, the selected population is composed of all Integrated Continuing Care Unit employees. Once the population is delimited, and in the impossibility of studying an entire population in an exhaustive way, that is, applying the study to all members that are part of it, it is intended to delineate a sample that is representative of the population, through a sample simple random since all elements that are part of the population have the same chance of being part of the sample. The sample was composed based on the availability and voluntariness of individuals from the two sets of elements: Collaborators of the Integrated Continuing Care Unit of Santa Casa da Misericórdia de Vila de Rei (group 1); Technical

Director of the Integrated Continuing Care Unit of the Santa Casa da Misericórdia de Vila de Rei (group 2). Data collection from group 1 (employees) was carried out through a closed-ended questionnaire survey. The group 2 (technical director) was carried out through a semi-structured interview. Regarding the quantitative approach (employees), out of a total universe of 69 individuals, 58 elements of the organization participated in the study, of which 57 individuals are employees and 1 corresponds to the technical director of the same, who volunteered to respond as a collaborator , which corresponds to 84% of the total universe. As a way for better characterizing the study sample, its sociodemographic data were collected, namely age, gender, educational qualifications and function. Thus, in terms of age, it can be seen that the ages of the employees vary between 18 and 65 years old, with the age group between 34 and 41 years old with the largest number of participants in the total number of the sample, representing 27.6% (16 employees) and the group with the fewest participants is between the ages of 58 and 65, covering 3.4% (2 employees) of the sample. Analyzing the gender variable, it appears that the study sample is mostly female, corresponding to 81% (47 employees) of the total number of participants, with the male gender representing 17.2% of the sample. With 1.7%, there is 1 employee who did not answer the question. With regard to educational qualifications, it can be observed that a large part of our sample, with 48.3% (28 employees), has a degree of education or higher, and with the lowest percentage of the sample, the level of first cycle, corresponding to the fourth year of basic education, with 1.7%, covering only 1 employee. Finally, and regarding the role that the employee performs in the organization, it was observed that 36.2% (21 employees) perform the role of General Services Assistant, followed by the role of Nurse with a total of 20.7 % (12 employees) of the sample. Regarding the lower incidence in the sample, a group can be conceived with several functions, such as Medical Action Technician, Pharmacy Assistant, Speech Therapist, Cup, Psychologist and Technical Director, since they all correspond to a number of 1 employee for each, representing 1.7% of the sample. Another element that did not answer the question could be added to this group. Regarding the qualitative approach (technical director), given that it corresponded to the total universe, a response rate of 100% was obtained. As a way of better characterizing the study sample, sociodemographic data were collected, namely age, gender, qualifications, area of intervention and how long they have been working.

3. MAIN RESULTS

At a quantitative level, after analyzing the results, the hypotheses were verified. Regarding hypothesis 1: Employees prioritize intrinsic factors over extrinsic factors when it comes to their motivation, it is possible to denote that there is a minimal difference between the percentage of selection of the two sets of motivational factors. However, it is observed that extrinsic factors are selected in greater numbers, representing 58.87% of the employees' choice. Intrinsic factors are slightly below this value, with a 56.16% choice rate. In this sense, and even with a minimal difference in the percentage of choice of two sets of factors, employees prioritize extrinsic factors over intrinsic factors in terms in their motivation. About hypothesis 2: Performance evaluation, as an isolated act, is identified as a motivating factor for employees. The Performance Assessment was identified as a process that contributes to motivation by 66% of employees, which corresponds to the absolute majority of the sample. In this sense, hypothesis 2 is confirmed: Performance evaluation, as an isolated act, is identified as a motivating factor for employees. For hypothesis 3: Performance evaluation and management is an important process for employees. Throughout the data collection, employees assigned a score from 1 to 5, where 1 would be “totally disagree” and 5 “totally agree” to the various categories described on the Performance Assessment and Management process. As analyzed, the options of “agree” and “totally agree” were the most selected by employees.

Thus, it was possible to gather that: 94% of employees agree that it is important to ensure a climate of respect and trust among all employees (1), 94% of employees agree that encouragement to assume responsibilities is important (2), 95% agree that it is important to clarify their role (3), 94% of employees agree that it is important to establish clear goals and objectives (4), 92% of employees agree that it is important to demonstrate openness so that these objectives are agreed between managers and employees (5), 89% of employees agree that it is important to monitor performance and provide feedback (6), 94% of employees agree that it is important to develop a management style in which everyone can participate (7), 92% of employees agree that it is important to create a motto of continuous improvement among all employees (8), 90% of employees believe that it is important to motivate to learn, innovate and develop see themselves personally and professionally (9), 94% agree that it is important to guide themselves towards self-management of time and work (10) and 83% of employees agree that it is important to transform performance evaluation into something positive (11). In this way, it is possible to verify that the absolute majority of employees agree that all dimensions of the Performance Assessment and Management process are important, confirming hypothesis 3: Performance assessment and management is an important process, for collaborators. About hypothesis 4: Performance evaluation and management, as a process, is identified as a potential motivating factor by employees. As analysed, Performance Assessment and Management, described in 11 domains, was later pointed out as a process that would contribute to motivation by 79% of employees, which corresponds to the absolute majority of the sample. Therefore, hypothesis 4: Performance evaluation and management, as a process, is identified as a potential motivating factor by employees is confirmed. For the hypothesis 5: The sociodemographic characteristics of the employees influence the perception of the importance of performance evaluation and management, the "Age" and "Importance of performance assessment and management" variables were analysed and verified that there is no age group with a different perception regarding the importance given to performance evaluation and management and there is at least one age group with a different perception of the importance given to performance evaluation and management. It was found that the variables on hypothesis 5 are suitable for quantitative treatment and, therefore, the ANOVA test for 1 factor was applied to the variables "Age" and "Importance of performance assessment and management ". For a significance level of 0.05, where α=0.05, we have p_value > α (0.0732903 > 0.05). In other words, we do not reject the hypothesis " There is no age group with a different perception regarding the importance given to performance evaluation and management.", concluding that there is no statistical evidence that the behavior of individuals in relation to the importance given to performance Performance Assessment and Management is different depending on the age group to which they belong. "Gender" and "Importance of performance assessment and management" variables: None of the genders has a different perception regarding the importance given to performance evaluation and management and There is a gender with a different perception regarding the importance given to performance evaluation and management. It was found that the variables are suitable for quantitative treatment and, therefore, the 1-way ANOVA test was applied to the variables "Gender" and "Importance of performance evaluation and management". For a significance level of 0.05, where α=0.05, we have p_value > α (1.56017 > 0.05). In this way, the hypothesis "None of the genders presents a different perception regarding the importance given to the evaluation and management of performance, concluding that there is no statistical evidence that the behavior of individuals in relation to the importance given to performance is not rejected. Performance Assessment and Management is different depending on the gender they belong to. About "Educational qualifications" and "Importance of performance evaluation and management" variables: There is no type of educational qualification with different behavior in terms of the importance given to performance evaluation and management and There is at least one type of educational qualification with different behavior in terms of the importance given to performance evaluation and management. It was found that these variables are suitable for quantitative treatment and, therefore, the ANOVA test for 1 factor was applied to the variables “Educational qualifications” and “Importance of performance evaluation and management ”. For a significance level of 0.05, where $\alpha=0.05$, we have p_value > α ($1.56017 > 0.05$). Thus, we do not reject the hypothesis “ There is no type of educational qualifications with different behavior in terms of the importance given to the evaluation and management of performance”, and it can be concluded that there is no statistical evidence that the behavior of individuals in relation to the importance given to performance evaluation and management is different depending on the type of educational qualifications they have. Regarding the last sociodemographic data collected when filling in the questionnaires, the function performed by the employee in the organization, it was found that the variables were not suitable for quantitative treatment.n Thus, hypothesis 5, which indicated that “The sociodemographic characteristics of employees influence the perception of the importance of performance evaluation and management” is rejected, as there is no statistical evidence that this happens. At the qualitative level, the interview carried out was analyzed, and it was possible to gather the following conclusions and relate them to the defined objectives:

- Understand the importance of people management in motivating employees. It is important, especially in this type of service delivery organizations, as it is an organization that works with and for people. Identify the motivating factors. Active participation and freedom to make their own decisions as motivating factors and lack of recognition and salary remuneration as demotivators.
- Realize if the performance evaluation is pointed out as one of the motivating factors. It is not formalized and systematized, but is generally seen as a positive factor. However, this view is not held by all employees in the same way. Some consider it important and positive, than the devaluation and others who do not understand it.
- Understand the importance of performance evaluation and management. The management of this process is the most important, having a different impact when there is continuous monitoring and when employees are given the opportunity to express their own opinion.
- Understand whether performance evaluation and management could be a potential motivating factor. It would be a positive factor that would contribute to the development and learning of employees, but when implemented, it would have to be a well-managed process that would have to be organized, considering the employees opportunities and weaknesses.

4. CONCLUSION

The present study was developed as a way of contributing to the enrichment of scientific knowledge in the area of People Management, particularly in the practice of Performance Assessment and Management in the context of social units. We emphasize the relevance of this study, given the lack of studies on this topic in the context in which it was inserted. Therefore, this study sought to understand the importance of performance evaluation and management in organizational motivation, in the context of social units, namely, in the Rainha D. Leonor Continuing Care Unit, an institution belonging to the Santa Casa da Misericórdia. Based on the results obtained and analyzed, it is possible to conclude that with regard to motivating factors for employees, namely extrinsic factors, priority is given to a good relationship with colleagues and salary rewards and, with regard to intrinsic factors, growth personal and personal fulfillment. These are four factors that most contribute to the employees motivation. Technical director mentioned active participation and the freedom to make their own decisions as factors that greatly help employees to feel motivated and valued.

Regarding the Performance Assessment as a motivating factor, this is not formalized and systematized in the Continuing Care Unit, but most employees consider that this process is an important factor in terms of their motivation within the organization. However, from the perspective of the technical director, this vision is not taken by all employees on the same scale of importance, as there will be professionals who have accepted it and will see it as a positive process, professionals who will ignore it and others who will not understand it as growth opportunity. It was concluded that employees recognize the importance of Performance Assessment and Management, through the eleven dimensions mentioned above and analyzed. The technical director ends by mentioning that this would be a positive factor and that it would contribute to organizational motivation, but that, when implemented, it would have to be a well-managed process and that it would have to be organized, considering the employees opportunities and weaknesses. Regarding the importance of people management practices, it was possible to conclude that they are important, especially in this type of service delivery organizations, as it is an organization that works with and for people in a good and fair management. Therefore, the importance of the results obtained in this investigation for the scientific community, which has shown a growing concern about the importance of human resources management practices in motivating employees, is highlighted. Also for the area of Social Work, it allowed to enrich and add knowledge, since a considerable number of people managers, of social units, will have their basic training in this same area.

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DOES POLITICAL ORIENTATION INFLUENCE UNCONVENTIONAL POLITICAL PARTICIPATION?

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ABSTRACT

In recent decades, scholarly interest in political participation has increased. It is evident that voting is only one of many ways in which voters can attempt to influence the course of politics. In democratic societies, various forms of political action are on the rise that represent alternatives to voting. In contrast to conventional political activities, unconventional political activities include less institutionalised and less time-consuming political activities that are not associated with a political party. The purpose of this study is to explain some factors influencing the intention to engage in unconventional political activities - political orientation and perceived political risk. It is assumed that voters with different political orientation (left or right) and voters with different levels of perceived risk have different intentions to participate in unconventional political activities. The research was conducted using a face-to-face survey on a sample of 658 respondents. Data were analysed using SPSS and the Amos programme was used for structural equation modelling. The results showed that voters with higher perceived risk and more liberal (i.e., politically left-leaning) voters have a stronger intention to participate in unconventional political activities.

Keywords: *political orientation, unconventional political participation, intention, perceived political risk*

1. INTRODUCTION

Political participation can be defined as actions used by private citizens to influence government decision making either directly or indirectly (Brady, 1999; van Deth, 2014). This definition is broad and encompasses a variety of activities ranging from voting and signing petitions to demonstrations and volunteering. In recent decades, scholarly interest in political participation has increased. It is clear that voting is only one of many ways in which voters can attempt to influence the course of politics. In democratic societies, various forms of political action are on the rise that represent alternatives to voting. Unlike conventional political activities, unconventional political activities include less institutionalised and less time-consuming political activities that are not associated with a political party. The purpose of this study is to explain some factors that influence the intention to engage in unconventional political activities - political orientation and perceived political risk. Voters with different political orientation (left or right) and voters with different perceived risk are assumed to have different intentions to engage in unconventional political activities.

2. UNCONVENTIONAL POLITICAL PARTICIPATION

Barnes et al. (1979) note that unconventional political activities refer to a wide range of less institutionalized and less time-consuming political activities that are not associated with a political party. These activities often address specific social or political issues or are directed toward solving a particular problem. Unconventional political participation is also referred to as protest political participation, as it includes activities in citizens' groups, signing petitions, boycotting certain products, and participating in legal protests.

Sabucedo and Arce (1991) argue that such activities are good for social development as long as they are not violent. Tilly and Tarrow (2006) define unconventional political participation as a direct form of political participation that occurs without the mediation of other participants. It requires a deeper and longer effort and implies a degree of conflict. Unconventional participation can also involve collective action. Citizens gather and organize to achieve their desires. The resulting activity is said to be an episodic, public, collective interaction between the creators of demands and their objects. The term "episodic" refers to the fact that it does not occur on a specific schedule, but may occur only occasionally and for specific reasons. In this definition, the term "public" is also used to distinguish all those events that are organized, promoted and sponsored by private organizations. A collective action, on the other hand, refers to the participation of many citizens. However, the benefits arising from the actions do not necessarily have to be distributed among the participants, but can also benefit the general public. In this sense, the term "collective" refers not only to the action, but also to the result, as a larger number of people can benefit from it.

According to Munroe (2002), conventional political participation is declining, while unconventional political participation as a type of political behavior is increasing, which explains the number of roadblocks, demonstrations, political blogs, and protests (violent and peaceful). Economic deterioration and deficiencies in social infrastructure are among the reasons for the increase in unconventional political participation (Munroe, 1999). Some individuals and institutions-such as human rights organizations, advocacy groups, and private citizens-use protests to advance and expand their demands for change and improvement because they can more effectively attract public attention and achieve a positive response from the current government.

Vujičić (2000) emphasizes that the "protest behavior/potential" model has a more complex etiology than other models, such as traditional participation and mere voting in parliamentary elections. Thus, for "protest potential," it is important to have developed civic competencies, a critical attitude toward government performance, a social-humanist educational orientation, etc., whereas for conventional participation, a higher level of political interest is crucial.

Various authors (e.g., Tilly and Tarrow, 2006) consider membership and activities in civil society organizations as one of the forms of unconventional political participation, while others (e.g., van Deth, 2001) consider it as a distinct form or dimension of political participation. Social scientists usually see the core of civil society in voluntary associations, especially those with idealistic and altruistic goals. Many of them emphasize the network of NGOs or other policy-oriented organizations as the most important means of mediation between the individual and the social and political system (Putnam et al., 1993; Siisiainen, 1999; Putnam, 2000). However, civil society institutions vary widely: activist groups, local community organizations, cultural groups, sports clubs, labor unions, religious organizations, environmental groups, and other associations.

According to Howard (2003), civil society should be distinguished from social movements. Social movements consist mainly of a combination of spontaneous mobilization and weak organization, but to be considered part of civil society, they must be more or less formally organized and consistent. Moreover, only those groups that act in a legally permissible manner are considered civil society, as opposed to those that act illegally. Apart from institutionalized activities, there are other ways in which individuals can become politically involved. For example, they can participate in mobilized political action, either individually (boycotting, writing to a congressman) or by joining a collective initiative (demonstrating, striking, signing petitions, etc.). c) points out the need to analyze both institutionalized and mobilized forms of participation, especially in studies that attempt to relate political participation to political trust and efficacy.

3. POLITICAL ORIENTATION

Social scientists generally believe that political orientation (left-right) is the strongest way to classify political views (Fuchs and Klingemann 1990; Knight, 1999; Feldman, 2003; Jost, 2006). In psychology, many studies have focused on the differences between adherents of left and right ideologies in terms of their goals, values, motives, and personalities (Adorno et al., 1950; McClosky, 1958; Tomkins, 1963; Sidanius, 1985; Altemeyer, 1996, 1998; Braithwaite, 1998). The most commonly studied dimensions were the need for order, structure, cohesiveness, security, and discipline, all of which were found to be more significant and pronounced among proponents of right-wing political ideology than among proponents of left-wing ideology. It is necessary to ask the question whether people know exactly what the left and right political orientation means? Can individuals adequately assess where they are on the left-right scale, or can they independently identify themselves as liberal or conservative? Many studies (McCormick, 1974; Sears et al., 1979, 1980; Conover, 1984; Carmines and Stimson, 1989; Huckfeldt and Kohfeld, 1989; Kinder and Sanders, 1996) believe that this is the case and support the thesis that social attitudes and stances on important political issues are more important than individuals' self-assessments in analyzing political behavior. Fuchs and Klingeman (1990) believes that only members of the political elite are able to adequately assess their position on a scale from left to right. Carsey and Layman (2006) point out that political orientation is an important factor in understanding political behavior. Memoli (2016) explains how different political activities characterize members of left and right political orientations. Left wing voters are more likely to seek change through political activism (Christensen, 2013) and participation in unconventional political activities (Baglioni, 2007). On the other hand, right-wing voters prefer to maintain the status quo (van der Meer et al., 2009) and are more likely not to participate in protests (Hutter and Kriesi, 2013).

H1: More conservative voters will show less intention to participate in unconventional political activities.

4. PERCEIVED POLITICAL RISK

Perceived risk is consumers' subjective belief that there is a probability that a decision may lead to an undesirable outcome (Oglethorpe and Monroe, 1994). Perceived risk includes: financial, performance, physical, psychological, and social risks (Jacoby and Kaplan, 1972). According to Hohenemser and Kasperson (1982), risk perception increases when consumers feel that they cannot control the nature of a product. Stone and Gronhaug (1993) argue that risk is context dependent because the importance of different perceived risks affects different products differently. In the context of choice behavior, what some people consider an unacceptable risk may be considered acceptable by others (Rindfleisch and Crockett, 1999).

Risk is viewed as a determinant of product involvement and purchase decisions (Mittal and Lee, 1989). In the context of politics, O'Cass (2004) and O'Cass and Pecotich (2005) show that a voter's political commitment increases when he or she perceives the risk associated with voting. In other words: Voters who perceive higher levels of political risk exhibit higher levels of political engagement. Thus, the H2 and H3 have been formed.

H2: Perceived political risk will have a positive direct influence on the intention to participate in unconventional political activities.

H3: More conservative voters will show higher levels of perceived political risk.

5. RESEARCH METHODOLOGY

5.1. Data collection

The main data were collected with an in-person survey conducted on a convenient sample of all persons over 18 years of age, i.e., all persons with legal voting rights. The research instrument used was a structured questionnaire based on previous research in the field.

The research was conducted on a sample of five Slavonian counties: Brodsko - Posavska, Osječko - Baranjska, Požeško - Slavonska, Virovitičko - Podravska, and Vukovarsko - Srijemska. The investigators were instructed to examine one woman and one man from each age group (18-31 years, 32-45 years, 46-59 years, and 60 years and older) to ensure equal representation of all age and gender groups. The sociodemographic characteristics of the sample are shown in Table 1.

Table 1: Sample characteristics
(Table ends on the next page)

		n	%
Gender		**658**	**100**
	Male	328	49,7
	Female	331	50,3
Age group		**657**	**100**
	18 – 31	170	25,9
	32 – 45	169	25,7
	46 – 59	163	24,8
	60+	155	23,6
Level of education		**658**	**100**
	Elementary school	62	9,4
	High school	372	56,5
	Faculty	221	33,4
	PhD	3	0,7
Employment		**662**	**100**
	Student	110	16,6
	Unemployed	64	9,7
	Employed	320	48,3
	Retired	168	25,4

Household income		650	100
	> 3.000 kn	67	10,3
	3.001 – 6.000 kn	192	29,5
	6.001 – 9.000 kn	173	26,6
	9.001 – 12.000 kn	129	19,8
	12.001 – 15.000 kn	51	7,8
	<15.000 kn	38	6

Source: authors

5.2. Variables and measurement

A total of 5 measurement scales were used for the research, four of which were adapted from previous studies, while one was developed specifically for this study. Political orientation was measured through attitudes about tradition, homosexuality and gender roles. Measurement scales for political orientation were adapted from the research of Bagić and Gvozdanović (2015). Measurement scale for perceived risk was adapted from research of O'Cass and Pecotich (2005) while the scale that measures intention to participate in unconventional political activities was developed by the authors. All scales were measured on a Likert scale from 1 to 5, where a value of 1 indicated marked disagreement with the statement and a value of 5 marked agreement with the statement.

6. RESEARCH RESULTS

6.1. Exploratory factor analysis

An exploratory factor analysis in SPSS was undertaken to identify and confirm the factors under each construct. The Kaiser-Meyer-Olkin measure of sampling adequacy had a value of 0.802 while Bartlett's test of sphericity was significant, indicating that the data were suitable for a factor analysis. Oblique rotation was used due to high correlations between factors. Items with loadings less than 0.4 were dropped from further analysis. Table 2 shows the items, factor loadings for each item and Cronbach's alpha coefficients for each construct.

Table 2. Results of exploratory factor analysis
(Table ends on the next page)

Variable	Item abbreviati-on	Item	Factor loading
Attitudes about tradition	T1	The constitution should define Croatia as the national state of the exclusively Croatian people	0.835
	T2	The constitution should declare Catholicism as the only religion of Croatian people.	0.892
	T3	Only Catholics are true Croats.	0.821
	Cronbach's alpha coefficient: 0.826		
Attitudes about homosexuality	H1	Homosexuals should be banned from public appearances because they have a negative influence on young people.	0.853
	H2	Homosexuality is a type of disorder or disease.	0.871
	H3	Homosexuals should be banned from working with children.	0.723
	Cronbach's alpha coefficient: 0.796		

Attitudes about gender roles	GR1	It is the man who should earn and feed the family.	0.709
	GR2	It is not good when the usual role in the family changes and the woman starts earning more than the man.	0.878
	GR3	We don't need more women in positions of power in society because a woman's primary role is to take care of the family.	0.843
	Cronbach's alpha coefficient: 0.757		
Perceived risk	PR1	If wrong candidate gets elected, there is a lot to lose.	0.894
	PR2	If wrong party gets elected, there is a lot to lose.	0.933
	PR3	There is a lot hinging on election.	0.836
	Cronbach's alpha coefficient: 0.870		
Unconventional political participation intention	INT1	I have an intention in the future to support civic initiatives.	0.781
	INT2	I have an intention in the future to vote on referendums.	0.797
	INT3	I have an intention in the future to sign petitions.	0.843
	Cronbach's alpha coefficient: 0.780		

Source: Authors

6.2. Confirmatory factor analysis

Data were analysed using AMOS structural equation modelling software. Bollen's (1990) recommendation to examine multiple indices of model fit was followed to evaluate both the measurement and structural models, since it is possible for a model to be adequate on one fit index but inadequate on many others. Indexes were selected based on the recommendations of Hu and Bentler (1995).

Table 3. Results of confirmatory factor analysis

Variable	**Item**	**Standard loading**	**CR**	**AVE**
Political orientation	TRAD	0.680	0.787	0.553
	HOMO	0.757		
	ROLE	0.789		
Perceived risk	PR1	0.841	0.875	0.701
	PR2	0.916		
	PR3	0.746		
Unconventional political participation intention	INT1	0.609	0.787	0.555
	INT2	0.783		
	INT3	0.826		
Model fit indicators (recommended values)		**Values**		
$\chi 2$/DF (1 to 3)		1.494		
CFI (>0.90)		0.989		
GFI (>0.95)		0.976		
AGFI (>0.80)		0.965		
IFI (>0.90)		0.990		
TLI (>0.90)		0.987		
RMSEA (<0.08)		0.027		

Source: Authors

As depicted in Table 3, factor loadings for the latent constructs ranged from 0.680 to 0.916, indicating strong support for construct validity (Hair et al., 2010). The values of the average variance extracted (AVE) for almost all constructs were higher than the guideline value of 0.50 recommended by Fornell and Larcker (1981). The composite reliability coefficients for all constructs were higher than 0.70, suggesting high internal reliability (Fornell and Larcker, 1981). In addition, all scores from CR were higher than scores from AVE, demonstrating convergent validity. The goodness-of-fit statistics of the measurement model also showed very good agreement with the data ($\chi2$/df = 1.494; CFI = 0.989; GFI = 0.976; AGFI=0.965; IFI = 0.990; TLI = 0.987; RMSEA = 0.027). Discriminant validity was established because none of the root squared correlations between constructs were greater than the AVE values of the constructs. Also, as depicted in Table 4, average shared square variance (ASV) values were also no greater than the AVE values for each construct (Fornell and Lacker, 1981). The correlations between the constructs are presented in Table 4.

Table 4. Discriminant validity

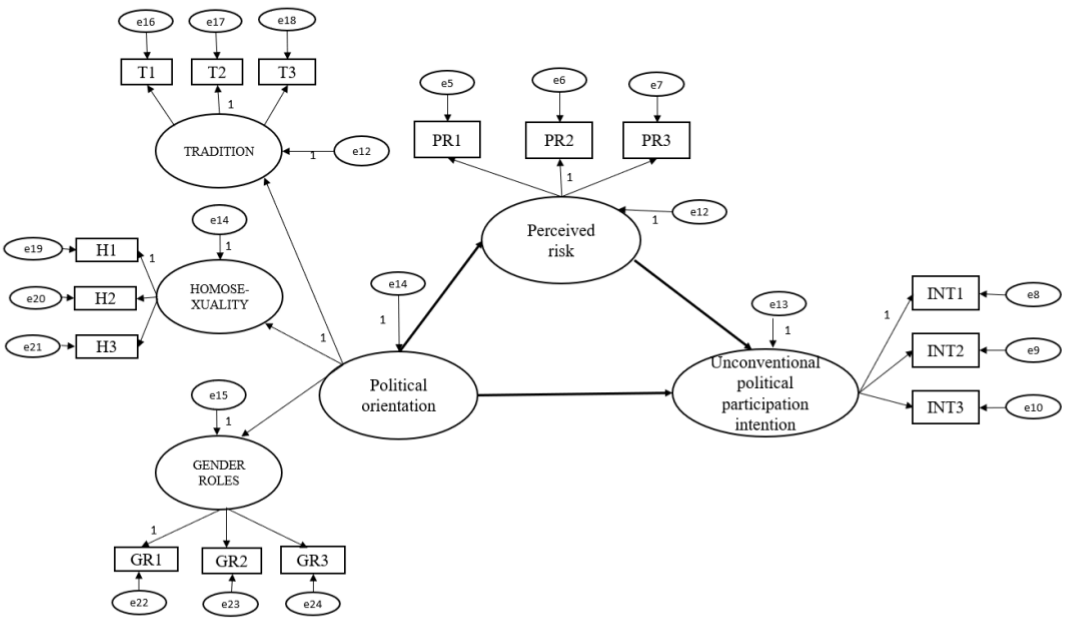
Variables	**Correlation**	**Square root correlation (r^2)**	**AVE1 (AVE1>r^2)**	**AVE2 (AVE2>r^2)**	**Discriminant validity**
PO<-> INT	-0.052	0.0027	0.553	0.555	Established
PO <-> PR	0.186	0.0345	0.553	0.701	Established
PR <-> INT	0.149	0.0222	0.701	0.555	Established

Source: authors

6.3. Structural model testing

A hypothesized structural model (Figure 1) was developed to test the impact of political orientation and perceived risk on the intention to participate in unconventional political activities.

Figure 1. Hypothesised model



Source: Authors

Evaluation of the structural model indicated a great model fit in terms of its goodness-of-fit indexes, since all of the suggested values were met ($\chi2$/df = 1.494; GFI = 0.976; NFI = 0.969; CFI = 0.989; IFI = 0.990; TLI = 0.987; RMSEA = 0.027).

Results of the model testing are depicted in Table 5. Research results have confirmed all three hypothesis.

Table 5. Results of the analysis

Relationship			Standardized total effects	Hypothesis
Political orientation	→	Intention	-0.115*	Accepted
Perceived risk	→	Intention	0.216**	Accepted
Political orientation	→	Perceived risk	0.193*	Accepted

*p<0.05; ** p < 0.01
Source: Authors

7. CONCLUSION

The purpose of this study was to assess the influence of political orientation and perceived political risk on intention to engage in unconventional political activities. Results have shown that politically left oriented individuals tend to show significantly stronger intentions to engage in unconventional political activities, i.e., more conservative voters tend to show lower intentions to engage in unconventional political activities. These findings are consistent with some previous studies (Baglioni, 2007; van der Meer et al., 2009; Christensen, 2013, Hutter and Kriesi, 2013). The results of this study also confirmed that voters who perceive higher levels of political risk exhibit higher levels of political engagement, particularly in this case, unconventional political participation. The results also showed that more conservative voters tend to have higher levels of perceived political risk, but are more likely to engage in conventional political activities (e.g., voting, being a member of a political party, etc.) than unconventional ones. The results of this study may be helpful to political parties, NGOs, and various political activists. Understanding voter behaviour is the first step in determining the strategy to approach them. The main limitation of the study is a convenient sample so the results cannot be generalized, but rather considered indicative. Future research should focus on exploring in more detail the factors influencing intention to engage in unconventional political activities.

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DEVELOPMENT OF BUSINESS MODELS IN THE ENVIRONMENT OF THE NEW INDUSTRIAL REVOLUTION

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ABSTRACT

In the third decade of the 21st century, new information and communication technologies significantly affect the development of many areas of life and work of modern man and business. Old paradigms are a thing of the past and new ones are developing new (business) models that combine modern achievements of scientific research and innovation. With the application of new technologies (data clouds, GPS, AI, AR, 3D printing, etc.), the world is globalizing again, in a new way. New political and economic relations are being built between states and between companies. Declaratively and really many borders have been erased and barriers have disappeared. In this and such a world, for many products and services, the distinction between local, regional and international markets has disappeared. The competition is intensifying, because knowledge is being transferred at a speed that was inconceivable until yesterday. Entrepreneurs who understand the latest trends in the economy are turning to new business models, the application of new technologies. Thus, they became global players in the provision of products and services, and this then caused changes even among those who did not plan to change so soon. New relationships are being established not only between countries and companies but also between customers and consumers. With the development of social networks, their power has grown so much that they have become an important factor in shaping supply chains and business models in modern conditions. By exchanging data, giving personal judgments and recommendations, customers and consumers have contributed to the development of many marketing channels, especially communication. These changes have significantly affected the development of business processes in companies that require new competencies, knowledge and skills, which is a special challenge for new leaders, both in companies and society as a whole.

Keywords: *business models, new industrial revolution, automation, robotics*

1. INTRODUCTION

1.1. Subject of research

The subject of research is the development of business models in the environment of the new industrial revolution with special emphasis on the impact of new technologies on business models of modern companies both in the world and in Croatia. Modern available sources of scientific papers are rich in findings of various researches, changes in society and business, which have taken place in the past few decades: impact on changes in supply chains, business models, development of new global trends, knowledge transfer and management, impact of automation and robotics on employment, development of new business models, development of marketing, logistics, etc. (Spremić, 2017; Jordan, 2020; Kolyasnikov i Kelchevskaya, 2020; Bowler i Watson, 2021; Cao et al., 2021 and others).

1.2. The goal of the research

The aim of the research is to analyze the impact of the application of new technologies of Industry 4.0 on the business models of modern companies (and in Croatia). Examine whether automation and robotics in the foreseeable future will reduce the number of full-time employees in modern companies and under what conditions. Examine whether new technologies, with the end of the COVID-19 pandemic, will increase the work of remote workers, which would enable the employment of the global workforce.

1.3. Research hypothesis

Basic research hypothesis:
H1: Implementing Industry 4.0 technologies into business processes will lead to the transformation of business models and management strategies.

Industry 4.0 is not just changing technology and processes, but every aspect of the company, including its very essence. About an environment that is changing extremely fast, which is made possible by new ICT technologies, entrepreneurs are in a position to change the existing paradigms and turn to new visions in order to survive in market competition. New paradigms have the capacity to transform the traditional model of value creation into a new one. Advanced technologies are driving new possibilities, connecting data, people and objects. This changes the work of manufacturers and the way customers receive products and interact with them. Demands and trends that drive digital transformation in supply chains, and new barriers and risks appear as a result of the development of the business environment and the trend of digital transformation. Automation and robotics already now, and in the foreseeable future, will increasingly reduce the number of full-time employees in companies around the world in those workplaces where it is possible to introduce machines, for all that is routine, which includes more repetitions. On the other hand, Industrial Revolution 4.0 has led to increased employee engagement to create and oversee business processes. Likewise, accelerated by the current COVID-19 pandemic, there are more and more remote work jobs, enabling the employment of a global workforce. Now it turns out that the new Industrial Revolution 4.0 technologies result in benefits for many employees as they don't have to travel to work (remote work capability). In addition, increased automation reduces the number of full-time employees in the manufacturing and agricultural sectors, and robots cope more efficiently and safely with tasks in industrial plants.

1.4. Expected research contribution

The main contribution of the research will be the results of the research regarding the assessment of the development of business models in the environment of the new industrial revolution, globally and in the Republic of Croatia. Possibilities and obstacles to the introduction of robots in the business of domestic companies will be explored. Based on the research, an assessment will be made of how much telecommuting will develop in the post-pandemic period, ie how much new technologies will contribute to global competition for those jobs for which it was inconceivable until yesterday to involve foreigners.

2. Business models in the environment of the new industrial revolution

2.1. The role and importance of business models

The business model can be explained as a conceptual framework that represents the link between strategy and business processes, ie it explains the essence of the value creation process (Morić-Milovanović, Srhoj and Krišto, 2016: 539). Although business models have been studied in different perspectives for a long time, it is only in the last two decades that they have become an extremely popular subject of scientific interest and analysis, primarily with the development of the new economy and e-business. After the fascinating growth of e-business and even more incredible failure during the so-called The dot.com era concept of business models began to develop most within the field of organization and management. Business models were therefore often associated with the economic and organizational perspective, with the economic perspective studying the essence of profit making, ie cost structure and revenue sources, while the organizational perspective was more focused on studying the process of resource allocation to identify market opportunities and create added values. Also, three different directions of studying business models have been developed, the first of which is focused on technology (the so-called technological direction) and is closely related to e-business. Then the organizational direction, which is focused on the business model as a tool to increase organizational efficiency, while the third direction is oriented to strategic thinking of creating and capturing value. By reviewing the above perspectives of studying the concept of business models, it is possible to conclude that business models help to understand, visualize and communicate the essence of business with various stakeholders (Morić-Milovanović, Srhoj and Krišto, 2016: 539). Modern companies are turning to new business models that shape the look of organizational structures and give them meaning in their business. It is important to emphasize that it is necessary to understand business models and thus it is possible to commercialize your business ideas. Therefore, it should be said that business models do not consist only of organizational structure or assets and business processes. Business models consist of the way each company does business. There are a lot of business models. Some classics have been modified and improved (auction sales), some models have been invented through innovation and the development of new technologies (online sales), while some have been merged from several types of business models (brick and click). Each company has its own business model and adapts it to their own needs and capabilities. There are also proven business models that guarantee success, such as franchise sales or the Just in time model (Tikas 2015).

2.2. Implementation of business models in companies and remote work

The technologies or foundations of Industry 4.0 are considered to be extremely important factors for the development of the business model. A study conducted by Grabowska and Saniuk (2022) showed that large companies do best in the transformation, ie implementation of business models, which is probably due to the availability of significantly more financial capital than in the case of small companies that do not have sufficient financial resources. The same research also states that respondents point out the lack of financial support in the form of EU structural funds, which would certainly help to avoid the problems of lack of own investment capital in order to develop business models. Lack of funds for investment is the biggest problem of introducing automation and robotics in companies. The sharp rise in the popularity of telecommuting and its application among a growing number of employees is based on the pandemic crisis that has gripped the entire world. However, despite the current growth and popularity of this form of work, the question arises as to what will happen to telecommuting when the pandemic crisis subsides or is completely over, and when employees and employers will be able to return to their usual ways. work. Epidemiological measures, ie social distance and isolation, have the greatest impact on the scope of remote work. During periods of easing such measures, many employers require their employees to return to their usual jobs because of the lower risk of contracting the virus. Such requirements point to the fact that certain companies will require the physical presence of employees whenever possible. Obstacles that prevented the growth of telecommuting in the run-up to the pandemic, such as lack of control over employees and difficult productivity monitoring, could be the main reasons for resistance to telecommuting by employers even after the pandemic. Also, the future of remote work in an individual company is affected by the amount of investment by the employer in the transition from the usual to remote work. In other words, companies that perceived remote work as a temporary solution in the pandemic crisis, invested less in equipment and education of their employees, thus returning to business from normal jobs in the post-pandemic period. The main factor in the employer's decision on the long-term use of remote work in the company can be considered the performance of employees and their productivity since the beginning of the pandemic and the transition to remote work. It is this productivity that can be maintained or even improved by increasing employee satisfaction with work, increasing autonomy and strengthening motivation (Music, 2021). According to a 2021 survey of 800 senior executives conducted by McKinsey, two-thirds of companies globally are increasing investment in automation and artificial intelligence. As an example of the scale of change that awaits us, McKinsey expects customer and food jobs to fall by 4.3 million in the United States alone, greatly affecting the 13.3 million people currently employed in the hospitality industry and 14.8 million in the retail industry. We can already see signs of this, where supermarkets are increasing the presence of "self-payment" services (Luk, 2022). Office workers who can do work online have also experienced change, and remote work has ushered in a new era of work flexibility. Work from home was introduced as part of government restrictions due to COVID-19, forcing companies to accept this work and invest in remote work technologies (Luk, 2022). The workforce is currently undergoing a major transition. For some, closure and absence have been catalysts for them to think and pursue new passions, and workers in some sectors are now working with more flexibility and higher pay. There is no doubt that remote work in the post-pandemic period will take on a whole new dimension, ie that the application of this type of work will become increasingly dominant in companies around the world, including Croatia, given the many benefits of this type of work (less office space, eliminated travel costs to the company and back home, the possibility of hiring labor from around the world, flexibility, etc.).

3. THE IMPACT OF THE APPLICATION OF NEW INDUSTRY 4.0 TECHNOLOGIES ON THE BUSINESS MODELS OF MODERN ENTERPRISES

3.1. Transformation of business models

Current business models essential for creating consumer value, and thus business competitiveness, are currently undergoing transformation. Brand new technological developments based on network integration, intelligent technology and flexible automation are becoming increasingly important: new competitive opportunities are emerging, and knowledge management and intellectual capital management are becoming more and more important. When developing a strategic vision, it is extremely important that companies select appropriate data from the flow of information about the external and internal environment and turn it into knowledge of the organization, which is a key management potential (Kolyasnikov and Kelchevskaya, 2020). The development of Industry 4.0 and the advancement of information technology have spurred new consumer demands for smart products in the context of awareness and autonomous control. Nature has significant potential to inspire innovative concepts that can meet the growing demand for smart products (Cao, Sun, Tan, Zhang, & Liu, 2021). In addition to the various technologies included under the auspices of Industry 4.0, robots have generally received the most attention so far, while the current application and impact of Industry 4.0 on such technological possibilities as 3D printing, big data analysis, etc. have not yet been studied (Freddi, 2018).

3.2. Digital transformation in Croatia

There is not enough relevant data on the state of digital transformation in Croatia to provide an objective picture of the situation, both at the level of companies or corporations, and at the level of the Croatian economy (Spremić, 2017). The results of the study of digital transformation conducted in Croatia in the period from October 2018 to September 2020 indicate insufficient preparation of the Croatian economy for the challenges of the digital age (Ćurić Martinčević 2020). According to the study, almost every other company in Croatia believes that digital transformation is among the ten most important topics, but the vast majority of them believe that digital challenges will simply be solved by digitizing analog business processes. That is why most companies leave the management of the challenges of digital transformation to the company's IT department. However, those better informed understand that digital transformation is not just about changes in IT systems, but that it encompasses all segments of the organization's business (people, culture, processes, partners, etc.) (Spremic, 2017). More knowledgeable members of the business community understand digital transformation as digital business transformation - a fundamental change in the organization and way of traditional business, using digital technologies and applying new business models to improve organizational performance and faster adaptation in a constantly changing environment. The study of the Croatian Digital Index (Ćurić-Martinčević 2020) provides an overview of the state of digital transformation in Croatia from the so-called bottom-up perspective. This means that the overall results of the study are the sum of individual reports on the state of digital transformation of the three hundred best medium and large enterprises.

3.3. Impact of Industry 4.0 for manufacturing companies

Industry 4.0 impacts can have effects at different stages of supply chain and in supply chain management strategies, such as better forecasting and planning through unified flow and improved supplier performance due to real-time information sharing (Ghadge, Kara, Moradlou and Goswami, 2020). According to Ibar, Ganzarain and Igartua-Lopez (2018: 8-9), four ways to implement digital transformation in manufacturing companies are listed:

- External and internal optimization - This type of transformation is an innovation that optimizes real business without some major changes. New technologies such as big data, robots and cloud computing are being implemented solely to optimize value creation to increase efficiency and improve performance. This is essentially the first phase for traditional companies to implement Industry 4.0 without major or serious risks.
- Improving the user interface - This second innovation is aimed at improving or improving the delivered value. The introduction of technologies such as Big Data creates the conditions for connecting through new touch points, which provides a better understanding of customer needs, as well as a better user experience.
- New ecosystems and value networks - This model proposes a complete innovation of the business model due to the introduction of technologies such as Big Data. Thus, the process of creating company value is linked to stakeholder processes. The transition from value chains to ecosystems requires a huge change in many segments of the customer business model.
- New business models in the form of smart products and services - This model proposes a new comprehensive business model established on new technologies focused on big data and cloud computing, etc., which offer innovative and smart products and services. This type of new business model could give companies the opportunity to expand their market presence.

Industry 4.0 (I4.0) describes the digitization of manufacturing companies. Adoption or implementation of I4.0 is a key step for manufacturing companies in order to maintain competitive advantages and take advantage of new opportunities.

The majority of all research is focused on the technological prism of I4.0 in the form of product innovation, but also production processes. Although more and more attention has been paid to Industry 4.0 recently, there is still insufficient research on business model innovation, although business model innovation may be more successful than product or process innovation. To address this research gap, Weking, Stöcker, Kowalkiewicz, Böhm, and Krcmar (2020) analyzed the case studies of I4.0 business model innovators.

The findings showed how firms can leverage I4.0 concepts and build a conceptual basis for future research. Nara et al. (2021), in their research, analyzed the impact of Industry 4.0 technologies on several performance indicators. The model was tested in the plastics industry in Brazil. Research has shown that the Internet of Things and the implementation of big data are key components in maintaining competitiveness. They also proved that these technologies are associated with positive impacts on economic metrics. However, research has pointed to the negative effects of robots on job creation. The fourth industrial revolution is able to execute complete production processes using industrial digital technologies (Bowler and Watson, 2021). The results of the research by Patrucco, Ciccullo and Pero (2020) point to the fact that the implementation of Industry 4.0 technology would greatly improve the performance of business models in the company. Also, it would lead to better support for the performance of production activities, and increase the efficiency and effectiveness of communication in the company. Such technologies need to be introduced in combination with new organizational mechanisms that will essentially be of great benefit to business models of companies.

3.4. Application of robotics and automation in manufacturing companies

At the end of the 20th and the beginning of the 21st century, the application of robots in the production and other activities of society experienced an expansion. Robots that help in the household are being developed. People who use them should treat them like their own robot, not like a child. They already have the senses of sight, hearing and touch, and it is important that they gain the ability to remember and recognize the people with whom they communicate. Robots recognize faces they once saw. Robots are being developed to help in the household. They should know how to bring the owner coffee, find keys or a mobile phone. Further development seeks to develop robots that will replace humans in the care of the elderly. Healthcare professionals caring for the elderly are overwhelmed. That is why new generations of robots are trying to take over these jobs. Robots should know how to change bedding, bring and take dishes with food and drink. In the future, people will be able to stay at home with the help of robots, while maintaining their independence. They are increasingly used in various areas of society. Robots are used in the armies of developed countries, in the fight against terrorists, space research, etc. (Kozić, 2021). By 2030, robotization of production is projected to wipe out 20 million jobs, especially in economies that rely on low-skilled labor, experts from Oxford Economics have calculated (Pili, 2019). However, due to the simultaneous growth of productivity, global GDP will grow annually more than the value of the entire German economy. According to a published study entitled "How Robots Change the World", the number of robots in factories around the world has tripled in the last two decades to 2.25 million. However, in the coming years, the growth rate of robotics will be much faster, so it is planned that up to 20 million robots will be installed by 2030, of which 14 million in China alone. There are three reasons for the jump in production robotics. The first is that buying and installing robots has become cheaper than the cost of human labor, the second is that robots are becoming more sophisticated and capable of complex operations, and the third is that the demand for factory goods is growing. But each installed robot replaces 1.6 workers, calculations show.
As a result of robotization, tens of millions of jobs will be lost, especially in poorer economies that rely on low-skilled labor (Pili, 2019). This will translate into rising income inequality. If

the number of installed robots by 2030 is a third higher than the initial projections, experts estimate that it will result in additional global GDP growth of 5.3 percent. Looking at the world's regions, most jobs will be lost in China, as many as 11 million. Two million workers in the European Union will lose their jobs due to automation, and 1.5 million in the United States. In Europe, robotics has wiped out about 500,000 jobs since 2000 (Pili, 2019). When talking about the structure of jobs that are most endangered due to robotics, the most frequently mentioned activities are in production, retail, administrative and ancillary services, and transport and storage. Yet as robots become able to perform more and more cognitive tasks, it is predicted that in the future, cognitive occupations such as physician, translator, editor, lawyer, architect, journalist, and even programmer will be at risk (Frey and Osborne, 2013). Images of workers in production plants will soon be remembered only in old paintings. Their work has been almost entirely taken over by robots that increase production by more than 50 percent, and the cost of an hour of their work is much less than a worker's. Robots 'employed' in Croatian companies change from two to twelve or more workers in one place and are very cost-effective. Although some cost from one hundred thousand euros to as much as three hundred thousand euros, the investment in buying a robot will pay off in just a few years. Although the Croatian industry still lags behind the number of robots compared to more developed countries, the largest Croatian companies, which are also large exporters, use an increasing number of robots. More than twenty robots are currently in Podravka's production processes, and the first was procured in 1999 for the Soup and Vegeta Factory. The production was also robotized by Franck, who has two robots in the tea plant and two more in the coffee plant. Most robots are in the AD Plastik group, there are more than a hundred. These robots do jobs that workers cannot perform due to ergonomic and safety reasons, and they use them in various business processes from product manipulation to assembly and painting of components. However, Marinko Došen, President of the Management Board of AD Plastika, points out that, despite robotics, there will always be certain parts of the process in which it is impossible to replace a human being. Also, although robotics optimizes the number of employees, Došen says that their structure and job description are changing, and the introduction of robots increases competitiveness and expands business, which is why it brings new jobs. The application of robots in production requires the employment of engineers, experts in robot programming and equipment, and maintenance personnel (Pranić, 2021). Robots, as part of a broader automation process, will have a significant impact on productivity, business models and even traditional industry constraints, and consequently on work. Much of the discussion on the impact of automation on employment and jobs has focused on scenarios in which entire job and occupation profiles are disappearing - including highly skilled jobs. Most research concludes that automation does not result in net job destruction and that very few (less than 10%) jobs will be replaced by automation in the foreseeable future. Instead, tasks will be automated and workers will take on new tasks resulting in highly skilled, highly paid job profiles (IFR, 2018). Robots are slowly changing more and more people in their jobs, and according to analysts, the coronavirus pandemic is accelerating this process (Blažinović, 2020). People usually say they want to have a human element in their interactions, but the coronavirus has changed that. The pandemic will continue to change consumer preferences and really open up new opportunities for automation. Large and small companies that are expanding today are using robots to respect social distancing and reduce the number of workers who must be physically present in the workplace. Robots are used to do the work of workers who cannot do their work from home. Walmart, the largest chain of stores in America, uses floor cleaning robots. Robots in South Korea are used to measure patients' temperatures and distribute hand sanitizers. While experts warn that social distancing measures must remain in place next year, robots could become increasingly sought after. Companies that produce cleaners and disinfectants have more and more work to do. UVD Robots, a Danish company that makes robots for UV light disinfection, has sold hundreds of robots to hospitals in China and Europe. Shops and restaurants offering food to take away are increasingly using robots. Experts say that robots will be used more and more as stopped businesses start. Robots could clean schools and offices. However, there are still limitations because automatic cash registers in stores must be monitored, given that many of these systems do not work well or often break down, so customers often avoid them (Blažinović, 2020). The food industry is also suitable for the use of robots for the purpose of preserving and protecting health. Fast food restaurants like McDonald’s are already testing robots for chef and service functions. Warehouses like Amazon and Walmart already have robots that increase efficiency, and the coronavirus could influence their increase to work on sorting, packaging, and delivery tasks. This could help workers who are currently complaining that they cannot socially distance themselves at work, but on the other hand could lose their jobs because of robots. Once a company replaces a worker with a robot, it is unlikely to get him back to work. It is true that the production and integration of robots is expensive, but when they start working, they are usually cheaper than human labor (Blažinović, 2020). Artificial intelligence is evolving to replace teachers, fitness trainers and financial advisors, while Facebook and Google, for example, are relying on artificial intelligence to remove inappropriate comments.

4. CONCLUSION

The impact of the application of new Industry 4.0 technologies on the business models of modern companies is extremely important given the efficiency of automation and robotics, which leads to large savings in production and profit maximization. Automation and robotics will undoubtedly reduce the number of full-time employees in modern companies in the foreseeable future, because robots and the automation process are able to perform a large number of operations, which reduces the role of man. It is also very likely that new technologies with the end of the COVID-19 pandemic will increase the employment of remote workers, which will ultimately enable the employment of labor worldwide, ie there will be no more spatial distance. There is no doubt that implementing Industry 4.0 technologies into business processes will result in the transformation of business models and management strategies and raise them to a higher level of productivity and efficiency. Although the term Industry 4.0 is widespread in the Croatian public, all this is still in its infancy, ie mostly on theoretical grounds. Given the worrying state of the industry, there are still factories that are introducing changes in the direction of Industry 4.0, these are actually isolated cases, primarily cases where a foreign ownership structure is present, which leads to the conclusion that there is no standardized process of introducing Industry 4.0. For this reason, many cannot recognize the opportunities of Industry 4.0, which will only be able to be analyzed in detail in the future, especially in terms of their impact on changes in today's industry, which will unfortunately position Croatia in a situation where it will be forced to join the emergence of a large discrepancy that will become more evident over time, and thus forced to keep up with competitors from its environment. That is why many do not recognize the opportunities of Industry 4.0, which will only be able to be analyzed in detail in the future, especially from the standpoint of their impact on changes in today's industry, and through the prism of efficient business.

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THE RISE OF INFLUENCERS: MARKETING TOOL IN TIME OF PANDEMICS

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ABSTRACT

COVID-19 has brought change in every industry. Companies in recent months have had to change their advertising strategies for their products and services in order to maintain their place in the market and remain present in people's lives. One of the strategies that may have become the main tool for communicating with consumers is marketing through social media influencers. Influencers in times of crisis have a major impact on consumer behavior. They are their source of news, friends in difficult times and advisors when it comes to making decisions. The aim of this paper is to analyse whether companies show more interest in collaboration with Macedonian influencers during the pandemic, therefore, to provide evidence of the rise of influencers as a marketing tool during the pandemic through qualitative approach; four content-different Macedonian influencers were interviewed. According to the obtained results, influencers and businesses working together effectively benefit both themselves and their audiences, providing respite in the purchasing decision-making process, which is especially important during this stressful time when we need all the help we can get.
Keywords: *influencer, COVID-19 pandemics, marketing tools, influencer marketing*

1. INTRODUCTION

When we thought that nothing could surprise us anymore, a pandemic broke out that literally changed the world. Although the world was unprepared, people around the world found ways to get on with their lives. Some have discovered what it is like to work from home, some have posted on social media, some have started ordering food through online restaurants, visiting virtual discos, museums, cities. In a word, the world has gone digital. Following these pandemic consumer behaviors, including social distance and long quarantines, companies had to find a way to make their products visible to consumers. According to Almeida et al. (2020), the COVID-19 pandemic has had a significant impact on the growth of e-commerce, largely due to the closure of outlets and travel bans. In parallel, the younger generations will adapt their consumer habits based on the digital society. Hence the introduction of new digital marketing channels, especially advertising and selling on social media, can provide great benefits to both small and large businesses. These strategies will enable them to diversify their sales and reduce their risk in the event of further closure of their physical stores. Social media has given marketers greater access to potential consumers and increased the effectiveness of persuasion in buying their products (Alnaser et al.,2020). Therefore, the question is whether certain ways of advertising through social media have an impact on consumers' consumer decisions during the pandemic, or in other words, the main purpose of this research is to find out whether in the COVID-19 period companies increasingly use influencers as a tool to advertise their products and services.

2. THE IMPACT OF COVID -19 ON INFLUENCERS

As the pandemic began, some influencers around the world saw their incomes plummet. It seemed as if their many years of dedicated work were suddenly erased, mostly due to the canceled business engagements. Life on a high foot, constant travel, 5-star hotels, branded clothes that influencers probably got and free now are now cut in half, and possibly completely, because of the pandemic. If previously, the categories for which the influencers shared announcements, such as fashion, makeup, travel and lifestyle were the most sponsored, now these categories are most affected (Arabianbusiness, 2020). This could also mean the end of the influencers who once lived the life of their dreams. In addition, as countries close, businesses reduce their operations, and the marketing sector reduces costs, the influencer industry will be destroyed. The focus shifted from economic prosperity and personal satisfaction to public health and increased community engagement, and COVID-19 seems to have resulted in the end of influencer marketing as we know it (Tsapovsky, 2020). However, not everything is so black, for influencers. During the period when people were locked in their homes due to quarantine or self-isolation, they spent much more time online and increased media consumption by 60% (Arabianbusiness, 2020). This means that influencers have the opportunity to prove that they are more than just an advertising tool. The same study reported that use of the Facebook and Instagram platforms had increased by more than 40% since the start of the pandemic, with the largest increase in population between 18 and 34 years. The data came from a survey of 25,000 respondents from 30 different markets. There is also a growing interest in home activities such as cooking, homework, reading, watching popular shows and movies, cleaning and disinfection, laundry, gardening, online shopping. This means that if companies use influencers properly, there is still plenty of opportunity to promote their products and services. As the world gets used to living in a pandemic, it is becoming increasingly clear that influencers will continue to thrive. People are constantly searching for online content, and thus influencers are becoming an increasingly important marketing tool for company ideas and products (Stephens,2020). While some influencers struggled to adapt to market changes and failed to seize commercial opportunities, others embraced the global crisis, using public uncertainty and disorientation to build their power, expand their audiences, and gain more. This opinion is shared by Bloomberg (2020). In their report, they say overall consumption will increase significantly as consumers stay indoors. Companies have the opportunity to connect with a "captive" audience that is currently eager for new content, services and entertainment. In times of stress, consumers favor advertising messages from those they follow and trust. According to the data published in this report, 66% of social media users say they expect their use of platforms such as Instagram and YouTube to continue to increase during the pandemic, and 99% said they would buy something online if quarantined. during COVID-19. This data is a great starting point for influencers to take advantage of the situation and provide support to consumers in these times. According to research done in Australia, China and Japan, Francisco et al. (2021) concluded that influencers who put "all eggs in one basket" feel a huge negative impact on their income and brand collaboration. These influencers are related to tourism, events, haute couture. In contrast, influencers who are more focused on domestic advice and adapting their content to the conditions imposed by the pandemic, in addition to seeing an increase in the number of their followers, also saw an increase in business collaborations. In a study published by Taylor (2020), COVID-19 is said to have a negative impact on many industries, and even on advertising businesses where people are accustomed to going to offices. However, this is not the case with influencers who already create and publish content from their homes. Many have gently adjusted their content to suit the pandemic, such as focusing on fitness, healthy eating, hobbies, or lifestyle tips. The pandemic has added another category of influencers - "homefluencers". This term refers to influencers who, due to COVID-19, spend time at home just like their followers and create content with which followers can connect. Unlike the domestic influencers, some of the other influencers did not use the opportunities created during COVID-19, on the contrary, they behaved inappropriately about this crisis. In his research Francisco et al. (2021) found that many Australian, Chinese, and Korean influencers were criticized for violating COVID-19 recommendations and regulations. For example, Australian and Chinese influencers have been criticized for continuing to publish content about their travels during the period of mass isolation and when keeping distance was one of the main preventive measures. Some Chinese influencers have also been criticized for posting content in which they carelessly play and sing, which followers have deemed inappropriate at a time when the entire country is facing suffering. Some influencers have also been criticized for underestimating the pandemic. Not realizing the seriousness of the pandemic, they repurposed the masks that are the primary protection into the primary fashion. Not all influencers in these countries behaved the same way. Many of them promoted good social behaviors, such as respecting social distance, respecting hygienic processes, and applying other health protocols. There were even "ordinary" social media users who, due to their desire and struggle to pass on to others the rest of their coronavirus protection practices, their posts went viral, and thus their follower base began to grow. These users soon became influencers in their community. Some influencers even invented interesting dances and various "memes" for proper hand washing. This type of announcement has attracted government institutions to enter into agreements with various influencers and involve them in their public relations campaigns and jointly spread positive propaganda to raise awareness among the people.

2.1.Influencers as a Marketing Tool in a Time of Pandemics

The increased time spent on social media by consumers during the pandemic increases the opportunity for brands and influencers to create content that will be seen by consumers. The research of Abidin et al. (2020) shows that influencer marketing is the key for brands to adapt to the new trend of "home consumption", which is characteristic of the pandemic. Simply put, the changes that have long been about to come to the surface, during the pandemic, began to happen rapidly. Consumers no longer left their homes to complete day-to-day responsibilities, and companies were rapidly looking for ways to make their products available to consumers quickly and easily. By looking at new trends that favor social media consumers, such as unfiltered, less staged content, companies are realizing that influencers who post content on their profiles on a daily basis, which is a major feature of these trends, could be their new channels of advertising and sales. of their products and services. Apart from being trendy, these influencers are considered a cheap and "easy to do" way of advertising, especially at a time when costs in the marketing industry are reduced and companies do not have enough funds for large ads. According to Lin, Bruning and Swarna (2018), influencers are a very important marketing tool when it comes to promoting products or services. In a short time, influencer marketing has become an integral part of business marketing strategies because they believe that this way of advertising results in increased profits. Moreover, Batsis et al. (2019), sees social media influencers as content creators who inspire, entertain, inform and connect with a group of followers. Influencers have been used in marketing and advertising for years, but lately they are gaining momentum. At the same time, traditional marketing methods are losing their effectiveness. Today, consumers do not want to be sold, they want to create long-term relationships. Companies use social media influencers to create these viral long-term connections and connect with their audience. Influencers are leaders in link building and are a great marketing channel that also allows consumers to more easily manage challenging times. The direct communication that influencers have with their followers allows them to generate social conversations, encourage interaction and ultimately create trends that will be accepted by followers. Companies, marketers and social media influencers already understand the need for mass audiences to build personal relationships. Collaborating with influencers gives the brand a human look. Their authentic content, especially in times of pandemic, is something that people identify with. So brands that work with influencers can win over positive influencers, as well as opinions about the brand. The greater the emotional connection of influencers with their followers, the more effectively they can influence them to accept the products or services they advertise (Ki and Kim, 2019). During the pandemic, influencers and brands began to change their communications, moving away from the products and services themselves and closer to creating value. According to Enberg (2020), brands increasingly trust influencers and give them complete creative control that would create value in the new reality of people. These trends are not new, they have just changed and unlike before the pandemic they are now focusing on more organic and authentic content and the rise of everyday influencers. Enberg (2020) came to the conclusion that the more a person trusts the more likely the influencer is to buy the product he is advertising. On the other hand, the more authentic the influencer is, the more audience he attracts and the easier it is to persuade them to buy the product he is advertising. Their research shows that brands are much more likely to use influencers as a marketing tool during a pandemic. Many brands have been forced to make these changes due to social distance and mandatory quarantines. This period enabled greater interaction between brands and consumers on social media. In fact, brands have had to connect with influencers who are realistic and loyal to their followers to promote their products and services. But it is also crucial that influencers research the brands they work with to maintain their credibility with their followers. They need to know the values and mission of the brand. Just testing the products and deciding whether they like it or not is not enough, as the majority of the population values when the company and its promotions have sincere intentions. This is especially important for companies and influencers, especially in difficult times like this, as the pandemic affects everyone. According to Dias, Pessôa and Andrade (2020), telling a story about a brand and promoting its values is key to building relationships with followers. This new address model is a proposal for two-way communication between influencers and their audience. Brands quickly realized that aggressive promotional messages were no longer preferred by consumers, so they began to take a more subtle approach. This subtlety must be precisely determined when creating the content published by the narrator, the influencer. In the context of COVID-19, the content created by influencers must be very well prepared to meet the expectations of the public. Influencers' liabilities increased during the pandemic. Many brands have recognized them as a great tool for conveying their message to the general public. As mentioned earlier, persistent quarantines, self-isolation, and government protocols have all contributed to the possibility of traditional advertising, especially when it comes to outdoor advertising. Therefore, each brand hurried to find a suitable pair of influencers and continue with marketing activities. The benefits of the influencers during the pandemic were also used by companies that had previously been banned from advertising. Such companies belong to the tobacco industry and the pharmaceutical industry. Rowell (2020) investigated the case of British American Tobacco who at the beginning of the pandemic began to transmit universal health-related messages and hashtags and effectively positioned themselves as representatives of public health. These messages were later applied to protective masks that were distributed free of charge to influencers on social media. According to Rowell (2020), the company's strategy is to use the pandemic to improve its corporate image, from villains to trusted health partners, by using influencers who will do this for them and reposition them. The use of covert marketing tactics through Instagram influencers is a key tool, given the existing restrictions on advertising. In turn, Instagram influencers can profit from audience disorientation and unique commercial opportunities by strategically positioning and raising their (global) profile.

When it comes to the pharmaceutical industry, the pharmaceutical brands often use influencers to convey their messages that are not clearly stated (Thomas, 2019).

3. METHODOLOGY

For the purpose of this research, the qualitative method was used; including 4 Macedonian influencers that belong to different categories according to the content they publish. The survey was conducted in the form of an interview consisting of 6 descriptive questions, which was emailed to each influencer separately. Due to the pandemic, the interviews were not conducted live. This research aims to help us understand the rise of Instagram influencers as a marketing tool during COVID-19, what influenced their rise and how they behave during the pandemic. It was previously agreed that the interviews would be presented anonymously. *Influencer A* started its career in influencer as a primary activity more than five years ago. Now, dealing with influencer is more like a hobby, but still not less valuable than her primary job. It belongs to the category of microinfluenzars and according to the content it publishes, it is classified as an influencer for restaurant food and travel, and more recently as a lifestyle influencer. *Influencer B* is also an influencer as a hobby, but she still understands the responsibility she has towards her audience, especially since she started growing. She sees her Instagram account as part of a community of many influencers who post similar content and who are constantly supported to strengthen this way of promotion. Influencer B is microinfluencer and belongs to the category of travel influencer. *Influencer C* is an international Instagram influencer. Its followers are mostly from the Balkan countries, but there are also followers from all over the world. She started actively building her Instagram profile in 2018 and she belongs to the category of micro-influencers. Its announcements are aimed at face and body care, usually through the presentation of products for this purpose. *Influencer D* has been building her Instagram account for more than 5 years. She is a model and this profession inspired her to start creating content on her Instagram profile which belongs to the category of fashion and makeup. The content she publishes is considered interesting by many women, so she started to increase the number of her followers very quickly.

4. RESULTS AND DISCUSSION

Table 1. Important factors for influencer-company collaboration

What factors influence your decision to partner with a company, brand or marketing agency to promote their products or services?	
Influencer A	The product or service I want to advertise must match my lifestyle and what I represent. This means that even without cooperating with the brand or the company, I would recommend them to my followers. The fee is also important to me.
Influencer B	If it's something I would personally use or match with my image, I would accept advertising it as well. It is important for me to have "tested" it before posting it on my profile. So far I have refused several collaborations because I do not believe in their products, but I have also accepted several collaborations for advertising products that are not part of my category, travel, but still fit my lifestyle.
Influencer C	The category of the product or service is most influential. If it matches my posts, ie if it is from the category of face and body care, then they can be advertised on my profile. Also, there should be no strict requirements from the brand or agency that will condition me to give only positive reviews. Of course, it is important to test the product beforehand and agree on a payment method.
Influencer D	It is important for me to stay authentic. I want people who follow me to know that I would really choose the product I am advertising. Therefore, as the biggest factor, I would say that it is my interest in the brand. Sometimes the products I advertise do not belong to the categories of fashion and make-up, but still suit my character.

Table 2. Values as important factor for collaboration

If the company has different values from you, will it affect your decision to work with it, especially during a pandemic?	
Influencer A	During this period it is very important for me to work with companies that are socially responsible. However, we all need support and presentation of true values.
Influencer B	I would not accept the promotion of products for which I personally have a reluctance to use.
Influencer C	Absolutely. If the values of the company are different from mine, then my followers may perceive me in a wrong way.
Influencer D	In the period of a pandemic, companies, above all, need to show care for their customers, so if they do not have this feature, they would not cooperate with them.

Table 3. Content published during COVID-19

Did you change the content you publish during the pandemic? If so, what is the change and what is the reason for it?	
Influencer A	I have made very small changes to the content I am posting to accommodate the situation. If in the past I used to publish food that I eat outside in restaurants, now I often publish home-cooked food. Also, due to the impossibility of traveling abroad, I focused my travel announcements on interesting things that can be done in Macedonia. Among my frequent posts were things I do at home, such as reading books, arranging, planting flowers, and so on.
Influencer B	Yes. Given that I previously posted more "outdoor content" during pandemic almost all profiles including me have adapted by posting content from their homes, such as less travel photos, more cooking content, home decoration etc.
Influencer C	I made a change in adjusting the content to pandemic conditions. I focused more on the face and body care they needed at home than on going out.
Influencer D	I personally did not make a change, but I noticed that several brands I work with at the beginning of the pandemic began to adapt their products to the situation. During that period, I advertised more clothes for the home, such as pajamas, tracksuits, etc.

Table 4. COVID-19 and its impact on collaboration
(Table ends on the next page)

How did the beginning of the pandemic affect your work and have you noticed any changes in the intensity of collaborations with brands / companies / marketing agencies in the last year?	
Influencer A	COVID-19 had a huge impact on the catering and tourism sector, and these are the two categories that I publish the most. I must point out that with the beginning of the pandemic, my engagements have drastically decreased, especially in the quarantine periods and the periods when all the catering facilities were closed. However, as we learned to live with the pandemic, engagements returned, even more so than before. Brands from every field, food, beverages, Macedonian hotels, white goods, gift shops, skin care products and many others started to contact me. I believe this happened because companies were looking for a way to get back in touch with their customers and my group of followers found them enticing.
Influencer B	My personal experience and perception is that the first 1-2 months of the pandemic collaborations are decreased and those who were active collaborations were stopped because it was pointless at the time when it is recommended to sit at home, to do a promotion of services or products that imply leaving home. But then the marketing agencies themselves adjusted their own campaigns and strategies, so they increased their presence through influencers, because and most of the users were in their homes and online. During that period they increased promotions of hygiene and home decoration products, food, home entertainment conditions, promoted reading, board games and the like.
Influencer C	The category I am posting for is always current, before pandemic and after pandemic, so I did not notice any particular changes in the intensity of collaborations. The cooperation with those companies that deliver their products and do not have physical stores may have increased a bit.

Influencer D	At the beginning of the pandemic, my collaborations with brands that had previously called me at events or used me as a model in their campaigns, photo shoots and more were reduced. However, I did not feel a big reduction in my engagements as many brands started to contact me and started selling online. Well, so I got a lot of products at home and posted about them from my home.

Table 5. Influencer's working approach and its changes during COVID-19

How do you most often work with brands / companies / marketing agencies? Do they pay you to publish content specifically for their product, do they give you free products for which you want to write only positive reviews, do they send you PR packages about which you can say your real opinion? Are there any changes in the way you pay for your cooperation during the pandemic?	
Influencer A	Over the course of a year I receive more than 1,000 PR packages, so I only post content for those who really like or like my character, which is rare. In most situations I cooperate with money, ie they pay me to publish their products and services. During the pandemic many companies tried to reduce the fee we agreed on earlier, but I do not make concessions. Now more often free products are offered, so if I really need something, I will accept such cooperation. However, even those who pay me for my cooperation, rarely want me to publish only positive reviews. They usually tell me to express my honest opinion. Knowing that I would not accept working with a brand with which we do not have the same values, my criticism in most situations is positive.
Influencer B	I usually work with marketing agencies, and therefore the way my posts are paid is monetary. My opinion is that the companies themselves are not aware of the impact in recognizing the brand (brand averseness) that they can reach through influencers, hence the collaboration with them more often it is based on compensation, of course if it is a product I need.
Influencer C	I have collaborations of all kinds, but I prefer paid content. However, if I need a product, I can get compensation. If it is a product that needs to be tested and I have not used it before, I practice using it for at least a month, then sharing an opinion. I receive PR packages very often, and sometimes if I like the product, I publish a story in which I express my opinion and thank the company that sent it to me.
Influencer D	Mostly in cash, often accompanied by products from the brand that she would buy herself anyway. During the pandemic, fees were reduced for the first few months. But I only accepted this for brands with which I have been cooperating for many years. Over the months, the old fees returned, and somewhere where the cooperation was quite successful, they even increased.

Table 6. Sponzored posts

Do you put a declaration (that the post is #Sponsored, #NotSponsored, Paid partnership) on your posts and if so, why do you think it is important to do this?	
Influencer A	If I say my honest opinion, I always write that the post is not sponsored. For those who are sponsored, if it is with compensation I write a gift, and if it is a paid post I usually agree with the client, because very often they do not want to know that the ad is paid. In the latter case, if they do not want the "Paid partnership" declaration to be published, I always try to support the advertisement with my real opinion.
Influencer B	So far I have not practiced and I have not been asked by the company that Hires me.
Influencer C	I always put a declaration, because I think it is important for my followers to know and not to be misled, what I personally chose, and what was offered to me by the company.
Influencer D	I only do this for longer collaborations, because it is important for the brands themselves to have access to certain of my posts through which I promote them.

It is crucial that influencers research the brands they work with to maintain their credibility with their followers. They need to know the values and mission of the brand and at the same time they correspond to the values and mission of the influencer.

From the qualitative research one can come to the evidence that the most important thing for the Macedonian Instagram influencers is the company and the product that they should advertise to represent their character, to believe in the product and to respond to their previous posts. In this way, influencers can maintain their credibility which is one of the main factors influencing the purchase decision. During the pandemic, influencers and brands began to change their communications, moving away from the products and services themselves and closer to creating value (Endberg,2020). Telling a story about the brand and publishing its values is the key to building relationships with followers (Dias, Pessôa and Andrade, 2020). Influencers A, B, C, D point out that if their values that they want to present to their audience are not in line with the values of the brand, they would not cooperate with it. Influencer C says that if a company's values differ from its own, then its followers may misperceive it, undermining its credibility and the trust they have in it. Several literature studies have reported that influencers who put "all eggs in one basket" suffered the greatest loss in terms of marketing engagement and earnings during the pandemic. Such influencers are those who belong to the categories of travel, makeup, fashion. Those influencers who managed to stay on top are those who made changes to their content to bring it closer to the new situation, those who already had a built-in "home influencer" profile or a category that was monitored before and during the Has Covid pandemic (Arabianbusiness, 2020). This was noticed by the Macedonian Instagram influencers, so all four interviewed influencers decided to make a change in their posts during the pandemic. Those who used to deal mostly with food in restaurants, travel, (influencers A and B) completely changed their content and decided to share more lifestyle announcements, home-cooked food, things that can be done at home, such as reading books, flower growing, landscaping. Influencer B continues to publish on the same topic, face and body care, but adjusts its announcements to home care, while Influencer D makes the change because the companies it works with decide to change products to make them more suitable for pandemic. The beginning of the pandemic was difficult for any business, including influenza. Although none of the influencers interviewed depend solely on the finances they receive from this profession, they still have a large share in the comfort they want in their lives. As previously mentioned, some of the influencers who publish in the categories of fashion, make-up, travel, food have felt a change in the intensity of cooperation with companies. Influencer A says the closure of restaurants and the inability to travel have reduced its engagement. Influencer B says the same thing and publishes travel category content. She noticed a decrease in cooperation in the first two months of the pandemic. Influencer D, which publishes content in the fashion category, says that the reduction in collaborations occurred mostly during quarantines and when physical distance was mandatory. Only Influencer B did not experience significant changes in the cooperation with companies and brands, which concludes that the influencers who published before the pandemic from home and made the necessary changes in time, are still a great marketing tool for advertising products by companies and brands. . However, at a time when people were locked in their homes due to quarantine or self-isolation, they spent much more time online and increased media consumption (Arabianbusiness, 2020). This gives companies the opportunity to direct their advertising campaigns to social media and, as part of it, to influencers. If companies use influencers properly, they have a great opportunity to promote their products and services. Some Macedonian companies have realized the importance of influencers as part of their marketing strategies, so influencers A, B, C and D say that their cooperation with companies has grown again, and in some cases more than before the pandemic. Although the categories advertised by influencers A and B have not yet returned to full swing, other home appliances, home and garden companies, books, garden centers, home cleaning products, gift shops, have seen great opportunity to take advantage of the popularity of these influencers and expand their target group of potential customers among their followers, creating partnerships with influencers to promote products and services.

Influencers B and D, on the other hand, noticed that they were most often contacted for cooperation by companies that, during a pandemic, started selling online or delivering their products at home. The introduction of new digital marketing channels, especially advertising and selling on social media, can provide great benefits to both small and large businesses. These strategies will enable them to diversify their sales and reduce their risk in the event of further closure of their physical stores (Almeida et al.,2020). Influencers usually receive free products (material compensation) or are paid (financial compensation) to include the products and recommend the brand in their daily announcements and thus create the opinion of their followers about it (De Veirman et al., 2017). Influencers A, B, C and D prefer the cooperation to be financially compensated. However, they do not exclude the possibility of material compensation, but only if they need the product that is offered. Influencer B says that when cooperating with marketing agencies, the cooperation is always with financial compensation, and if it cooperates directly with a company or brand, they often ask for it to be material compensation. Influencer A says that even when the compensation is financial, it prefers that the post should never be followed only by positive reviews of the product or service, ie it gives a "two-way message". The inclusion of negative information in the message may lead consumers to think that the influencer is honest and gives real feedback on the product, rather than just positive reviews (Uribe et al.,2016). Social media influencers are considered to be one of the few forms of authentic communication, so collaborating with brands can call this authenticity into question. For these reasons Influencer B says that whether it is material or financial compensation, he always wants to test the product for at least a month, especially since it is a face or body care product, before posting an opinion about it. , for her opinion to be relevant and to maintain credibility. The way the cooperation is done determines the degree of brand involvement in the announcement. If it is with monetary compensation, then the involvement is great and the entire content of the post refers to the product or service. Sending PR packages is considered a small involvement, where marketers send free products and hope that influencers will publish at least some information about the product (Audrezet et al.,2020a). This way of advertising can be profitable for companies, because the research concludes that half of the influencers (influencers A and B) would publish an ad or story about the products or services they received as a gift. It is ethically and legally correct for the influencers to state in their announcements whether it is a matter of sponsored content or their opinion and unobtrusive recommendation, ie to put a declaration. However, although this is a practice in the world, Macedonian Instagram influencers rarely "mark" their posts. According to the research, the only influencer who does this is influencer B, who lives outside Macedonia. Influencer C says she makes a declaration so as not to mislead followers into what her opinion is and what is paid to be her opinion. Influencer A says that if it is its opinion, it always puts a #NotSponsored declaration, and when cooperating with companies it often happens that the company does not want the # Sponsored or "Paid Partnership" declaration to stand, because this can reduce consumer confidence (Boerman et al., 2017). Influencer B never put a declaration on the posts because it was never asked to do so, while Influencer D puts a "Paid Partnership" declaration on technical grounds for the company he works with to have access to its posts. Hiding ads in advertisements can sometimes be considered a fraudulent communication practice (Cain, 2011). Therefore, companies, in agreement with influencers, should accept the rule for declaring shared announcements.

5. CONCLUSION

As much as the beginning of the pandemic had a negative impact on every business branch, it also had a positive impact on the occurrence of accelerated changes, especially in the digital world. Companies that have moved their businesses online and developed excellent online sales and product delivery systems, as well as those that use influencers as part of their marketing strategies, have been able to maintain the success of their business. At the same time, constant quarantines, social distance and time spent at home have led consumers to increase their use of social media, and thus to increase their follow-up with influencers. Influencers have become their new friends and important advisors in the decision-making process. They can influence consumer decisions if consumers find them passionate about their posts, credible and transparent. Proper cooperation between influencers and brands brings many benefits to both themselves and consumers, offering them relief in the purchasing decision-making process, especially in the stressful period we are in and we need great support.

Limitations:
There are few limitations to this study. The results of this research cannot be generalized because it was done on a convenient sample of very small number of respondents. To obtain reliable results on COVID-19 impact on influencers, it would be necessary to conduct a survey on a larger representative sample of respondents. In addition, this research was investigated only in the Republic of North Macedonia, and therefore the additional studies should provide more comprehensible analysis of such variables. Last but not the least, is the risk of social desirability bias. Although the respondents are anonymous, still the level of honesty should not be taken for granted.

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UNIVERSITY EDUCATION AND ACCUMULATION OF HUMAN CAPITAL IN THE REGION

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ABSTRACT
The interest in educated human capital is constantly growing, as it is considered as a key element of economic growth of countries. In the presented article, we focused on the analysis of university education in Slovak Republic. Universities play an important role in affecting the development of regions. The main goal will be to explore the employment of university graduates in Slovakia, while we analyze the employment of graduates according to selected characteristics of universities in Slovakia, regional differences in the employment of graduates, employment of graduates according to fields of study and also we deal with migration. Based on this analysis, we can state that the largest number of university graduates is always located in the place of graduation or in the surrounding regions. Universities also have a huge impact on accumulation of higher educated people in the region. However, from all regions, a significant number of graduates are located in the region where the capital is located, in Bratislava. This region ranks among the most developed regions of Slovakia in all directions. And so we can assume that if some Bratislava universities were not in Bratislava, they would not have such a high employability of graduates.
Keywords: *human capital, region, employment of graduates, migration*

1. INTRODUCTION
Universities often support the migration of young people. This desire for education causes the movement of human capital between regions. Therefore, it is important where such institutions are located and how they affect their location and region of occurrence. Because human capital is considered one of the main factors of economic growth. Localization of higher education institutions affects the accumulation of human capital, because part of the graduates continue their studies at the place of study after finishing school. The presented article focuses primarily on the analysis of university graduates for the year 2018, which represents the new educated human capital on the labor market in the conditions of the Slovak Republic. The article primarily analyzes the number of university graduates and the employment of university graduates - regional differences, the employment of university graduates by field of study and the migration of university graduates in Slovakia.

2. LITERATURE REVIEW
Definitions of the term human capital are different. Many studies define human capital as abilities, skills, knowledge and other personality characteristics that affect the economy. The owner of human capital is an individual who possesses such characteristics. Gary S. Becker (1993) was one of the main representatives of the concept of human capital. Recently, there is more and more talk about the influence of human capital on development.

However, this development may not coincide with national development or regional development. In developing countries, these are internal factors rather than the impact of human capital in the region on productivity in the economy. On the contrary, the redistribution of factors has an impact in regional development. If these factors work together, the regions will grow and prosper (Faggian, McCann, 2019). Currently, understanding this functioning is not entirely easy, and therefore it is necessary to clarify certain facts such as how human capital affects economic development and how migration between regions affects it. Many authors, such as Friedman and Kuznets (1954), Gary Becker (1993) and many others, have tried to capture this issue. It is universities that influence the development of human capital, which in turn influences the development of the territory in which such educated human capital is located. However, due to the fact that universities are located only in certain places or in certain regions, migration is also an important factor. University graduates are considered to be an important human capital that migrates precisely for the purpose of obtaining an education and subsequently better job opportunities. These factors positively affect the ability of regions to grow or negatively affect the ability of regions to grow (Faggian, McCann, 2019). Sprocha (2011) and the results of his analysis point to the internal migration of people according to the highest education obtained in the years 1996-2010. It points to the increasing representation of persons with higher education in the total number of migrants. It is clear that university students have the highest intensity of migration among all educational groups. The remaining groups of persons with lower education are more likely to move to shorter distances or not at all, and therefore their influence on regional differences is smaller (Sprocha, 2011). The university also supports the quality of the local workforce through the education that its graduates receive. Universities employ highly qualified workers in many scientific fields, which results in a high concentration of knowledge at universities and its positive impact on the regional economy. (Urbančíková, 2006) Florida (2005) in her article on the role of universities in regional development holds the opinion that the wealth of universities, cities and regions are people, their knowledge, creativity and talent. He is of the opinion that we should not see universities as incubators of technological innovation, but on the contrary, he sees the future in people.

3. METHODOLOGY

The main goal will be to examine the employment of university graduates in Slovakia. The sub-goals of the work are linked to the main goal, namely: To analyze regional differences in the employment of graduates in Slovakia, To analyze the employment of graduates by field of study in Slovakia, To analyze the migration of university graduates in Slovakia. The hypothesis is based on the assumption that university graduates have a higher ability migration due to employability, higher earnings and higher benefits to the quality of life. Therefore, they locate in more developed regions, which offer them greater advantages, but this is associated with higher costs of living than higher costs of housing, services or negative externalities associated with more developed cities and regions (Faggian, Mccann, 2019). We obtained the available data on university graduates from the project Application - in the footsteps of graduates, which is based on the records of graduates from 2018. The project is implemented by the Ministry of Labour, Social Affairs and Family of the Slovak Republic. The project is based on an interest in objective information about the employment of high school and university graduates, which would lead to the rationalization of decision-making by all actors in the labor market and in the formal education system and significantly help to eliminate existing differences in the labor market, leading to the prevention of their emergence in the future and ultimately enabled a relevant and comprehensive evaluation of the results of the educational system. Data from the project Application - following the footsteps of graduates are also linked to the website www.portalvs.sk. On this page, all universities (35), faculties (117) and departments (4891) are listed in one place.

We have compiled a database based on this website and link. Based on the available data, we will prepare a comparison of selected educational indicators in the Slovak Republic related to university graduates.

4. RESULTS

In this subchapter, we will analyze the application of university graduates from a regional point of view, from the point of view of scientific fields and migration of graduates.

4.1 Analysis of the employment of university graduates – regional differences

According to regions, university graduates achieve similar unemployment results to those achieved by individual NUTS3 regions as a whole. Therefore, unemployment depends not only on the quality of the university, but also on the development of the region and also on the demands of the labor market. The highest rate of unemployment among graduates is achieved in the Prešov Region at an average rate of approximately 8.32% compared to unemployment in the region, which is 8.61%. Graduates of higher education institutions have lower unemployment. It is followed by the Košice region, where university graduates reach unemployment of 6.27%, while the unemployment rate in the region is 8.17%. Graduates of the Trenčín Region achieve unemployment of 5.80%, the unemployment rate of the region is 2.93%. In this region, there is a significant difference between total unemployment and unemployment of graduates. The next region is the Banska Bystrica region with a graduate unemployment rate of 5.30%, and the unemployment rate in the region is 7.03%. The Nitra region has an average rate of unemployment of graduates of 4.11%, and the average rate in the region is 3.12%. The Trnava region has the third lowest unemployment rate of graduates with 3.54%, and the unemployment rate in the region is 2.31%. In second place is the Bratislava region with a graduate unemployment rate of 3.15%, while the unemployment rate in the region this year was 2.62%. In first place and with the lowest unemployment rate is the Žilina Region, while in this region the unemployment rate of university graduates reached 2.68% and the average unemployment rate of the region was 4.04%. The unemployment rate of graduates not only tells about the quality of the school, but also about the maturity of the region.

4.2 Analysis of the application of university graduates by field of study

In the following tables, we analyze the 45 fields that graduates studied at Slovak universities. Some fields require a larger number of graduates, while others require fewer. There are also different genders of graduates in individual fields. Some fields are preferred by women and others by men. We also focused on the top 10 fields with the highest number of male and female graduates. Whereas for the male gender, fields such as acquiring and processing earth resources, cybernetics, electrical engineering, informatics or mechanical engineering are in the first places. On the other hand, in fields with a female focus, speech therapy and therapeutic pedagogy, psychology, sociology and social anthropology, food industry and also pharmacy are at the forefront.The fields with the best applicability include pharmacy, speech therapy and therapeutic pedagogy, informatics, general medicine, cybernetics, teaching and pedagogical sciences, mechanical engineering, chemical engineering, chemistry and economics with management. Applicability in the field is also significantly influenced by the number of graduates who graduated from these field. As an example, speech therapy, which was graduated by only 19 graduates, and economics with management, which was graduated by as many as 3166 graduates. After the previous analysis of the top 10 fields with the best applicability, we also analyzed the top 10 fields with the lowest applicability.

Such fields include, for example, architecture and urban planning, sociology, woodworking, arts and culture sciences, philology, philosophy, security sciences, health sciences, acquisition and processing of earth resources, as well as geodesy and cartography. In this case too, it is important to note that the number of graduates varies. We will continue to analyze unemployment in individual branches.

Table 1: Top 10 fields of study with the lowest unemployment

	Section	Unemployment
1.	Speech therapy and therapeutic pedagogy	0%
2.	Acquisition and processing of land resources	0%
3.	Geodesy and cartography	0%
4.	Dentistry	0%
5.	Health sciences	0%
6.	Nursing	0%
7.	Physics	0%
8.	Informatics	0%
9.	Chemical engineering and technology	1%
10.	General Medicine	1%

Source: own processing based on the project - Application - in the footsteps of graduates.

The table 1 shows the professions with the lowest unemployment rate. These trades primarily have 0% unemployment, followed by trades with 1% unemployment. The fields with the lowest unemployment, such as speech therapy and therapeutic pedagogy, acquisition and processing of land resources, geodesy and cartography, dentistry and others listed in the table, have the lowest unemployment. Subsequently, we continue with the analysis of the trades that have the highest unemployment rate.

Table 2: Top 10 - fields of study with the highest unemployment

	Section	Unemployment
1.	Architecture and urban planning	67%
2.	Sports sciences	17%
3.	Veterinary medicine	11%
4.	Ecological and environmental sciences	10%
5.	Earth Sciences	8%
6.	Safety sciences	7%
7.	Historical sciences	7%
8.	Woodworking	7%
9.	Social work	7%
10.	Sociology and social anthropology	7%

Source: own processing based on the project - Application - in the footsteps of graduates.

Based on the table, the highest rate of unemployment in trade unions can be evaluated. Undoubtedly, the highest unemployment is recorded in architecture and urban planning, up to 67%, it is this field that we also recorded in the first place in terms of the lowest employability ratio. Sports sciences follow with 17%. Fields with a relatively high unemployment rate are also veterinary medicine, ecological and environmental sciences, earth sciences and others listed in the table.

4.3 Analysis of the migration of university graduates in Slovakia

We understand migration as the transfer of human capital between the place of residence, the place of study at university and the place of work. Therefore, in this work we analyze the migration decision of graduates, such as the decision to stay and work on the labor market in the place of study and location of the university or to leave to work elsewhere. We analyzed the decision to stay to work after graduation in the region where the graduate studied or the decision to leave for other or neighboring regions. Last part focuses on the analysis of the migration of graduates by field of study. This analysis should tell us about the possible focus of the region and the related migration of graduates.

Table 3: Analysis of migration of graduates by field of study in %
(Table ends on the next page)

Field of study/Region(%)	BA	TT	NR	TN	ZA	BB	PO	KE
Safety sciences	36,33	6,22	2,56	9,67	20,67	9,33	7,56	7,78
Biology	58,82	3,45	5,63	8,55	4,10	4,20	8,91	3,00
Biotechnologies	63,40	1,00	8,60	5,20	10,00	7,80	1,60	2,40
transportation	40,71	2,86	1,43	7,26	32,57	5,86	6,71	2,29
Woodworking	25,00	3,67	3,67	0,00	14,00	10,67	16,67	26,00
Ecological and	38,92	3,50	4,92	1,83	6,25	18,67	9,67	16,00
Environment. science	40,74	6,79	9,31	6,69	10,52	7,43	9,92	8,60
Economics and	45,25	13,88	0,88	7,25	12,50	3,00	4,63	12,75
management	28,00	2,00	7,00	2,00	3,50	4,50	21,00	32,50
Electrical engineering	40,81	7,55	10,96	7,49	12,12	8,31	7,13	5,74
Pharmacy	24,20	1,60	15,80	7,60	5,60	5,60	23,40	16,60
Philology	67,00	0,00	33,00	0,00	0,00	0,00	0,00	0,00
Philosophy	82,00	0,00	0,00	0,00	9,00	0,00	0,00	0,00
Physics	62,67	2,33	6,33	2,78	4,22	0,89	27,60	5,89
Geodesy a	73,80	3,40	17,20	0,00	3,40	2,20	0,00	0,00
cartography	70,33	7,00	5,67	4,33	3,50	3,00	5,33	1,00
Historical sciences	37,45	6,77	9,85	6,85	11,02	7,86	10,64	9,68
Chemistry	47,17	5,83	3,17	11,33	13,33	5,00	1,50	13,33
Chemical engineering a	20,00	3,50	5,00	7,50	12,50	35,00	10,00	7,50
technology	41,00	12,00	6,00	12,00	6,00	6,00	6,00	12,00
Informatics	88,33	0,00	2,00	0,00	5,67	0,00	0,00	4,33
Cybernetics	52,50	5,50	8,17	7,42	6,50	4,01	7,75	8,58
Forestry	26,00	0,00	6,00	0,00	0,00	15,00	9,00	44,00
Speech therapy and	47,07	7,29	4,50	6,58	2,00	8,75	11,75	18,00
therapeutic pedagogy	31,23	17,15	22,00	5,92	8,92	6,62	3,77	4,77
Mathematics	32,00	10,25	15,25	5,50	8,50	14,25	9,25	5,50
Media and	48,50	7,75	4,63	3,38	4,88	16,75	5,75	8,25
communication studies	47,56	5,78	11,00	2,67	5,56	7,67	6,11	13,56
Nursing	24,87	11,87	11,53	6,07	5,73	10,07	15,93	14,00
Political sciences	72,00	0,00	5,50	11,00	0,00	0,00	0,00	6,50
Half foot. a	41,87	1,67	3,67	11,73	13,73	2,80	11,47	13,13
landscaping	27,19	7,57	10,83	8,34	13,42	9,53	13,45	9,71
Food industry	14,75	0,00	18,75	1,25	0,00	0,00	40,50	14,75
The law	36,61	6,57	9,48	6,72	10,84	7,76	10,97	11,16
Psychology	30,85	7,45	10,41	7,89	12,65	8,90	12,35	9,57
Social work	10,00	0,00	20,00	0,00	0,00	0,00	20,00	50,00
Sociology and Social Anthropology	37,50	25,00	23,00	4,00	8,00	2,00	0,00	0,00

Construction industry	53,88	2,13	3,25	4,38	5,88	8,88	11,75	9,75
Engineering	37,50	9,50	6,25	9,50	12,25	5,50	7,25	11,50
Theology	20,67	2,33	8,00	2,33	18,67	8,67	19,67	20,67
Teaching and	36,71	2,71	12,86	6,71	17,29	5,14	10,29	8,71
pedagogue science	17,50	0,00	3,00	7,00	21,50	0,00	29,00	22,00
Art	0,00	0,00	0,00	0,00	0,00	17,00	41,50	41,50
Sports sciences	18,00	6,33	5,67	8,33	22,67	12,00	10,67	17,33

Source: own processing based on the project - Application - in the footsteps of graduates.

As we can see, just as in the previous analyses, the Bratislava Region has a significant position. In this region, there is a large representation of almost all graduates of the study fields. However, we analyze the results of the table according to the regions of Slovakia in more detail. Already in the previous findings, we found the results that 30.32% of graduates remained in the Bratislava Region after graduation. Therefore, it is not surprising that the graduates of almost all fields of study were largely located in this region. Based on the analysis, we can conclude that the Bratislava region has a significant lead in this area as well compared to other regions. We found that almost all branches achieve the highest percentages in the Bratislava Region. However, there were study fields that achieved high application in other regions as well. Thanks to this, the focus of the region can be predicted. Therefore, we conclude that it is not only the quality of the university that matters, but also the focus of the region. Because a college makes significant sense if it is located in a place where graduates can apply themselves in their field. If it is not located in such a place, graduates migrate to find employment. Therefore, universities have a huge influence on the retention or the accumulation of university graduates in the region and thus indirectly affect the development of regional economies

4. CONCLUSION

In the presented article we analyzed 45 fields that graduates studied at universities in Slovakia. Some fields require a larger number of graduates and others, on the contrary, a smaller number, and the gender of the graduates in each field is also important. Some professions favor mainly the female gender and others, on the contrary, the male gender. We analyzed the top 10 fields of study with the highest and lowest applicability rates. While among the fields with the highest applicability rate, fields such as pharmacy, speech therapy, informatics, general medicine and cybernetics came out for us. On the contrary, fields such as architecture and urban planning, sociology and social anthropology, woodworking, sciences of art and culture, and philology came out with the lowest applicability rate. However, it is important to note that the number of graduates of individual fields also plays an important factor in applicabilityThe last subsection was devoted to the analysis of graduate migration. Based on this analysis, we can conclude that the largest number of university graduates is always located in the place of graduation or in the surrounding regions. Also, universities have a huge influence on staying or the accumulation of university graduates in the region and thus indirectly affect the development of regional economies. However, for all regions, a significant number of graduates are located in the Bratislava region. This region ranks among the most developed regions of Slovakia in all directions. The Bratislava region offers a wide range of opportunities for employment and self-realization. However, it is precisely the localization of a large amount of human capital, especially the educated one, that provides the possibility of regional development of the region and the competitiveness of the region. And we can also assume that if some Bratislava schools were not in Bratislava, they would not have such high employability of graduates. Several facts emerged from the results of these analyses. From the comparison of the regions, we can evaluate the significant lead of the Bratislava region, in terms of the number of universities, the number of graduates, the amount of the average salary, employability, the average rate of unemployment, but also the location of the graduates.

Because the Bratislava region had the best results for all these indicators. This may be due to the fact that the Bratislava region is a region of the capital Bratislava, where there is a higher standard of living, better opportunities for graduation, a greater number of job offers, better applicability in the field, lower unemployment, higher incomes and also a higher quality of life. However, there are also negatives associated with developed locations such as higher costs of living than housing or negatives such as traffic jams and others. These positives and negatives also affect the surroundings. For example, lower unemployment of graduates in the Nitra or Trnava regions compared to other regions. On the contrary, on average, the worst results in our research were achieved by the Prešov region, which in the case of comparison was last ranked. This region had the lowest average wages of graduates compared to the regions and also the highest unemployment rate of university graduates. In conclusion, we would like to add that universities should also respond to changes in the labor market in order to achieve 100% success rate in the employment of graduates. On the one hand, the quantity of graduates is essential in order to cover the needs of the labor market. However, on the other hand, the quality of these graduates is also important. The applicability of graduates on the labor market would certainly be increased by more intensive cooperation between universities and employers of graduates, either companies or the state apparatus itself. Because that's the only way we know which graduates the given region or the labor market needs. It works in more developed countries and we should take inspiration from such countries. Because high-quality human capital, as empirical studies from world literature have already shown, is the driving force of economic development. It is also extremely important for Slovakia's progress and increasing the competitiveness of Slovak regions.

ACKNOWLEDGEMENT: *This contribution was supported by Scientific Grant Agency VEGA (Vedecká Grantová Agentúra), grant number 1/0605/19 "New role of universities in regional innovation systems".*

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NEW TRENDS TAKEN BY BANGLADESH TOURISM AFTER COVID-19 FOR BETTER SUSTAINABILITY

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ABSTRACT
Tourism is the fastest growing economic activities that Bangladesh is currently hailing towards. Though Covid-19 left a very bad impact on the tourism sector globally, let alone in Bangladesh, she looks to come up with full vigour using new techniques and changing the trends to attract more tourists. Using new technologies to provide guests a better experience will enable Bangladesh tourism industry to maintain the steady growth it makes. It will change the negatives and help sustain through better management.
Keywords: *Bangladesh, new technologies, new trends, sustainable, tourism.*

1. INTRODUCTION

Tourism industry is never static, it's always changing and the most dynamic one. Globally it reached its peak in 2018 with the highest record of international tourist arrival as declared by the United Nations World Tourism Organization (UNWTO). A total of 1,326 million *international tourist arrivals* were recorded in destinations around the *world*, which is 86 million more than in 2016. Yet, like all other industries of the world, tourism sector undeniably is facing big challenges and uncomfortable changes after the Covid-19 pandemic. During the pandemic outbreak and lockdown in many parts of the world, habits of people have changed a lot. People remain more depended on technology, work from home; internet becomes the most powerful tool to communicate globally. As most of the people, including all tourists and tour operators, travel agents, hospitality service providers depend on technology, tourism trend has taken a new dimension. Technology has empowered the industry management and tourists to explore, encounter and reach new unexplored areas by facilitating on-line travel, accommodation booking, and many more. With the rapid technological advancement, the tourist desires to have novel experiences are also changes; and it helps tourism industry to constantly transform into a new dimension. Thus tourism industry is witnessing some new trends as this industry has intense potential to grow and generate revenues. The changing trends and technological developments help tourism of Bangladesh to expand the horizon of the sector and generate avenues to generate more foreign revenues. Paper explores new shaping trends in global tourism industry today.

2. DIGITALIZATION IN TOURISM

World moves faster with the advancement of digital technology. Currently tourism development accelerates and achieves its target due to the rapid development of digital technology. We can notice a great change in the taste and trends of global tourists. Now-a-days, prior to take a journey to any destination, tourists check the status of the proposed destination, weather condition, local culture, food habits, current events, places of specific attractions, and also for travelling purposes like using inexpensive flights, renting a car, etc. using the digital technology. Tourists commonly use mobile apps for directions like compass, Google maps, for personal assistance apps for currency converter, world time zone, weather, language translations, locating accommodation or places to eat, and of course use on-line booking. Digitalization in tourism can be divided into more segments like: a. automation, b. on-line booking and c. tech-empowered travel.

2.1. Automation

Earlier days, tourists have to visit a travel agency or tour operator's office to talk, negotiate and decide to travel a destination. Automation changes everything. Now digitalization changes it completely. It helps both way, saving advertising and office cost of the travel agencies as well as time and money of tourists. Moreover, tourists enjoy the experience of findings options from the on-line, confirms booking and enjoy travelling. From the report of Arrival Travel (2020) it is found that travellers are accustomed to book a trip on-line, but the service provider are lagged behind. More travel and tour operators are now adopting technology to give customers better experience and make more profits. In 2019 about 71% of travel operators surveyed were using reservation technology, but in post-covid period automation is rising faster in the sector to remain competitive and generate more profit for better sustainability. Bangladesh government has declared to complete its digitalization pathway by 2041 in every sector and tourism will be one of the pioneers in this respect.

2.2. Mobile booking

Another important trend, as a part of digitalization, is mobile booking. Mobile operators report that 2 out of 5 on-line booking are made on mobile devices. More interesting facts are: tourists booked trips on mobile phone spend 50% more on tours and other activities, and they usually leave on-line reviews twice than other tourists. So, Bangladesh travel and tour operators also go with this trend of the tourists, ensuring in-line booking using mobile apps.

2.3. Tech-empowered travel:

We have already mentioned about automation and mobile bookings as some of the current trends in the tourism sector. In addition to that existing and emerging technologies will continue to influence travel in many other ways. As from a recent study Amadeus stated that technology and innovation seem to be one of the keys in building confidence of the tourists. Technologies, during the post-covid world, is going to be more crucial as international tourists need to present digital covid vaccination certificate as an essential travel document. Also tourists need access to information on-line while in abroad. After pandemic time, tourists now more prefer to have self-service check-in, contactless payment just to maintain a safe distance. We also notice that virtual tour experiences obtained very significant popularity during the lockdown periods, and it was possible because of the digitalization process in the tourism sector. Bangladesh initiated, though in very limited numbers, digital check-in and check-out by the tourists to ease the process and contactless services in the reception desk. Since technology is bringing changes in the mind of tourists, travel and tour operators also welcomes the new trend to reach their guests and clients to provide them with the satisfactory service. Digitalization also contributes for promoting their products and services through on-line marketing and establishing a branded image of the business.

3. SAFETY

Though the post-pandemic tourism industry looks brighter again, there are still many safety concerns regarding covid-19 as well as other health related issues like the outbreak of monkeypox in May 2022. The main health concerns include the fear of being caught by corona virus again during the travel which may cause to remain in quarantine or in self-isolation that ultimately destroy the joy of travel. Moreover, many tourists feel that they have to cancel the planned trip just because of entry restrictions to certain places in the world.

Now, everyone has to deal with the health issues of the tourists as first concern before making a tour plan and implement the same and Bangladesh is no exception in this regard. All relevant service providers of the tourism and hospitality are following the covid-19 protocol while providing services to tourists in Bangladesh.

4. BLEISURE TRAVEL

Bleisure is the mix of business and leisure, and over the last few years it becomes a new trend to mix a business tour with the leisure. Bleisure travel is one of the mostly frequently growing trend where business people extend their tour to leisure activities. In a recent study by the Expedia.com is it found that 60% of the US business tours incorporated the leisure elements. Bleisure is getting more popularity nowadays:

- AMEX Global Business Travel reports: 57% of companies have a policy for young employees to extend business trips with vacation time.
- 74% of frequent business travellers wish their corporate travel policy included a budget for entertainment and while normal business trips last 2 days on an average, bleisure travels can often be 6 days long or more.

The above mentioned reasons justify why bleisure travel is a new trend and getting popularity day by day. Most important consideration is bleisure travel is beneficial for the employee's satisfaction and it costs next to nothing for the employers. Booking.com suggests that 30% of people would accept a job with a lower salary if it offers more business trips. Moreover, during the pandemic time and currently in post-covid period many offices encourage work remotely, making it easier to work and travel for fun. A new type of digitalized tourists group is termed now as "digital nomads" who are basically freelance entrepreneurs. Our own experience is not much different, as whenever we get a chance for a business trip outside, people usually take 2-3 days extra to explore new destinations and cultures. Without being aware, we are becoming part of bleisure tourism.

5. STAYCATION

A bit similar types of new trend is staycation – that represents a holiday spent in one's home rather than going abroad. It gains popularity during the covid-19 pandemic time. This often involves day trips for exploring local attractions and activities by a person. This type of vacation is ideal for the persons who deem to escape from their homes but want to avoid the ongoing covid-19 restrictions by following set regulations. Though the travel restrictions are getting easier day by day, yet the new trend of staycation may continue for few more years as the tourists in this case support their own local markets to grow, and feel safer and secure in their homely holiday environment. In Bangladesh it rises more than in neighbouring countries, as many top business people remain at their holiday homes near the city (Dhaka) but away from the crowds (in Gazipur), help local community to come up with services.

6. PERSONALIZATION

Personalization is another new travel trend that has seen a huge growth in recent years, and we believe it will continue to grow in the days ahead. According to Think with Google, 57% of travellers express that hey love to have personalized experience while taking services from the travel organizations, and should be based on their needs, behaviours, personal preferences, and past choices. Personalization is more significant when it comes to the actual tour or activity. By offering flexible experiences that can be tailored to a traveller's needs, the travel organizations can provide better satisfying services to tourists, and that can lead to have repeated visits by the travellers. Following the trend, Bangladeshi travel organizations are now focusing to provide customer-oriented services that starts from the time they see an advertisement on social media or on company website. The communication also echoes with what the specific tourist prefers.

7. SUSTAINABLE TOURISM

During the post-covid period sustainable travel is going to be one of the key factors to the recovery and the future of the tourism industry. As the effects of climate change have become more apparent over the past few years, eco-friendly travel is now a priority for many tourists. Many countries are urged to accelerate climate action in tourism, hence the demand of responsible travel is on the rise. The conscious travellers love to explore the world with more sustainable way while assisting the local communities, safeguarding the nature and the planet for the next generation. Tourists have the mindset to take their travel choices with the environment in mind. But we have to remember that the sustainability is not only about the environment, it is also about making a positive impact on the lives of the people, on cultures they are going to experience, and the economy of the destination. In connection to this, two more trends can be sub-categorized: a. Active tourism, and b. Cultural engagement.

7.1. Active tourism:

Active tourism is the trend that has emerged in response to the calls for more sustainable and thoughtful tourism. It encourages combining the passion for travel with direct involvement in conservation and supporting the local environment. Tourists help the nature to keep clean and safe, they participate in activities, like beach cleaning, enlightening youths by tree plantation, etc. From the result of recent survey made by Amadeus it is found that during this rebuilding time of tourism, travellers consider cost-effective sustainable travel as top priority. 37% of the travellers surveyed think that opportunities for the tourists' involvement in the preservation of tourist destinations will help the industry to become more sustainable in the long term.

7.2. Cultural engagement

Tourists' cultural involvement with a destination's cultural attractions and events is another major new trend and this sort of tourism is growing further by culturally motivated people. According to UNTWO, international tourists engaging in cultural activities accounted more than 500 million in 2017, and it grows more even after the pandemic covid-19 affect. Mostly city tourism relies on culture as a major product, though in Bangladesh rural tourism is more connected with cultural tourism. It may be because of the origin of culture in Bangladesh is rural based. This new trend of tourism includes another factor 'experiential tourism' where interaction between a tourist and local resident plays the key role of sharing experience and obtaining satisfaction. Both tourists and local residents like to see the growth of cultural tourism as it help increase of local income and support for local cultural institutions, (Richard, 2006)

7.2.1. Experiential tourism

Every tourist now-a-days like to have experience – a lifelong experience from a visit. This notion helps the experiential tourism to grow faster and be a part of the new trend this days. Tourists love to obtain an emotional bonding with nature as well as local culture to have an authentic experience from the travel destination. They mix with local and experience the culture of the people. In CNBC published a report of the Harris Group (2016) where it showed that "72% of Millennial are prioritizing 'experiences' over stuff"; they prefer to spend more money on experience than on material things. The experiential tourism grows faster than other new trends and draws varieties of experiences. It also includes food taste of the destination, introducing culinary tourism.

7.2.2. Culinary tourism

Culinary tourism enables tourists to enjoy different local cuisines, maybe even staying with local families rather than in hotels. They love to learn how to cook some of the items they taste, and interact with the locals closely and watch their ways of life. Sometimes tourists visit food festivals, join culinary competitions, visit farms and fields to have the most authentic experience. Here I like to add further that there is huge opportunity to attract foreign culinary tourists to Bangladesh as she has a long history and culture of food heritage.

Bangladesh can easily catch attention of the neighbouring countries like India, Nepal, Pakistan, Sri Lanka as well as China who are nearly one third of the total population of the world. Many of them will find some similarities of recipes, cooking style and origin of the food.

8. WELLNESS TOURISM

It’s another current trend of travel that gets high demand day-by-day. Though Bangladesh cannot capitalize on the wellness issues, but cannot ignore the trend as a faster growing trend. It becomes reverse to Bangladesh as many Bangladeshis are travelling to India, Thailand and Singapore for health issues, taking treatment for the places which are better service provider in this respect.

9. CONCLUSION

Travelling is a very dynamic sector and embraces changes everyday. Many new trends are now extremely popular whereas they were quite unnoticed or unknown even few decades earlier. The industry is more rely on the quickest developed technology and tourists as well as tourism organizations like to take the best support of the technology for obtaining and providing services. With the introduction of new apps, on-line services, flight connectivity, travelling modes, comfortable accommodation and quality food and drinks technology helps the tourism industry progress faster. We do hope that now during the post-covid period with better management Bangladesh tourism will bring the momentum again with assistance of the technology and nurturing the new trends to attract millions of tourists.

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THE EFFECT OF SCHOOL LEADERSHIP STYLES AND CULTURES ON ENGLISH ACHIEVEMENTS AND ENGLISH GRADES IN ISRAEL

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ABSTRACT
Israel is a vastly multi-cultural society with various religious affiliations, secularism, ethnicities, cultures, and social-economic groups. The task of developing and implementing a nationalized education curriculum for these various sectors and cultures is a complex task which incorporates many protocols and involves various stakeholders who motivate and influence the whole process. As English is an international language, it is a compulsory subject in Israeli schools from 3rd-12th grades, and a great deal of emphasis is placed on the Israel English curriculum in schools; however, each school may have different methods of implementing the national English curriculum and will therefore lead to different outcomes. The English Matriculation Exam (Bagrut), is a national standardized exam for high school students which has the goal of determining the achievements of students in their English language skills. Data on the success of the Arab and the Jewish population (success in matriculation exams and tests of Indicators of Efficiency and School Growth- IESG) that are published annually by the Ministry of Education reveal a significant gap between the scores in English among the Arab population and the Jewish population. School principals are responsible for ensuring the management of the school and the success of their students' educational achievements. Their management style highly impacts the pedagogical methods and activities which are integral to leading their students to achieving higher scores on standardized tests and superior school rankings according to the Ministry of Education. There are various styles of school managerial leadership which may be linked to cultural norms and lead to various outcomes in achievement. How do cultural differences and methods of management in schools affect the results of Israeli high school English matriculation exams and students' general English skills?
Keywords: *School principals, leadership styles, transformational leadership, transactional leadership.*

1. INTRODUCTION: LEADERSHIP

In order to ensure a state of order and consistency in any organization, including a school, good management is essential. Good management requires setting goals and methods into place in order to strive for better outcomes and for challenges to be faced efficiently (Ubben et al., 2004). The school principal is therefore a position which serves to keep the school functioning according to the norms set in place and the goals which have been defined. When challenging situations arise, conditions not met, or the school is not achieving its goals, the principal is expected to take corrective action in order to function effectively.

In addition, the principal must have a long-term vision which does not simply follow a status-quo, but is constantly searching for ways to adapt to the times, surpass current standards, and continue to lead the school in a positive direction. (Amanchukwu et al.,, 2015; Avolio et al., 2009). There are various styles of leadership which are conducive to running a school. The following research focuses on two different approaches: transactional leadership and transformational leadership.

1.1. Transactional Leadership Style

The transactional leadership style is generally considered to be more of a management type of approach which focuses on a leader who is in charge of a team who is expected to follow orders of the leader. This leader is in charge of employee or team compliance as well as supervising the team, organization, and group performance. Leaders of this approach are generally keen to keep the status quo of the organization and are hesitant to make changes in running the organization as it may cause rifts (Yukl, 1999). There is a more strict sense of hierarchy as the employees are directly responsible for acting according to the leader's guidelines with less input from the employees as to how the organization should be run. As there is more of an emphasis on the processes necessary to lead to successful outcomes as opposed to focusing on a future vision, (Odumeru & Ifeanyi, 2013), there is more of a concentration on contingent positive reinforcement or contingent negative reinforcement. With regards to school management, the relationship between the staff and the principal is based on the staff strictly adhering to the objectives, curriculum, pedagogical methods, and assessment methods outlined or approved by the principal (Burnes, 1978). The principal's approval over the methods is essential in transactional leadership while the implementation of the methods lies on the staff. A staff member who veers away from this system will be punished or terminated from their position as they are expected to comply. On the other hand, an employee who abides by the guidelines and meets target goals in a timely manner will be rewarded. This type of approach results in preserving the status-quo by rewarding adherence and dismissing non-compliance, regardless of the outcome of the non-compliance. This approach, according to Yukl (1999), is most efficient in times and situations of crisis and emergency as there is no room for negotiation, trial and error, and there is a necessity to be a cohesive unit which is based on a united strategy. In addition, when specific tasks must be completed with specific goals, this method is considered to be efficient.

1.2. Transformational Leadership Style

The transformational leadership style has a less rigid hierarchical structure and is based on the concept that the leader's place is to facilitate the team to perform better as opposed to directing them toward a specific direction. Bass (1996) considers this to be superior to transactional leadership as each component of the group has the ability to take initiative, work according to needs and strengths, and be empowered. The leader does not make all managerial decisions, rather works to inspire their staff and empower them intellectually in order to help them to achieve their goals and targets. The methods and decisions do fall solely on the leader, but on every party involved. The staff is not only the implementers of policies and methods from above, they are also creators and decision-makers and part of the process of goal-setting and long-term visions. The leader acknowledges that setting structures which are meant to be one-size fits all is not the best way to lead, and would rather empower each individual to add their own unique qualities to the school. As a result of this empowerment, staff members have the potential to highly influence the direction of the school (Bass & Riggo, 2006). Therefore, the teachers also have the potential to influence student achievement, school, and classroom climate (Brown et al., 2004) as they add their own abilities and characteristics to their own classroom. The school leader is considered one of the most influential factors which affects the development of the quality and school environment (Cohen et al, 2009), but the relationship between the leader and the staff must be based on trust on all sides to ensure successful outcomes. This type of leader sets clear goals and objectives based on rationale, and stimulates the motivation of the staff to secure commitment to these goals (Sergiovanni, 2007). Transformational leadership style has an impact on teachers' ideas of the school and their commitment to change, as well as student achievements (Bird et al, 2009; Hallinger and Heck, 1988), thus, they inspired high performing schools.

According to Warrilow (2012), there are four basic elements of transformational leadership style: charisma, inspirational motivation, intellectual stimulation, and individualized attention. Each of these aspects of a transformational leader are required to this approach to be successful. A charismatic leader will be one that can stimulate the staff to work more effectively, an inspirational leader will motivate the staff, the intellectual stimulator will encourage creativity and problem solving, and a leader who gives individualized attention will serve as a personal mentor which can instill confidence and give guidance when necessary.

2. METHODS

The quantitative study included three groups: 40 high school principals, 324 English teachers (about 8 teachers from each school), and 212 parents of high school students (about 5 parents from each school). The participants were recruited from 40 high schools in Israel (31 Jewish schools, 7 Muslim schools, 2 Druze schools) in order to understand how these populations are interrelated. Each of the three participant groups were asked to fill out a questionnaire. The teachers' responses were coded on a Likert scale to be analyzed according to the following variables: English professional development, English professional development needs, feedback, effect of feedback, teacher's Involvement, job satisfaction, school satisfaction, principal's involvement, transformational leadership of principal, and transactional leadership of principal. The parents' responses were coded on a Likert scale to be analyzed according to the following variables: importance of learning English, English at home, parental involvement, motivation of child, and satisfaction of child. The principal' responses were coded on a Likert scale to be analyzed according to the following variables: activities to improve school performance, time allocation, school evaluation, teachers' evaluation, lack of resources, students' problems, teachers' problems, principles' responsibility, and importance of good teachers.

3. RESULTS

3.1. Arab vs. Jewish Principals

The following table shows the comparisons between Arab and Jew principals. Jewish principals (Mean = 2.25, SD = 0.43) report lower frequency for conducting evaluation for their teachers in comparison to Arab principals (Mean = 2.74, SD = 0.59), ($F_{(1, 38)} = 7.69$, $p < .01$).

Jewish principals (Mean = 2.93, SD = 0.24) report higher importance of good teachers in comparison to Arab principals (Mean = 2.73, SD = 0.28), ($F_{(1, 38)} = 4.15$, $p = .049$).

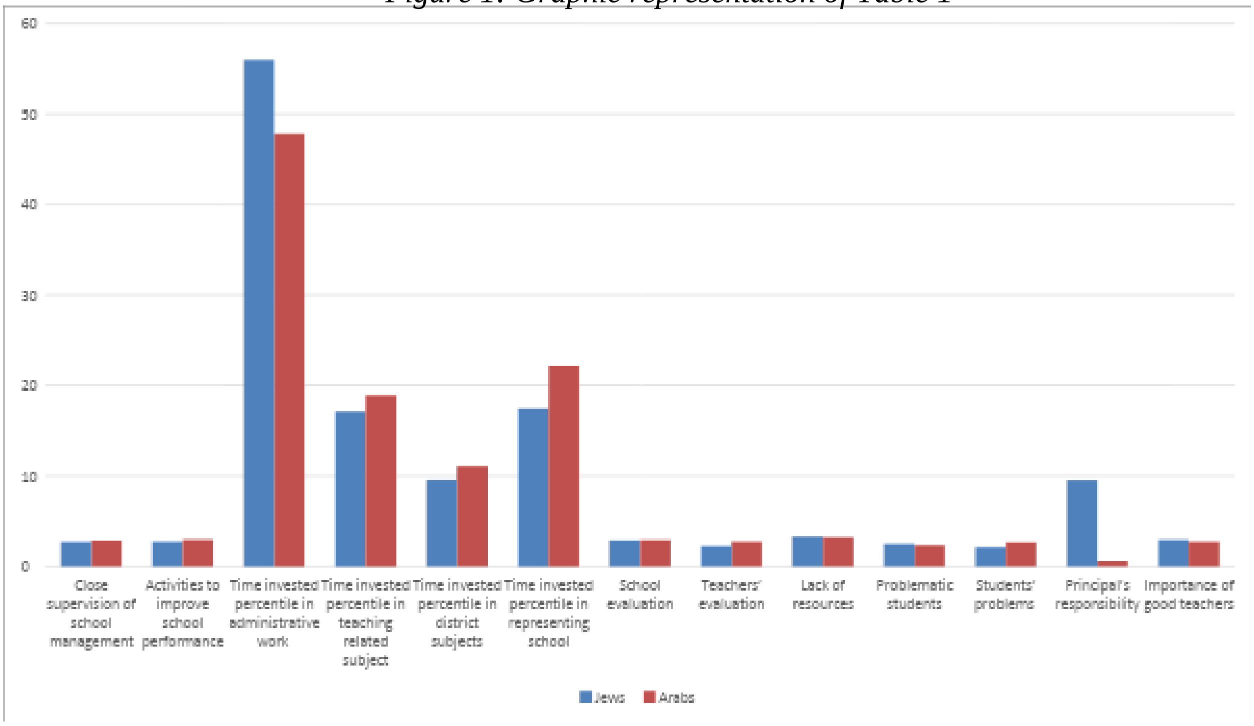
Jewish parents (Mean = 2.12, SD = 0.75) marginally report fewer student problems in comparison to Arab parents (Mean = 2.67, SD = 0.76), ($F_{(1, 38)} = 3.36$, $p = .06$).

Table following on the next page

Table 1: Comparison between Jew and Arab principles

Variable	Jews M (SD)	Arab M (SD)	F (1, 38)	P
Close supervision of school management	2.72 (0.49)	2.86 (0.60)	0.50	.50
Activities to improve school performance	2.74 (0.36)	2.95 (0.31)	2.44	.13
Time invested percentile in administrative work	55.97 (15.19)	47.78 (12.28)	2.12	.15
Time invested percentile in teaching related subject	17.10 (9.90)	18.89 (9.28)	0.23	.63
Time invested percentile in district subjects	9.55 (5.04)	11.11 (7.41)	0.54	.47
Time invested percentile in representing school	17.39 (12.03)	22.22 (13.25)	1.08	.31
School evaluation	2.88 (0.27)	2.91 (0.18)	0.09	.76
Teachers' evaluation	2.25 (0.43)	2.74 (0.59)	7.69	< .01
Lack of resources	3.27 (0.61)	3.19 (0.43)	0.11	.74
Problematic students	2.49 (0.52)	2.34 (0.35)	0.65	.43
Students' problems	2.12 (0.75)	2.67 (0.76)	3.67	.06
Principal's responsibility	9.52 (1.71)	0.56 (2.13)	0.00	.95
Importance of good teachers	2.93 (0.24)	2.73 (0.28)	4.15	.049

Figure 1: Graphic representation of Table 1



As seen in the table, there is very little distinction between Jewish principles and Arab principles with regards to most of the variables although Jewish principles spend more time on administrative work while Arab principles spend more time on representing the school.

The glaring difference is that the principal's responsibility is far greater in the Jewish sector in comparison to the Arab sector.

3.2. Management Styles and English Teacher Functioning

To analyze the influence of the principal's leadership approach with teacher functioning, Pearson correlations were calculated between teachers' perception of involvement of the principal, transformational leadership and transactional leadership with teachers' functioning and development. A positive correlation was found between teacher involvement to the principal's involvement (r = .15, p < .01). Moreover, a positive correlation was also found between the school satisfaction to transactional leadership (r = .12, p = .02). In other words, the greater the teachers' satisfaction from the school the greater the transactional leadership.

Table 5: Pearson correlations between principals' management styles and teachers' functioning and development

	Principal's involvement	Transformational leadership	Transactional leadership
English Professional Development	.09	-.05	-.05
Informal professional Development	-.08	-.08	-.08
Days professional development	-.02	-.05	-.05
Days professional development compulsory	.03	-.04	-.05
Days professional development pay	-.12	-.08	-.03
English Needs average	.09	.04	.10
Feedback principle	-.03	-.10	-.07
Teacher involvement	.15**	-.01	.04
Job Satisfaction	.09	.01	.05
School Satisfaction	.05	.04	.12*

*p < .05, **p < .01

3.3. Management Style as a predictor for English grades

A regression model showed that the six independent variables accounted for approximately 10.80% of the total variance in the English grades ($F_{(6, 199)} = 4.03$, $p < .01$). English grades have been shown to have positive connections to principal's involvement (beta =.22, p < .01) and school management close supervision (beta = .15, p = .04) which means that the greater the child's grades, the greater the principal's involvement and the school management's close supervision.

Table 17: Standardized coefficients to predict English grades from the classes

	beta
Principal's involvement	.22**
Transformational leadership	.09
Transactional leadership	.02
Principles Responsibility	-.11
School Management Close supervision	.15*
School Management Improving	.12

*p < .05, **p < .01

The data shows that Jewish teachers report higher principal involvement in comparison to Arab teachers which validates the data that Jewish principals feel more responsibility in their position than Arab principals. Jewish principals also reported lower frequency of teacher evaluations, and attributed higher importance of good teachers in comparison with Arab principals.

In analyzing associations between management styles and English teachers' functioning at school, a positive correlation was found between transactional leadership of principal and teachers' satisfaction from the school. It was also found that the higher the teachers' reports regarding principal's involvement, the higher principals' reports for improvement in the management. High involvement among principals was positively associated with parents' reports about their child's motivation, satisfaction and their children's English grades are higher. High transformational leadership of principles was positively related with parents' involvement at English studies and child's motivation, satisfaction and grades.

4. CONCLUSION

The data has shown that good principals are involved in school leadership in addition to management. The evidence points to the transformative leadership style as contributing to more success in English achievements specifically. As it is more empowering, internally motivating, and not based on external motivation such as positive and negative reinforcement, transformational leadership would have a significant impact on the English grades of Israeli high schoolers. The difference between the Jewish and Arab sector may lie in the differences between school leadership approaches. In fact, Jewish principals attribute greater significance on quality English teachers and feel a greater responsibility as principals leading to more personal involvement in school functions. Therefore, Arab sector schools should encourage more involvement of the school principal, not only as an empowering leader, but also as a manager, in order to minimize the gap in English grades and scores.

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INVESTIGATING THE DEVELOPMENT PATH OF SOUTH AFRICA THROUGH CONVERGENCE THEORY APPLICATION

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ABSTRACT

Economic convergence has attracted considerable interest since the 1980's where researchers attempted to discern whether impoverished countries will continue to be so in the longer term or will they catch up and be the wealthy nations of tomorrow. Due to globalisation, this catching up phenomenon has received much attention in the past two decades and therefore attention is now being redirected to emerging economies. This paper sheds new light in this area from an African perspective as it comparatively analyses 39 countries: South Africa, and the 38 Organisation for Economic Cooperation and Development (OECD) members. Investigates their respective average steady state equilibriums, testing convergence patterns from 1980 to 2019. The requisite method for this investigation is the Solow-Swan model (1956) as its application formed the foundation of several fellow researchers investigating similar topics. Furthermore, the Sala-i-Martin (1996) derivative of β-convergence and α-convergence as a measurement to test convergence of regions and countries was also applied. To the best of this researcher's knowledge, there is little to no empirical studies investigating the phenomena in an African context. Furthermore, the continents of Asia, Australasia, Central Eastern Europe, Europe, North America, and South America are represented in this group of countries. This will allow South Africa's developmental performance to be plotted relative to a representative international benchmark. The analysis revealed that despite the level of technology available in each of the OECD countries, data of the collective average indicates that it is not being exploited to harness its full capability, therefore producing an output lower than its steady state equilibrium. However, the economic performance of South Africa is considerably lower, where the OECD average GDP per capita is more than double than that of the country over this 39-year period. Furthermore, it will take South Africa approximately 67 years to reach the 2019 OECD average GDP per capita.

Keywords: *Convergence, Economic Development, Emerging Economies, Endogenous growth theory, Southern Africa*

1. INTRODUCTION

The convergence debate gained traction during the 1980's and stems from the need of economists to answer several questions; one such is whether poor countries will continue to be poor in the longer term or will they catch up and be the rich nations of tomorrow. Sala-i-Martin (1996) posits that there are two reasons for the increase in popularity to investigate; firstly, it was put forward to test the validity of modern theories of economic growth and enabled the calculation of time estimates for convergence across economies. Secondly, macroeconomic data became more widely available that allowed international comparability across many nations therefore enabling to plot the evolution of growth levels over a period (Sala-i-Martin, 1996). The investigation into the evolution of these growth levels gives impetus to the convergence hypothesis predicting that poor nations will develop at a higher rate than richer nations that are at a steady state output level, given the assumption that the only difference between them are the initial levels of capital.

The poor nation who initially starts farther away from their steady state, however as levels of capital increase, the economy grows rapidly then the growth rate starts to decline as it reaches its steady state. Barro & Sala-i-Martin, 1991; Mankiw et al., 1992; Sala-i-Martin, 1996; Sahoo et al., 2010; Zeng, 2015; Lengyel & Kotosz, 2018; Monfort & Nicolini, 2000; and Kanó & Lengyel, 2021 have extensively investigated convergence patterns of developed economies in Europe and North America; to a lesser extent developing economy's focusing largely on Asia. To the best of this researcher's knowledge, there is little to no empirical studies investigating the phenomena in an African context. Therefore, the Republic of South Africa, hereafter referred to as South Africa, acknowledged as the gateway and the most structurally advanced economy in Africa was chosen to contribute new knowledge to the broader body of work in this area. According to the World Bank, South Africa is classified as an upper middle-income country and therefore as an emerging economy, it is justifiable to comparatively analyse its economic performance with that of the developed economies that collectively constitute the OECD. Furthermore, the continents of Asia, Australasia, Central Eastern Europe, Western Europe, North America, and South America are represented in this group of countries.

OECD Member countries as at May 2021					
Australia	Czech Republic	Hungary	Lithuania	Portugal	Turkey
Austria	Denmark	Iceland	Luxembourg	Slovakia	United Kingdom
Belgium	Estonia	Ireland	Mexico	Slovenia	United States
Canada	Finland	Israel	Netherlands	South Korea	
Chile	France	Italy	New Zealand	Spain	
Columbia	Germany	Japan	Norway	Sweden	
Costa Rica	Greece	Latvia	Poland	Switzerland	

Table 1: OECD member countries. Author's own construction.

This paper sheds new light in this area from an African perspective as it comparatively analyses 39 countries: South Africa, and the 38 Organisation for Economic Cooperation and Development (OECD) members. Investigates their respective average steady state equilibriums, testing convergence patterns from 1980 to 2019. This will allow South Africa's developmental performance to be plotted relative to an international benchmark.

2. THERORETICAL BACKGROUND

The Solow-Swan model (1956) is used as the foundational theory for investigation into economic growth and convergence when determining the steady state equilibrium of countries. The Sala-i-Martin (1996) application of beta (β), alpha (α) and conditional convergence as measurements to test convergence of regions and countries (Saba & Ngepah, 2020). Neoclassical growth model predicts "that the growth rate of an economy will be positively related to the distance that separates it from its own steady state. This is the concept known in the classical literature as conditional β-convergence. There is absolute β-convergence if poor countries tend to grow faster than rich ones" (Sala-i-Martin, 1996:1020). Sala-i-Martin (1996:1020) further elaborates that α-convergence can be defined as "a group of economies are converging in the sense of α if the dispersion of their GDP per capita levels tends to decrease over time".

Analysis on a growth equation using the Solow-Swan model (1956) is "derived as a log-linear approximation, from the transition path of the neoclassical growth model for closed economies" (Barro & Sala-i-Martin, 1991:108). The Cobb-Douglas production function, $Y(t) = K(t)\alpha [A(t)L(t)]1-\alpha$, is applied and "convergence coefficient, β, depends on the productivity of capital and the willingness to save. In particular, the source of convergence in the neoclassical growth model is the assumed diminishing returns to capital. If the ratio of capital (and hence output) to effective labor declines relative to the steady-state ratio, then the marginal product of capital rises. Therefore, for a given saving behavior, an economy grows faster the further it is below the steady state" (Barro & Sala-i-Martin, 1991:109). Using the aforementioned as a theoretical base, contemporary economic growth theory has made use of aggregated models to measure economic growth with these approaches focussing on whether or not there has been an increase in equilibrium Gross Domestic Product (GDP) per capita over a period of time, identifying the economic factors which exerts an influence (Ascani, et al., 2012). Moreover, the neoclassical Solow-Swan growth model of the 1950's has been the blueprint for the furtherance of economic theory and the drafting of policies for institutions around the world, where economic development was viewed as being a linear process which could be influenced by adjusting certain factors. This simplified view pays no attention to the multiplex social, institutional or historical elements which are qualitative in nature that contribute to the advancement of an economy. Endogenous growth theorists such as Romer in his work during the 1980's asserted that technological innovation was at the core of economic growth processes (Ascani, et al., 2012). This piece of work applies the principles and assumptions established in endogenous growth theory.

3. METHODOLOGY

The intended aim of this research is to contribute to the existing broader body of knowledge through the application of econometrics to analyse the economic development of South Africa. This analysis is done over a thirty-nine-year period 1980-2019 where the economic development of South Africa is compared to the OECD group of countries average. The source of the secondary data for this analysis is the Penn World Tables 10.0 where data for 6 variables of the 39 countries from 1980 until 2019 was converted into panel data to enumerate the preliminary β-convergence and α-convergence. The sample of 39 countries is seen as one population extracted data was manually converted into a panel dataset to enumerate convergence. This has resulted in a sample of 39 observations for the period 1980-2019, where aggregate national capital stock at current PPP; expenditure-side real GDP at current PPP; number of persons engaged; output-side real GDP at chained PPP; share of gross capital formation at current PPP; and share of labour compensation in GDP at current national prices was analysed to illustrate this macroeconomic phenomenon.

Macroeconomic variable	Convergence formula computational reference in MS Excel
Capital stock at current PPPs	cn
Expenditure-side real GDP at current PPPs	cgdpe
Number of persons engaged	emp
Output-side real GDP at chained PPPs	rgdpe
Share of gross capital formation at current PPPs	csh_i
Share of labour compensation in GDP at current national prices	labsh

Table 2: Macroeconomic variables used in convergence calculations (Author's construction from Penn World Table)

The choice of these variables was guided by the literature and are deemed the most appropriate to test the Solow-Swan model (1956) and calculate convergence (Blonigen, 2005). Sala-i-Martin (1996) illustrates that to enumerate economic convergence it is necessary to include

"GDP per capita for a cross-section of economies", for this paper the economies are South Africa and the OECD collective. The Solow-Swan model centres around four variables: output (Y), capital (K), labour (L) and 'knowledge' or the 'effectiveness of labour' (A). Output changes over time only if inputs into the production process changes. If output increases over time (t) with the given levels of capital and labour, this is seen as technological progress in terms of improvements in the effectiveness of labour (labour augmenting or Harrod-neutral). Meaning that improved allocation of resources in the production process has resultant in increases in output. The production function is expressed as:

$$Y(t) = F(K)(t), A(t), L(t) \tag{1}$$

The basic assumptions of the Solow-Swan model (1956) are that:

- Time is continuous.
- A single good is produced with constant technology.
- There is no government or international trade.
- All factors of production are fully employed.
- Labour grows at a constant rate.
- Initial values for capital, K_0 and labour, L_0 are given.
- Saving rate is constant. If there is no consumption, then savings will take place.
- Depreciation rate is constant.
- Constant returns to scale in capital (K) and effective labour (A).

The steady state equilibrium levels of each country will be calculated following the Solow-Swan model (1956). The equation below illustrates the computational logic of the model.

$$\mathrm{y} = \left(\frac{\delta}{\sigma+\mathrm{g}+\mathrm{n}}\right)\frac{\propto}{1-\propto} \tag{2}$$

The Sala-i-Martin (1996) derivative of β-convergence and α −convergence as measurement to test convergence of regions and countries was applied. The neoclassical growth model predicts "that the growth rate of an economy will be positively related to the distance that separates it from its own steady state. This is the concept known in the classical literature as conditional β-convergence. There is absolute β-convergence if poor countries tend to grow faster than rich ones" (Sala-i-Martin, 1996:1027).

4. RESULTS

The complete Solow model (1956) is depicted as:

$$Y_{i,t,t+\mathrm{T}} = \alpha - \beta log(\gamma_{i,t}) + \epsilon_{i,t} \tag{3}$$

The equation above is expanded to "*Yi, t, t+T -log (Yi, t+T/Yi, t) / T* be economy i's annualised growth rate of GDP between *t* and *t + T*, and let *log (y, t)* be the logarithm of economy *i's* GDP per capita at time *t*" (Sala-i-Martin, 1996:1020). Based on the foundational equations mentioned in section 3 (methodology), the β-convergence and α-convergence calculations were computed in Microsoft Excel and produced the following results.

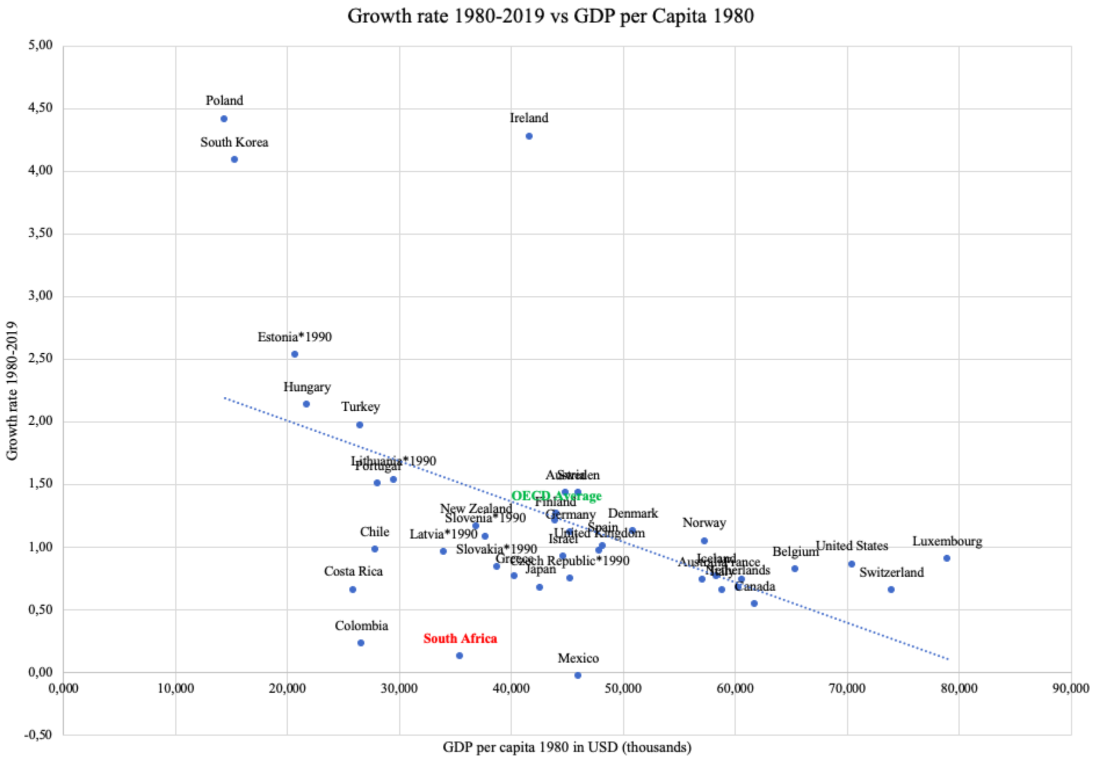

Figure 1: GDP per Capita 1980 v. Growth rate 1980-2019 for South Africa and the OECD. Author's own construction from Penn World Table 10.0 data.

The scatterplot visually illustrates the GDP per capita 1980 versus the growth rate 1980-2019 for the population of 39 countries including the OECD average. Several countries are observed to have formed more than one cluster, with Finland, Iceland, the Netherlands, and the OECD average (in green) positioned on the trendline which indicates that those economies have been performing at their respective steady state equilibrium levels. The Phillips and Sul (2007) log-t test method will be applied during the next iteration of analysis to identify any convergence clubs in the population. A larger number of these countries find themselves just below or below the trendline, indicating that they are performing below their steady state equilibrium levels. Fewer countries are positioned above the trendline most notably the outliers of Poland, South Korea, and Ireland whose growth rates are almost more than double the OECD average, indicating that they experienced absolute β-convergence. The relation between growth and the initial income level in 1980 for the OECD countries is considerably negative as shown by downward trendline in figure 1. South Africa being positioned far below the trendline, highlighted in red, indicates that its economic performance is lagging the OECD benchmark, which for this analysis becomes the new steady state equilibrium level. Being at the point furthest away from the steady state, South Africa in future, through further industrialisation has the potential to attain higher levels of growth reaching the benchmark (Eberts, 1990; Fedderke & Garlick, 2008; Grigoras, 2015; Kurniawati, 2020; Nagy, et al., 2020). Thus, attaining absolute convergence as per the convergence hypothesis. According to Solow (1956), constant returns to scale is applicative to capital and effective labour, also referred to as technology. Meaning that if there in an increase in K or A it will result in a proportionate increase in Y. These increases potentially result an economy reaching a new steady state level, y* and an improvement in its GDP per effective worker, A* are listed in table 1 below for the OECD and South Africa.

Country	Growth rate (1980-2019)	y*	GDP per effective worker *A(2019)	Actual GDP per capita (2019)
OECD Average	1,270	2,358	11,157	8,835
South Africa	0,132	1,628	2,568	3,938

Table 1: Growth rate vs. y new steady state equilibrium vs. New GDP per effective worker vs. Actual GDP. Author's own construction.*

The GDP per effective worker of $11,157 for the OECD average is higher than the actual GDP $8,835, based on the assumptions of Solow model this indicates that the average performance of the 38 countries is below its full potential. In other words, despite the level of technology available in each of the OECD countries, it is not being exploited to harness its full capability, therefore producing an output lower than its steady state equilibrium. The contrast is observed for South Africa where its actual GDP of $3,938 is higher than its GDP per effective worker, $2,568; meaning that the level of technology available in the country is being fully exploited and applied, thereby producing an output higher than its steady state equilibrium level.

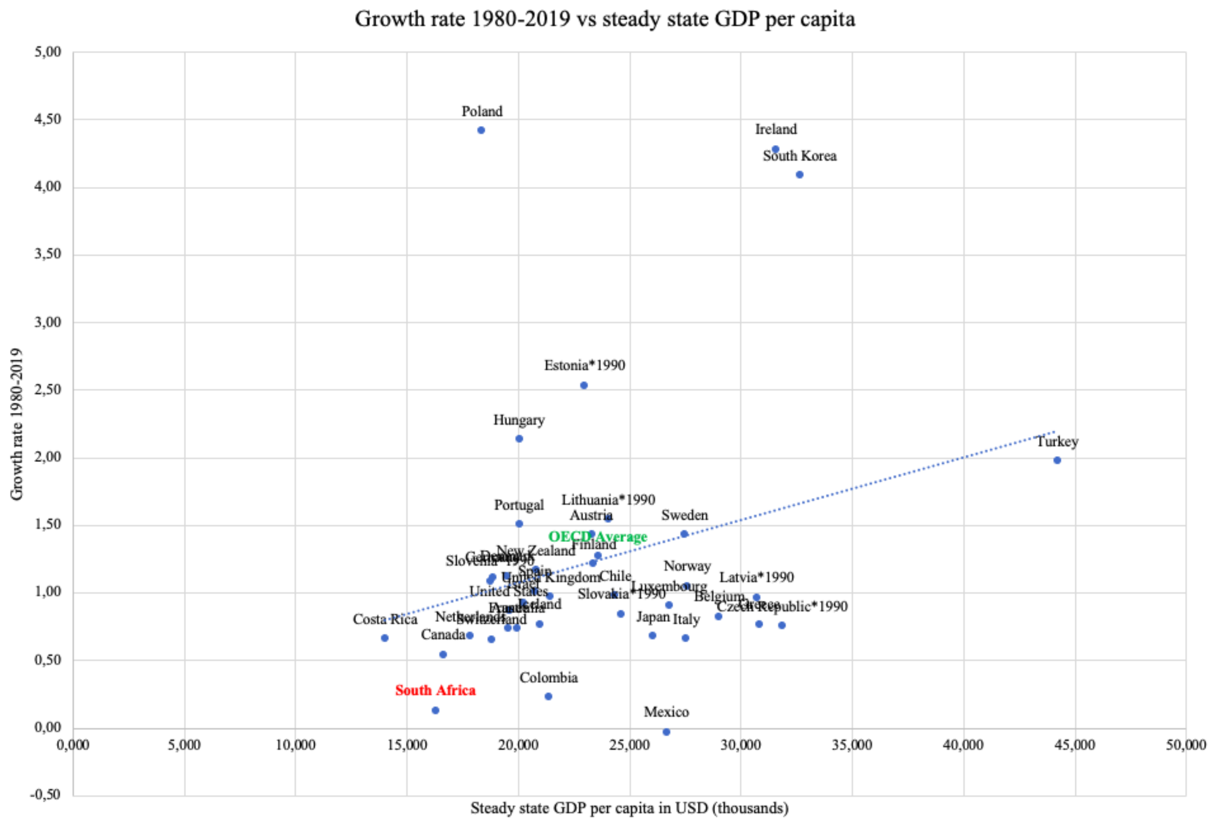

Figure 2: Steady state GDP per capita v. Growth rate 1980-2019 for South Africa and the OECD. Author's own construction from Penn World Table 10.0 data

Figure 2 demonstrates the potential steady state equilibrium (y*) that could be reached by each of the countries. Several countries are observed to have formed clusters, as seen in figure 1, with Sweden, Finland, Germany, and the OECD average (in green) positioned on the trendline which indicates that those economies have been performing at their respective steady state equilibrium levels.

Fewer countries are positioned above the trendline most notably the outliers of Poland, South Korea, and Ireland whose growth rates are again almost more than double the OECD average, indicating that they experienced absolute β-convergence. The relation between growth over the 39-year period and the steady state for the OECD countries is positive as shown by the steep upward trendline in figure 2. Also showing that the growth rate of the group of countries are approaching the steady state level at a relatively similar growth rate, thereby reducing dispersion. South Africa (in red) yet again is observed to be positioned far below the trendline indicating that its economic performance is lagging the OECD benchmark. This leaves room for South Africa to improve its economic performance through technological advancements in labour or increases in capital (based on the parameters of the model) and in time reaching the OECD average steady state equilibrium level. However, this conditional β-convergence shows that South Africa is moving away from its low initial GDP toward a higher GDP level potentially at a faster rate therefore closing the per capita income divergence between itself and those developed economies.

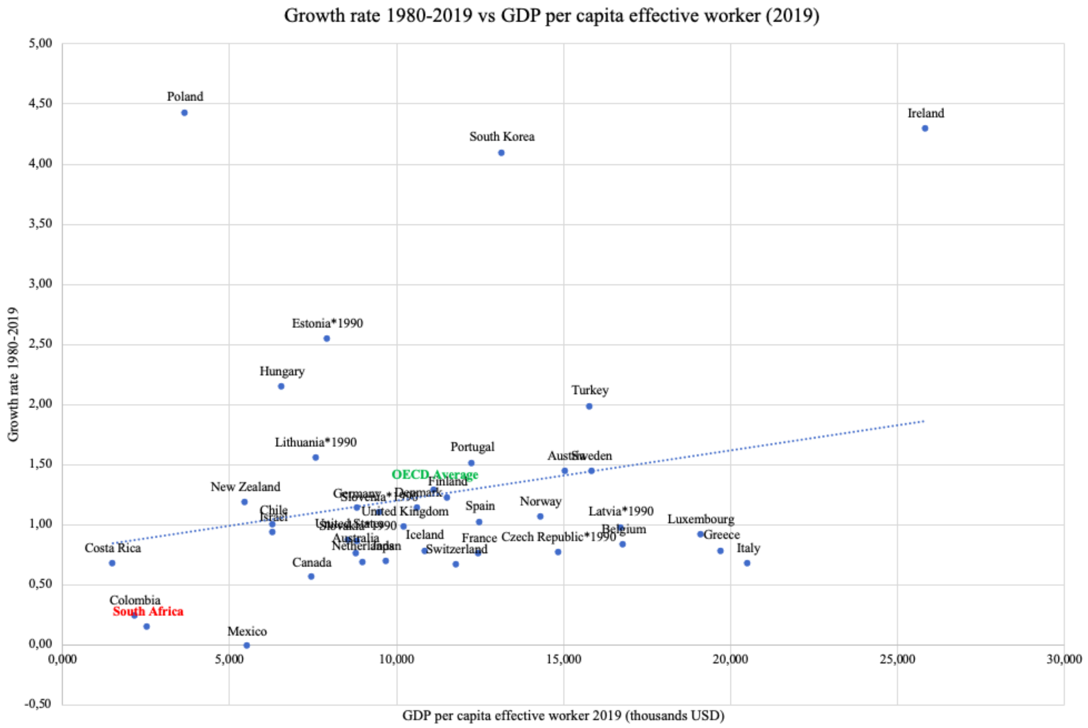

Figure 3: GDP per effective worker v. Growth rate 1980-2019 of South Africa and the OECD. Author's own construction from Penn World Tables 10.0 data

According to the Solow model, constant returns to scale is applicative to capital and effective labour, also referred to as technology. Meaning that if there is an increase in K or A it will result in a proportionate increase in Y. These increases potentially result an economy reaching a new steady state level, y* and an improvement in its GDP per effective worker, A* as demonstrated in figure 3 above. The OECD average (in green) is the new steady state equilibrium point as it is positioned on the flatter trendline, the individual countries are observed to be in distributed positions with less clustering implying varying growth rates. South Africa (in red) finds itself well below this point. This purports the presence of multifaceted disparities between South Africa and the OECD (Rogerson, 1997; Gibb, 2007; Wehner, 2000; Rogerson & Rogerson, 2010; Young, 2013).

Through the estimation of the β-coefficient, the speed of convergence can be calculated which is the amount of time in years that it will take South Africa to reach the OECD average GDP per capita. Furthermore, half-life, is the "time required to cover half the road leading to full convergence within the study region if the speed of convergence remains unchanged" (Egri & Tánczos, 2018:53) and is calculated through the application of the equation 4 below. It estimates that it will take South Africa 67,487 years to reach the OECD average GDP per capita of 2019.

$$\pi = \frac{ln2}{\beta} \qquad (4)$$

5. CONCLUSION

This investigation delved into the growth patterns of 39 countries, South Africa and the 38 OECD countries and compared their performance over a period of 39 years from 1980-2019. Convergence analysis is considered to derive significant results when applied between countries that have similar economies (Sala-i-Martin, 1996). However, by conducting comparative convergence analysis between a developing country, South Africa and the OECD developed economies, we are able to gain valuable insights into the income and developmental disparities that exist. The results of the analysis show that there was a negative relationship between the growth rate over 1980-2019 and the GDP per capita in 1980 between the OECD countries. However, a contrary relationship is observed between the growth rate over the same period and the steady state GDP per capita equilibrium level. This demonstrates economic development achieved by these countries heeded within the parameters of the model. Furthermore, despite the level of technology available in each of the OECD countries in 2019, data of the collective average indicates that it is not being exploited to harness its full capability, therefore producing an output lower than its steady state equilibrium. The opposite is observed for South Africa where its actual GDP is higher than its GDP per effective worker meaning that the level of technology available in the country is being fully exploited and applied, thereby producing an output higher than its steady state equilibrium level. The overall economic performance of South Africa over these 39 years were significantly lower, where the OECD average GDP per capita is more than double than that of the country. Elaboration of this phenomenon is beyond the parameters of this model and requires further exploration using the appropriate application of other economic theories. In light hereof, it aided the apparent conclusion that it will take South Africa approximately 67,487 years to reach the 2019 OECD average GDP per capita.

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THE OPERATION OF THIRD SECTOR ORGANISATIONS IN THE SLOVAK REPUBLIC AS PART OF THE ECONOMIC ACTIVITIES IN THE GLOBALISED WORLD

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„Volunteers are not paid, not because they are worthless,
but because they are priceless.“

ABSTRACT

It is practically impossible to satisfy all people. People controlled by egoism could make decisions that would only bring themselves some personal benefit - money, prestige etc. From their point of view these are valuable pleasures. If their decisions benefit both themselves and the organisation and society, that's fine. An altruistic individual tries to make the kinds of decisions and alternatives that bring the greatest benefit to others. This means that if there are groups of people in society who, for the sake of equal opportunities, need help or find themselves in crisis situations, and on the other hand there are people who are willing to selflessly provide them with this help, then the existence of volunteering as the domain of third sector organisations and social economy organisations occurs. Furthermore the role of voluntary activity is not to replace the functions of public or market bodies, but to supplement them appropriately. In accordance with the global economy and in accordance with the European trend of the last three decades, the Slovak Republic has also included, for example, its approach to the third sector and to the social economy and to social enterprises (so far 16 EU countries have laws for developing the social economy) as a step forward towards innovation, to participation, e. g. to create a cohesive Europe and currently to creating a coherent, integrated Europe. In our paper we present a view on the existence and operation of third sector organisations in Slovakia. One of the names of this sector is the voluntary sector. We map the year 2011, which was declared the year of volunteering. We then discuss the milestones that preceded the Year of Volunteering. We place special emphasis on 1989 as a landmark in the formation of the third sector in Slovakia. We address the structure, forms and sources of funding of these organisations in Slovakia and conclude with our views on the prospects for third sector organisations in a globalised world.

Keywords: *Voluntary, Third Sector, Non-profit Organisations, Non-governmental Organizations, Volunteering in a Globalised World*

1. INTRODUCTION

In 2021, exactly ten years will have passed since the European Commission, in cooperation with the European Parliament, the Council of Europe, the European Economic and Social Committee, and the Committee of the Regions, declared 2011 the European Year of Voluntary Activities Supporting Active Citizenship. The general objective of the European Year of Volunteering was to stimulate and support, mainly through the exchange of experience and professional practice, the efforts of the entire European community, the efforts of the Member States and the efforts of local and regional authorities to create the conditions for a civil society that are favourable for volunteer work in the European Union, and also to support greater visibility of voluntary activities in the European Union.

After all, the post-war events that culminated in November 1989, enabled civil society to awaken in the countries of Central and Eastern Europe, including Slovakia. The activities of civil society in the 1990s led to social dialogue and discussion, and finally to the rebirth of the third sector, which took root and today, together with the public sector and the private sector, form the three pillars of the national economy of the Slovak Republic, which since the end of the 20th century[1] can also be called the concept of a social-solidarity economy. In 2011, the European Commission published its Green Paper on Promoting a European Framework for Corporate Social Responsibility and defined CSR as „a concept whereby businesses voluntarily integrate social and environmental aspects into their business activities and interactions with stakeholders". Currently, the European Parliament, on its own legislative initiative, is working on the statute of social and solidarity enterprises (Official Journal of the EU, 2012). In the context of the economic crisis, a new wave of concepts emerged, such as social enterprises, the collaborative economy and the economy for the common good. In the most recent period, most European countries paid attention to the creation of legislation on the social economy. Specific laws on the social economy were adopted at the national level, for example, in Spain (2011), Greece (2011 and 2016), Portugal (2013), France (2014) and Romania (2016) and at the regional level in Belgium (Wallonia, Brussels and Flanders) and in Spain (Galicia) (EESC, 2017). In Slovakia, in 2018, Act No. NR SR SR entered into force. 112/2018 Coll. of . on the social economy and social enterprises and on the amendment of certain laws, which establish social economy entities, social enterprises, organisations of the social economy sector, the provision of support for enterprises in the wider area of the social economy and define the social economy sector and state administration in the area of the social economy. In March 2022, *the Ministry of Labour, Social Affairs and Family registered 512 social enterprises*[2] *in its Register of Social Enterprises*, which fulfil the public interest or community interest according to the intentions of the law.

2. FORMATION OF THE THIRD SECTOR IN THE SLOVAK REPUBLIC AFTER NOVEMBER 1989

Since the beginning of the 80s of the 20th century, the Slovak Republic, as one of the countries of Central Europe, went through a complex process of privatisation, and subsequently, in the 90s of the 20th century, the principles of the market mechanism were gradually reintroduced in the newly formed country. The emerging market economy brought about the coexistence of two spheres of economy - the sphere of private economy and the sphere of public economy. This means that the modern current Slovak economy can be called mixed, where the public sector and the private sector exist side by side. For a better understanding of the structure of the elements and connections of both sectors, it is good to analyse the economy - the national economy in terms of different criteria, while the choice of criteria is always purposeful (BELICKOVA - BUKOVOVA, 2007). In this way, in our national situation, the concept of the third sector came into an awareness not only in theory, but it also came into an awareness of politics and practice in the 1990s. The third sector is created by organisations that have the form of a voluntary association of citizens sharing common values. Since the state of the third sector very sensitively reflects the events of society as a whole, for example the degree of freedom, as well as the prerequisites for economic as well as spiritual prosperity, that is why in the early 90s of the last century the time became ripe for its reinvigoration and re-realization.

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[1] The modern concept of the non-profit sector was more precisely defined and became more widely known in the world through an international research project that began in the early 1990s under by the leadership of John Hopkins University (Baltimore, USA) in order to discover and quantify its size and structure, analyse its development prospects and evaluate its impact on society.

[2] https://www.employment.gov.sk/sk/praca-zamestnanost/socialna-ekonomika/register-sp/ [cited 2022-03-12]

In this period, the Slovak Republic also saw changes in economic differentiation, among other things. It should be noted that since the second half of the last century, the state has taken over activities that used to belong to the family, such as providing pensions for old age, protecting and caring for children and youth from birth, caring for mothers and children, caring for school attendance, for extracurricular leisure activities, education in the field of culture, health, sports, care for talents, protection of employees at the workplace, protection of the population from negative social influence etc, - that means the state (government), through the legislative power, the executive represented to a certain extent the quality of a responsible solver of problems connected with the mentioned activities. Since the 60s of the last century, we have noticed the potential and the growth of the consumer society way of life throughout Europe. Since the 1980s, enormous technological and social progress has resulted in profound changes in people's life and work. Also, a huge phenomenon that has influenced value orientations, patterns of behaviour, raising children, relations in society and cultural liberalisation was the phenomenon of the information society and globalisation. After the Velvet revolution came the Velvet divorce and the Czech Republic and Slovakia were divided. In January 1993, two independent states were created in the heart of Europe - the Czech Republic and the Slovak Republic. Both newly formed countries kept only their own historical heritage, which marked the political culture and this co-created the profile of the third sector in Slovakia. And this had a significant impact and represented at the same time the basic framework for future association, association and voluntary activity, which led to the creation of organisations voluntarily associating citizens sharing common values, which was given the title of a third sector organisation. In the space between the two sectors, the private and public , a third sector was established, whose mission is to intervene where the possibilities of the state sector and private sector fail and for which there are several names[3] and attributes[4], while it is important to realise that the motive of its activity is not the achievement of profit[5], nor public welfare, but voluntary activity, charitable activity, humanitarian activity, philanthropic activity, self-help activity, which we refer to generally as beneficial activities, that consist of publicly beneficial activities and mutually beneficial activities.

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[3] For terminology see, for example: ANHEIER, H.K. - SEIBEL, W. (Eds.): The Third Sector: Comparative Studies of
Nonprofit Organizations. Berlin–New York, 1990. De Gruyter 1990; Salamon, L. - Anheier, H.: Search of the Nonprofit Sector I: The Question of Definitions. Working Papers of the Hopkins Comparative Nonprofit Sector Project, No. 2. Baltimore, The Johns Hopkins Institute for Policy Studies, 1992.

[4] In the available literature, we encounter terms such as third sector, non-profit sector, non-governmental sector, independent sector, voluntary sector, tax-exempt sector, private non-profit sector, non-statutory sector, économie sociale, gemeinwirtschaftliche Unterhehmen, civil sector, another invisible hand, vita activa (active life), arena for public entrepreneurs (Ashoka Foundation term), space for public soulful individuals (American philosopher Michael Novak), but also charitable, humanitarian, philanthropic, charitable or self-help organizations.

[5] In the years 1993-2003 it was a service center for non-governmental organizations SAIA (Slovak Academic information agency). During this period, it organized over 700 trainings and seminars focused mainly on management of non-governmental organizations and on various third sector topics attended over 16,400 people, created the first electronic database of Slovak non-governmental organizations, published the monthly magazine NonProfit (1994–2001) and the monthly magazine Spravodajca 3S (2002 – 2003), these magazines brought information for non-governmental organizations, legal advice, opinions of the Third Sector Committee on current affairs social and political issues, built a specialized library for non-governmental organizations, dedicated with press monitoring focused on non-governmental organizations (between 1995 and 1998, there were documented almost 24 000 articles about the third sector), collaborated in organizing the "Stupavska conferences" of non-governmental organizations, which served as a platform for exchanging experiences and coordinating activities within the third sector, in 1997 it played a key role in the preparation and creation of a network of seven regional committees of the third sector in Banská Bystrica, Košice, Nitra, Prešov, Trnava, Trenčín and Žilina, issued over 70 publications (directories, manuals focused on the management of non-governmental organizations, occasional publications, materials for parliamentarians and employees of the state administration and facts about the third sector in Slovakia). Available at: https://www.saia.sk/_user/documents/publikacie/20-rokov-saia-web.pdf [cited 2022-04-28]

At its birth, the third sector in Slovakia achieved self-confidence and consensus, for example, through its annual nationwide "Stupava Conference", at which the Third Sector Committee was elected, which represented the third sector in social dialogue with the government - the state, with the private - business sector and with domestic and with foreign partners. The Third Sector Committee (G3S) was formed by democratically elected representatives of non-governmental organizations in Slovakia. The basic mission of G3S was to maintain partnership relations with representatives of the state, municipalities, the business sector, trade unions as well as with national and international non-governmental organizations. Membership in G3S was honorary and voluntary. G3S issued statements on current issues of social life, concluded cooperation agreements with representatives of the state administration and local government, entrepreneurs, trade unions and convened the Stupava Conference of non-governmental organizations in Slovakia. The responsibilities of G3S included the implementation of resolutions before conferences, monitoring the social situation and regularly informing non-governmental organizations about the decisions made and the work of G3S expert groups in the monthly magazine NonProfit and in other media.

3. STRUCTURE, FORMS AND RESOURCES OF THIRD SECTOR ORGANIZATIONS (NON-GOVERNMENTAL ORGANIZATIONS)

According to the legal form, the following types of non-state, non-church, non-profit organisations exist in Slovakia: civic associations (Act SNR No. 83/1990 Coll. on Associations of Citizens); foundations (Act NR SR No. 34/2002 Coll. on foundations); non-investment funds (Act NR SR No. 147/1997 Coll. on non-investment funds); non-profit organisations providing services of general benefit (Act NR SR No. 213/1997 Coll. on non-profit organisations providing services of general benefit) and organisations with an international element (Act SNR No. 116/1985 Coll. on the conditions of operation of organisations with an international element in the Czechoslovak socialist republic). The following are or may be non-profit organisations: interest associations of legal entities (e. g. associations of towns and villages[6]); church and religious societies[7]; political parties and political movements[8], or others (Act NR SR No. 85/2005 on political parties and political movements as amended by later amendments and regulations).

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[6] Currently, the total number of municipalities in Slovakia is 2,927 - rural municipalities, cities, townships together; total the number of municipalities without urban districts including Bratislava and Košice as a whole is 2,890; total number of districts – Bratislava – 17, Košice – 22; the total number of places is 140; the total number of rural municipalities is 2750; the number of districts is 79.
(Available at http://www.sodbtn.sk/obce/index_kraje.php)

[7]Currently, the registered churches and religious societies in the Slovak Republic are: the Apostolic Church in Slovakia, Bahá'í Community in the Slovak Republic, Brotherhood of Baptists in the Slovak Republic, Church Seventh Day Adventists, Slovak Association, Church of the Brethren in the Slovak Republic, Czechoslovak Church Hussites in Slovakia, Church of Jesus Christ of Latter-day Saints in the Slovak Republic, Evangelical Church of the Augsburg Confession in Slovakia, Evangelical Methodist Church, Slovak Region, Greek Catholic Church in Slovakia, Christian congregations in Slovakia, Religious Society of Jehovah's Witnesses in Slovak Republic, New Apostolic Church in the Slovak Republic, Orthodox Church in Slovakia, Reformed Christian Church in Slovakia, Roman Catholic Church in the Slovak Republic, Old Catholic Church in Slovakia, Central Union of Jewish Religious Communities in the Slovak Republic. Available at: https://www.culture.gov.sk/posobnost-ministerstva/cirkvi-a nabozenskespolocnosti/registracia-cirvii/registrovane-cirkvi-a-nabozenske-spolocnosti/[cited 2022-06-02]

[8] Currently, according to the Register of Political Parties and Political Movements, which is maintained by the Ministry of the Interior of the Slovak Republic, within the meaning of the law, we have 54 political parties and movements registered. Available at: https://www.minv.sk/?psph-uvod;
https://ives.minv.sk/rez/registre/pages/start.aspx?type=ps;https://www.slovensko.sk/sk/agendy/agenda/_poli ticke-parties-and-movements-in-sr/ [cited 202-08-02]

Further, for the purposes of budget classification, a non-profit organisation is considered to be an institution that is not wholly or mainly financed from the state budget or from the municipal budget; it primarily provides social and public services to individuals, either free of charge or at a lower rate that does not fully cover its expenses and it employs two or more full-time workers (MF SR, Budget..., 2022). In order for third sector organisations to develop their activities, in addition to a sound legal environment and good information, they need financial resources for their existence. Following the activities aimed at the long-term sustainability of these organizations at the present time, when the reform of the management of the activities of non-governmental organizations has also taken place in Slovakia, according to the author, it is possible to lean towards the following breakdown of the financial resources of organizations of the third sector. Financial resources for third sector organizations[9] consist of: private resources and public resources. Their detailed breakdown is given in Table 2. The following table shows the number of non-profit organisations according to the available data from the Statistical Office[10] of the Slovak Republic. It should be noted that, for example, FinStat[11] maintains its own database of NGOs.

Table following on the next page

[9] Act NR SR No. 364/2018 Coll. on the Register of Non-Governmental Non-Profit Organizations has been effective since January 1, 2019, and in connection with the new comprehensive register of non-governmental non-profit organizations, the Ministry of the Interior of the Slovak Republic obliged third sector organizations to make the new register available by January 1, 2021 of non-governmental non-profit organizations, which includes data on foundations, non-profit organizations providing generally beneficial services, non-investment funds, civil associations, trade unions and employers' organizations and organizations with an international element. Available at: https://www.minv.sk/?tlacove-spravy-8&sprava=upozornujeme-na-oznamovacie-povinnosti-mimovladnych-organizacii-suvisiace-s-pripravou-noveho-komplexneho-registra [cited 2021-06-02]

[10] Slovak Statistics DATAcube. 2022 Available at: http://datacube.statistics.sk/

[11] Available at: https://finstat.sk/databaza-neziskoviek

Non – profit organisations										
Year	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**
Overall	71486	66580	66926	64136	60128	55048	52278	49101	45480	46273
Associations	50575	48206	45938	43544	40386	36041	33894	31989	28205	28648
Church organisations	3072	907	3508	3489	3471	3439	3427	3412	3360	3367
Associations of apartment owners	10075	10307	10310	10302	10297	10225	10162	10122	9738	9790
Non-profit organisations	949	3356	3272	3071	2186	3193	2707	1827	2111	2302
Foundations	471	477	468	469	468	459	443	328	416	439
Interest associations of legal entities	845	944	1026	984	973	890	878	837	809	834
Non-investment funds	501	507	504	518	524	501	497	344	483	504
Estate chambers	32	32	86	85	85	83	83	72	94	94
Healthcare and contribution organisations	-	-	-	-	-	31	33	24	32	34
Non-profit organisations providing public services	1638	1638	1602	1501	1556	-	-	-	-	-
Others	3328	206	212	173	182	186	154	146	232	261
Year	**2010**	**2009**	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**
Overall	44176	42395	39874	38081	35643	32514	29260	26106	26210	23556
Associations	26991	25460	23651	22113	20375	18420	16346	14558	14654	12903
Church organisations	3354	3333	3283	3241	3208	3170	3120	3122	3128	3356
Associations of apartment owners	9642	9421	9082	8794	8339	7674	7013	6334	6304	5426
Non-profit organisations	2101	1869	1628	1610	1439	1030	-	-	-	-
Foundations	426	412	382	493	483	458	429	402	530	518
Interest associations of legal entities	810	1070	1020	972	928	848	751	611	614	575
Non-investment funds	484	470	454	483	481	457	426	370	341	297
Estate chambers	93	94	88	93	101	102	106	116	141	225
Healthcare and contribution organisations	34	41	41	41	41	95	288	53	-	-
Non-profit organisations providing public services	-	-	-	-	-	-	-	-	-	-
Others	241	225	245	241	248	260	781	510	498	266

Table 1: Number of NGOs in the Slovak Republic in years 2001-2020

<table>
<tr><th colspan="2">Private sources of non-governmental organizations:</th></tr>
<tr><th>Resources for activity:</th><th>Resources from own activity:</th></tr>
<tr><td>public collections
gifts
grants
membership fees
sponsoring
charity advertisement
charity lottery
the legacy
assignment</td><td>main activity
other gainful activity
economic/business activity
social entrepreneurship
investing
self-financing</td></tr>
<tr><th colspan="2">Public sources of non-governmental organizations:</th></tr>
<tr><th>Direct support</th><th>Indirect support</th></tr>
<tr><td>Transnational – European funds, structural funds, EEA Financial Mechanism, Norwegian Financial Mechanism, Swiss Financial Mechanism and other departmental subsidy schemes used in the conditions of the Slovak Republic</td><td>Allocation - as a transfer of a share of the paid tax for special purposes,it is not a gift and therefore not philanthropy. However, it allows the provider to decide to whom to send them. It is therefore an indirect state support of non-governmental organizations by providing part of the taxes that would otherwise end up in the state budget[1]</td></tr>
<tr><td>National - Ministry of Culture of the Slovak Republic, Ministry of the Environment of the Slovak Republic, Ministry of Education, Science, Research and Sports of the Slovak Republic, Ministry of Defence of the Slovak Republic, Ministry of Labour, Social Affairs and Family of the Slovak Republic, Ministry of the Interior of the Slovak Republic, Ministry of Agriculture and Rural Development of the Slovak Republic, Ministry of Health of the Slovak Republic, Ministry of Transport and Construction of the Slovak Republic, Subsidy Schemes of the Prime Minister of the Slovak Republic</td><td rowspan="3">Tax exemption

Sponsoring

Deductible items

Charity advertisement</td></tr>
<tr><td>Regional – territorial units</td></tr>
<tr><td>Local – cities and towns</td></tr>
</table>

Table 2: Financial resources of organizations of the third sector
(Custom processing by K.B)

[1] Act NR SR No. 595/2003 Coll. on income tax, in § 50 Use of the share of paid tax for special purposes, regulates the remittance of 2% tax as follows:
A share of the tax paid can be given to a recipient who is:
civil association / foundation / non-investment fund / non-profit organization providing generally beneficial services / purpose-built facility of the church and religious society / an organization with an international element / Slovak Red Cross / research and development entities / Anti-drug fund / Vocational education and training development fund.
The share can be given to the recipient if the subject of his activity is:
health protection and promotion; prevention, treatment, resocialization of drug addicts in the field of healthcare and social services / support and development of physical culture / provision of social assistance / preservation of cultural values / education support / protection of human rights / protection and creation of the environment / science and research

4. CONCLUSION

In conclusion, it must be reiterated that the third sector exists in Slovakia and that it has defended its position during its more than thirty years of viability. According to the author, it is not in danger of disappearing,but on the contrary, it has managed to make itself and many important personalities and events visible. The question remains concerning its sustainability in the existing environment between the public and private sectors. However, in order to strengthen the financing situation with the use of allocation, on which many, especially local, smaller organizations of the third sector rely, and also in view of the fact that in the conditions of the Slovak Republic, as in the European vanguard, the possibility of allocation was introduced, it is necessary for citizens, to motivate natural persons and legal entities more, in order to better direct them to use this option (remittance of the share of paid tax for special purposes) to strengthen the financial health and financial independence of the organizations of the third sector. One of the fundamental principles of the European Union is the development of democracy. Activities performed by volunteers of all age categories are crucial for the development of democracy. Voluntary activities have the potential to contribute to the well-being of individuals and to the harmonious development of European societies. Volunteering can be considered one of the key dimensions of active citizenship and democracy, which puts into practice European values such as solidarity and non-discrimination and which contributes to the harmonious development of European societies (BROZMANOVA GREGOROVA et al., 2018). We are inclined to the opinion that the sectoral division of the national economy as a whole, the establishment of the third sector in the social field in an environment of strong competition between the private sector (in the economic field) and the public sector (in the political field) is a significant activity at the moment, when the demise of the third sector is not threatened and which has brought positive social changes.

In addition to the legislative definition and legal amendments to the existing legal norms governing the entire spectrum of organizations of the third sector, further to increase transparency, the creation of the Act on Volunteering (in 2011) and the creation of the Act on the Register of Non-Governmental Organizations (in 2018) brought further positive changes in society and contributed to a synergistic process leading to a functional community model with targeted sustainable development. Based on the national strategy "..sustainable development is understood as a targeted, long-term (continuous), complex and synergistic process, affecting the conditions and all aspects of life (cultural, social, economic, environmental and institutional), at all levels (local, regional and global) and progressing towards such a functional model of a certain community (local and regional community, national and international community) that qualitatively satisfies the biological, material, spiritual and social needs and interests of people, while eliminating or significantly limiting interventions that threaten, damage or destroy conditions and forms of life, furthermore it does not burden the country beyond what it can bear, uses its resources wisely and protects the cultural and natural heritage..." (Government of the SR, National Strategy..., 2001). Today and in the future, in the author's opinion, third sector entities (together with social economy entities) will, thanks to their special features, play an important role in further sustainable social development, for example in the further discussion of future policy, strategy, and legal norms regarding the environment, quality of life, energy and climate protection, in the integration of immigrants as well as in the development of trade throughout the EU. Their mission (third sector organizations) is also to support business culture, to contribute to the democratic principles of the economy as a whole through educational projects aimed at the development of business initiatives, the development and support of science and research, education, culture and sports at all levels of government.

However, mainly their social potential is strategic (as mentioned in the introduction, they operate in the social field), and therefore their attitudes towards the future, if they are to bring further sustainable innovative positive social changes according to the authors, all this should move in a direction towards a partnership with all institutions representing a developed civil, democratic society in such a way that ultimately all the needs and interests of society are satisfied, while being aware of the reasonable use of spiritual, cultural and natural resources, wealth and heritage in broad national and international contexts.

ACKNOWLEDGEMENT: *The paper was written as a partial output of the VEGA project (1/0851/21) "Social Economy as a Modern Tool for Building an Inclusive Society in the Context of Global Changes and the Challenges of the UN 2030 Agenda for Sustainable Development" with the support of the Civic Association Protector populi, civic association IČO 54072468, VVS/1-900/90-62239.*

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INFORMATION AS A CREATOR OF MICROECONOMIC STABILITY IN CRISES

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ABSTRACT

Microeconomic stability is based on a number of postulates one of which is the information reliability. In the paper, a microeconomic model is set as a subsystem of the general social system, which is exposed to strong external actions – perturbation disruptions caused by global crises (pandemic, energy). One of the key premises of a stable microeconomics lies in superior information with the following characteristics - reliability, speed and availability. It works in a specially designed information model and as a part of a general social model immune to external changes, it aims to contribute to the microeconomic stability of an individual social sub-element. Current models do not have enough information power for newly created situations; the pandemic has left an uneven effect on individual microeconomic systems and the EU energy sector is undergoing a thorough transformation. That being said, current decision-making models in crises are to be redesigned. The developed model is based on general principles of model development within the prism of the system theory as a general theory based on information, energy and matter. Microeconomic postulates are implemented in the developed model that can be further incorporated into any social model, and as such, it has all the universality properties of a general model, which gives results within the boundaries of the observed system. In order for the designed model to exist in global crises (energy, pandemic), the information flow must have high reliability. Information reliability, speed and availability contribute to the model and microeconomic stability. The time domain is a dimension, which gives special strength and reliability to the described model.

Keywords: *Information, Microeconomics, Model*

1. INTRODUCTION

Using scientific methods in studying social systems and their characteristics, and considering other scientific properties, we can define an appropriate concept of the current social system situation. Sustainability of the social system depends on its current condition as well as the initial or null condition. The social system structure is a complex set of state quantities that essentially influence its behavior. By their nature, the state quantities (input and output parameters) can be measurable or non-measurable, discrete or continuous, current, past or future. The number of state quantities of an observed social system essentially tends to infinity. For pragmatic reasons, the state quantities will be observed as a finite set — if they are discrete, and social systems have all the attributes of discretion; logic, set theory, design theory, information theory, complexity theory and probability theory. In this paper, we will observe a semi-closed interval of values not studying state quantities and their properties of continuity. If we observe the social system through the function of time, we can consider it as a dynamic system that strongly changes its states as a function of time. Based on the principles of development, our social system and all phenomena will be subject to change even though a strong reduction of reality was done. Only the changes in our social system require a change of every component as well as every phenomenon.

Real social systems have the property of inertia, i.e. it is impossible to change their state in a very short time. The rate of change, i.e. its gradient, changes within wide limits. The reaction time of a social system is called the transient phenomenon of the social system. Historically, social systems had properties that were defined by space and time. Generally, the two most complex systems are biological and social systems. At the moment of designing the state of the social system, the most important thing is its axiomatic definition and that is the implication of its problem with reality. The general concept of the state of the social system has input values (past, current and future time) as well as output values (past, current and future time), which are connected by a set of mapped functions. Every scientific discipline must primarily start from the definition of the content that is the subject of its study as well as the definition of boundaries of the observed social system. This paper implicitly studies the special state of a social system triggered by crisis input variables. According to the logical postulate that each input change must change the parameters of individual elements of the observed system, it is up to the observer to reduce the insignificant responses of the mapped function and try to bring the excited dynamic value system to a stable state. This algorithm for social systems is the easiest to implement if the basic set is broken down into partial subsets and interconnected by internal connections – relations according to the horizontal and vertical principle. A systematic analysis with the following steps is to be applied:

1. problem definition is an activity of problem transformation in which we do not limit an unadjusted event to the observed phenomenon.
2. designing an observation object – in order for this activity to come to life, we reduce the impact of a sudden event only on important factors.
3. transformation of the problem into a system – model – on the basis of similarity and analogy, we set relations within the elements of the observed social system. This is the most important moment when we evaluate the impact of the problem on individual elements of the observed social system and make a final solution aiming to completely map the input unexpected changes to the output in the social environment.
4. testing the obtained results in the designed model – it is the most criticized process in social systems because it is a consequence of the information credibility and must contain the basic testing postulates such as measurability and reliability of the obtained values – results.
5. implementation of the selected designed model – real-time to the social system and its application through an additional factor, which is the final response of the social system as a complex dynamic and discrete system to a random variable of unknown etiology.(1,2,3,4,5)

Microeconomic postulates are implemented in the developed model that can be further incorporated into any social model, and as such, it has all the universality properties of a general model, which gives results within the boundaries of the observed system. In order for the designed model to exist in global crises (energy, pandemic), the information flow must have high reliability. Information reliability, speed and availability contribute to the model and microeconomic stability. The time domain is a dimension, which gives special strength and reliability to the described model.

2. DESIGNING A SOCIAL MODEL IN CRISIS SITUATIONS

The design of the model starts from the basic fact that it is possible to objectively set the model of public administration using elements of similarity and analogy, different states and phenomena. Therefore, we can conclude about individual elements and properties on the designed model aiming to get insights into internal relations of the observed system to the occurrence of a crisis state.

If we apply a systemic approach to the designed model using analogy, we can simulate changes in the crisis without compromising the actual relations within the state administration structure. Public administration as a subsystem of the social system functions based on legal provisions and defined standards. Its management cannot have elements of efficiency if the relations between individual elements are broken. Every internal relation of the state administration in a crisis must be based on the man-conscience premise.The next figure shows a non-ambiguous representation of the contemporary triple relation between the designed model state administration and a subject (man).

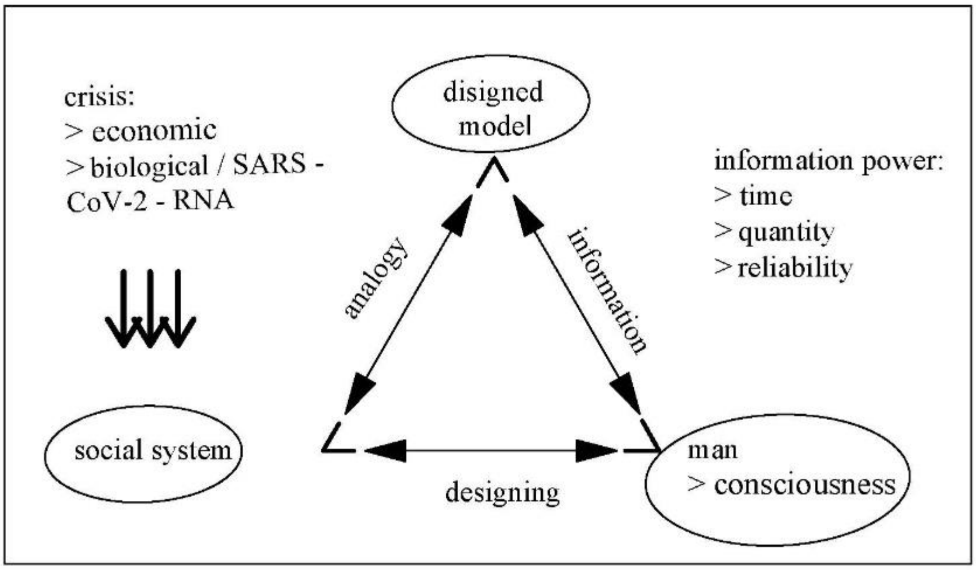

Figure 1. Designed three-relational model of the social system in a crisis situation
Source: (authors)

In the scientific review, the selectivity of external perturbation changes, which will cause changes in the form of breaking relations between individual subjects, is important. A man, as the most important subject, has limited psychophysical qualities and can have reactions only to a certain number of study dimensions. If those dimensions and/or vectors destabilize his psychophysical capabilities, as an element of the presented model, he will experience termination in terms of relations of the presented model of state administration

3. RELIABILITY OF INFORMATION IN THE DEVELOPMENT OF SARS-COV-2-RNA INFECTION

If we observe the development of antibodies (IgM and IgG) as information in a biological system such as a human being, it is important that the information has a high degree of reliability on the resulting change. In the diagram shown in Figure 2, we see the development of infection in the human organism as a function of time. Upon infection, the first antibodies begin to develop on the seventh day (Figure 2), at the moment when the infection is at its maximum on the thirteenth day of infection the maximum weight of antibodies (IgM) is the highest, and along with the recovery from the infection, IgM antibodies also fall so that **Immunoglobulin M (Ig M)** disappears after the twenty-first day of infection.

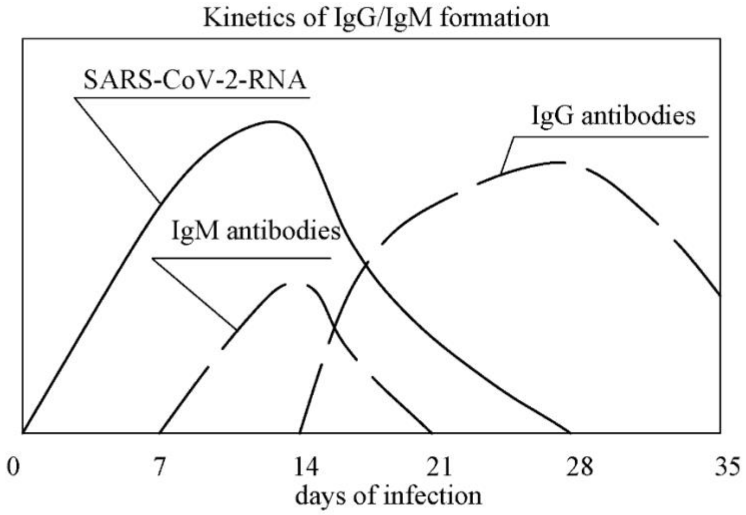

Figure 2 Development of infection in the function of time.
Source: (authors)

The other strong antibody / **Immunoglobulin G (Ig G)** / begins to develop on the fourteenth day of infection and is at its maximum on the 28th day of infection, precisely when the biological system (human) is healthy in medical sense. This image strongly demonstrates the significance of information as a function of time and reliability. It is precisely this representation, with the human being dominant as a biological system that reacts to a natural phenomenon as well as his/her personality, that gives us a clear picture and confirmation of the defined model of Figure 1.

4. MACRO- AND MICROECONOMIC ASPECTS ON THE EXAMPLE OF PORTUGAL IN THE PANDEMIC

Portuguese economy is recovering from the crisis caused by COVID-19, owing to quick and effective political action and the successful introduction of vaccines. We cannot unequivocally apply this fact to other members of the OECD, nor to other EU member states. „The new OECD report (6) states that, as the recovery progresses, it is important to continue with investment and structural reforms that will raise living standards, strengthen public finances and put growth on a strong, sustainable and resilient path". The latest OECD research on Portugal states that, with an aging population and a declining working age population, future growth will depend on increased productivity. Portugal should use its EU-funded Recovery and Resilience Plan in order to accelerate the digital and green transition, focusing on projects that will have the strongest economic and social impact. The diagram that follows clearly and very graphically illustrates the state of shock caused by the pandemic on the overall economic situation in Portugal, in the macro-microeconomic sense, as well as in OECD countries. (6)

Figure following on the next page

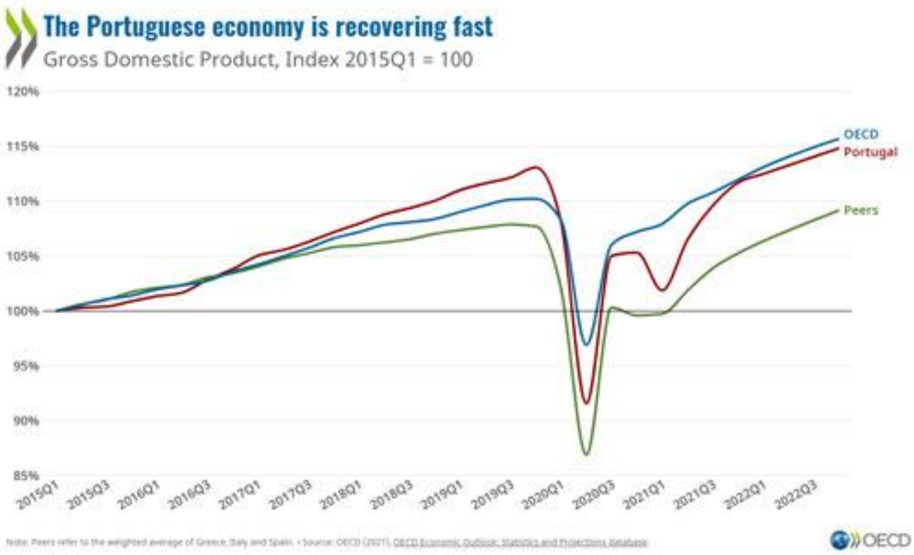

Figure 3. Diagram of Portuguese economy recovery
Source: (OECD[1])

Crises mark a period in which there are obstacles in the functioning of the financial system, there is a fall in the value of assets and insolvency of companies from all the sectors of national and global economy. The consequences of the economic crisis are enormous, they require many efforts, measures and procedures to find a solution for an exit from the crisis. Micro and macro are the two fundamental levels of observation of economic life. Micro, at the level of the individual, organization and company. Each level fosters a specific approach to reality and special methods of study, therefore, in this sense we speak of microanalysis and macroanalysis. Understanding phenomena at the individual (micro) level facilitates the understanding of the whole, and the analysis of the whole gives answers to global movements. All of the above derives from the general principle (inductive and deductive) of modelling the state of social models. The pandemic has had a disastrous effect on the Portuguese economy. After a decline by 8.4% in 2020, Portugal's GDP was forecast to recover by 4.8% in 2021 and 5.8% in 2022, assisted by the fact that almost 90% of the population is now fully vaccinated, which is the highest rate in the OECD. The citizens of Portugal had faith in the high reliability of the vaccine.

4.1 Summary of the economic forecast for Portugal (June 2022)

The real GDP growth is forecast at 5.4% in 2022 and 1.7% in 2023. Massive public investments, boosted by EU funds, and the return of tourism exports should assist the recovery. However, the war in Ukraine, supply chain disruptions and the rising energy and commodity prices will have an effect on the activities, by lowering confidence and the purchasing power. Although spare capacities remain, rising energy and food prices are expected to push inflation to 6.3% in 2022 and 4% in 2023. Salaries will accelerate as working hours catch up to pre-pandemic levels, but not enough to protect household purchasing power from the rising inflation. Portugal should also reduce macroeconomic imbalances in order to put the recovery on more solid foundations.

[1] https://www.oecd.org/portugal/portugal-use-post-covid-19-recovery-plan-to-bolster-growth-and-public-finances.htm, access August 15, 2022.

The ratio of public debt to GDP has risen among the highest in Europe, and as the recovery gains momentum, it will be important to establish a clear and credible medium-term fiscal adjustment plan. Reforms are needed to prepare for a declining working age population, as well as to improve public sector administration. The long-term sustainability of the pension system could be further improved. The pandemic has also increased financial risks in the corporate sector, and the Portuguese banks carry high levels of non-performing loans.(6)

5. CONCLUSION

Through an in-depth analysis of external perturbations-changes to the social system, we can reach a number of unique conclusions. It is possible to define a general social model that is capable of reacting to phenomena caused by various external factors. The pandemic resulting from the SARS-CoV-2-RNA virus infection caused profound disturbances in the past period. The paper analyzes the appearance of antibodies in the human body as a consequence of the threat caused by the SARS-CoV-2-RNA virus, i.e. the kinematics of state of the antibodies was set throughout the time domain, as an independent variable. This analysis has undoubtedly established that the reaction of a human being as a biological system to the occurrence of a threat has all the attributes of a normal distribution. Through connection and analysis, we arrive at the conclusion that the intensity of the infection is significantly reduced at the moment when an IgG-type antibody develops. The high reliability of the information in the human body gives us the right to conclude that the presence of antibodies affects the reaction of a person in the event of a threat when the mentioned virus is introduced into the body. In other words, the level of antibodies gives the level of resistance to external change. Another important conclusion is based on the reaction of Portuguese economy in a state of crisis, all resulting from the pandemic caused by the infectious disease. In the specific case, it is a country that had and still has the highest vaccination rate in the world. The analyzed economy had the highest growth trend in the OECD group. Data downloaded (June 2022) - OECD. Regardless of the inflation rate, it is still within the limits, below the countries with similar economies. All attempts and simulations of social models that did not have an in-depth synthesis; human being, consciousness, environment and information showed a low level of reliability. The model set up is considered the greatest contribution of this paper. "An analogy can be made between the biological model / human being / and the social model / economy /, with the fact that the vaccine in the human being is what incentives are in the economy".

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SELECTING SOCIAL SUSTAINABILITY INDICATORS OF OIL PALM PRODUCTION SYSTEM: A CASE STUDY IN NORTH SUMATERA PROVINCE, INDONESIA

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ABSTRACT

Oil palm industry play a pivotal role in the rural development of Indonesia regions. However, the oil palm production patterns should develop sustainably without negative effects to the environment and society. As well, consumers nowadays shifted their attention from environmental issues to social impacts concerns. Therefore, an appropriate assessment tools are required to measure social sustainability aspects. However, the common problem in SLCA studies is the large number of social aspects or indicators. This paper focuses on selecting a set of social indicators that applicable to oil palm production systems in case in North Sumatera Province, Indonesia. A multi-methodological approach was chosen to identify and prioritize relevant indicators. The result show there were 22 final set of social indicators selected that can be used in assessing the social performance of the oil palm production system in North Sumatra Province. The most high-risk impacts are related to forced labor, fair salary, social benefit/social security, child labor, access to material and immaterial resources, health and safety living condition, respect of indigenous rights, fair competition and access to services and inputs. This study could become valuable inputs for monitoring social sustainability of oil palm production system, specifically for the North Sumatra region and generally for Indonesia.

Keywords: *social sustainability, indicators selection, oil palm, social life cycle assessment*

1. INTRODUCTION

North Sumatra Province is known as a pioneer area for developing oil palm plantations in Indonesia [1]. With an area of mature oil palm plantations reaching 1.34 million ha, palm oil production in North Sumatera is estimated to reach 5.9 million tons in 2020, placing North Sumatra as the third largest palm oil producer province in Indonesia after Riau and Central Kalimantan Province. Most of the oil palm plantations in North Sumatra are managed by private companies' plantation which are 43.9 percent (590,984 ha), followed by smallholder's plantation occupying the second position at 33.7 percent (453,664 ha), and the rest of 22.4 percent (301,135 ha) is cultivated by the state companies' plantation [2]. This labor-intensive industry is one of the mainstay sectors in supporting North Sumatra's economic growth.

Throughout 2020, the export performance of palm oil industry has a fairly high contribution to the growth of the GRDP of the Province of North Sumatra, reaching 41.1%. At the same time, palm oil is also the main export commodity with the highest portion of the total value and volume of exports of North Sumatra. In 2020, the palm oil export value of North Sumatera reached USD 2.7 million, equivalent to 33.6% of the total export value [3]. However, there are some challenges in establishing a stable palm oil supply chain. Oil palm industry has been associated with several alarming sustainability issues. The cultivation and expansion of oil palm plantations carried out on a business as usual has caused various social problems. The increased risk of human rights violations such as forced labor, child labor and poor working conditions become common social problems today. Workers in the palm oil industry faced such as lack of formal contracts and social benefits, unfair salary, and unethical recruitment [4, 5]. This has increased the demand for sustainable palm oil production, resulting from environmentally friendly and socially acceptable production practices [6].

No.	Provinces	Mature planted area (ha)	Production (ton CPO)
1	Riau	2.476.316	10.270.149
2	Central Kalimantan	1.781.245	7.920.462
3	**North Sumatera**	**1.202.365**	**5.928.611**
4	West Kalimantan	1.681.913	5.635.682
5	South Sumatera	1.045.942	4.388.731
6	East Kalimantan	1.104.985	3.939.049
7	Jambi	852.658	3.109.205
8	South Kalimantan	416.532	1.608.256
9	West Sumatera	342.536	1.350.125
10	Aceh	366.697	1.167.337

Table 1: Number of mature planted area and production of CPO in top ten largest palm oil producer province in Indonesia on 2021
Source: [3]

As one of the important parties in achieving sustainable development goals, palm oil companies are also required to identify and prevent or mitigate adverse impacts of their activities on human well-being where necessary. For businesses, these new rules will bring more equally legal certainty. For consumers and investors, it will provide more transparency. However, it is not clear, how adaptions and modifications of already established industries may evolve in a social sustainability manner. Therefore, to accompany such a transition process, the potential societal implications have to be assessed and monitored [7].

A method suitable for this purpose is social life cycle assessment (SLCA), analogous to conventional LCA for the assessment of environmental implications. SLCA is an ISO compliant technique for the assessment of (potential) social impacts of products and services and their potential positive and negative impacts along their life cycle. Although ELCA and SLCA differ in many aspects, the development of the SLCA method seeks to follow the same structure as proposed for LCA in ISO 14040 and ISO 14044. However, there is no standardized method for the selection of indicators in SLCA. Therefore, several approaches are used to make an indicators selection. Indicators need to be individually adapted, since socioeconomic effects vary strongly across projects or cases, depending on different factors.

Especially the implementation of bioeconomy strategies (oil palm production system context) requires a regional context-specific approach which determines social aspects that are of core interest for potentially affected stakeholders [8]. Therefore, this paper attempt to define the most appropriate and relevant social indicators which can be used effectively to assess the potential social implications of oil palm production system in North Sumatera region. The results of study could become valuable inputs for monitoring the oil palm social sustainability, specifically for the North Sumatra region and generally for Indonesia.

2. METHOD

A multi-methodological approach was chosen to identify and prioritize relevant indicators, as presented in Figure 1. The basis of provided indicators is found in the "Methodological Sheets for Subcategories in S-LCA to by [9], a supplement to the UNEP/SETAC Guidelines that also offers a vast number of indicators. In accordance with [7, 8, 10], the selection is based on screening social aspects and impact categories in SLCA guidelines, sustainability standards on a global, national, and sector-specific level and a literature review on articles of SLCA studies in a related context.

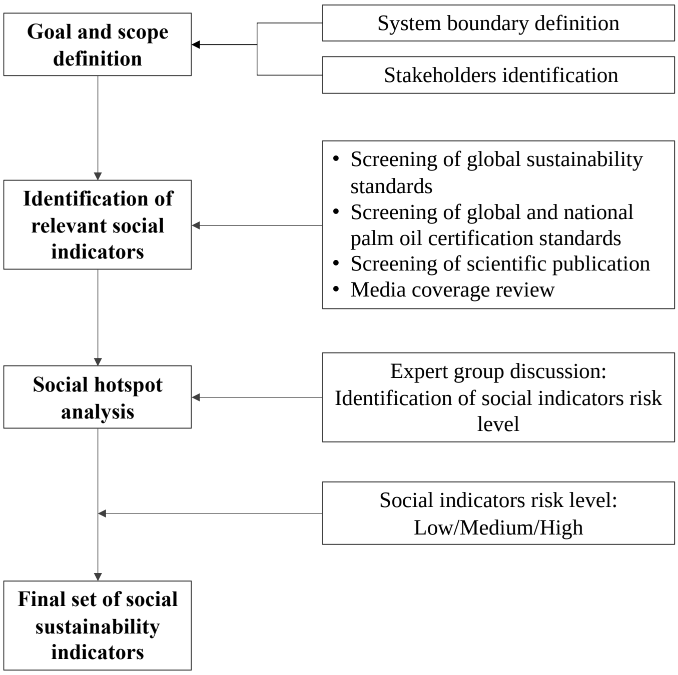

Figure 1: Research steps to select and develop context-specific social indicators to be used as SLCA framework

There are three common steps used for identifying relevant impact categories and indicators in SLCA:

Step 1: the goal and scope definition of the research. This study is based on the point of view of life cycle thinking in assessing the social performance of the oil palm production system in North Sumatera Region. Boundary system of this study is cradle-to-gate which is limited only to the production process of fresh fruit bunches (FFB) in the plantation, transportation of FFB to the mill, and the extraction process in the mill.

Step 2: the identification of relevant social indicators. A relevant indicators screening was carried out reviewing guidelines for SLCA, sustainability standards on global, national and sector-sector specific level. Five different guidelines and standards are used as the basis for implementing an SLCA, which are Global Reporting Initiative (GRI) [11], Methodological Sheets for Subcategories in Social life cycle assessment (S-LCA) by United Nations Environment Program (UNEP) [9], Product Social Impact Assessment (PSIA) [12] and also

global and national sustainability palm oil certification standards were reviewed, as well as Roundtable on Sustainable Palm Oil (RSPO) standards [13] and Indonesian Sustainable Palm Oil (ISPO) [14] to determine a set of social specific criteria in oil palm production system. Information on relevant social oil palm issues in North Sumatra Province was collected through a media coverage review, primarily using the Google search engine. The limitations of the database make information on categories or indicators of social and socio-economic impacts in sustainability standards at the national level especially at the regional level in Indonesia very challenging.
Step 3: social hotspot analysis was conducted to identify the level of risk of relevant social indicators in the oil palm production system. Social indicators obtained from media coverage, reviews of scientific publications and reviews of pre-selected sustainability standards are discussed and mutually agreed upon through expert discussions involving experts from various institutions such as local governments, academics, child protection activists, small farmer associations, trade union federations, and associations of oil palm entrepreneurs.

3. RESULT AND DISCUSSION

3.1. Goal and scope definition

This study was conducted in a palm oil company that has the following criteria: a) the company has had an RSPO or ISPO certification for the plantation and mill; and b) partnering with independent oil palm smallholders in the marketing of Fresh Fruit Bunches (FFB). In this study, the social implications of oil palm production to be monitored are associated with the conduct of the organizations along the life cycle. The social aspects considered affect: 1) workers employed in the organizations, both in the plantation and mill, 2) the surrounding local communities, defined as communities living around the concession area of oil palm companies and were not employed in the company that become the research site and 3) oil palm smallholders as value chain actors, selected smallholders are suppliers of fresh fruit bunches (FFB) in marketing partnerships with the company.

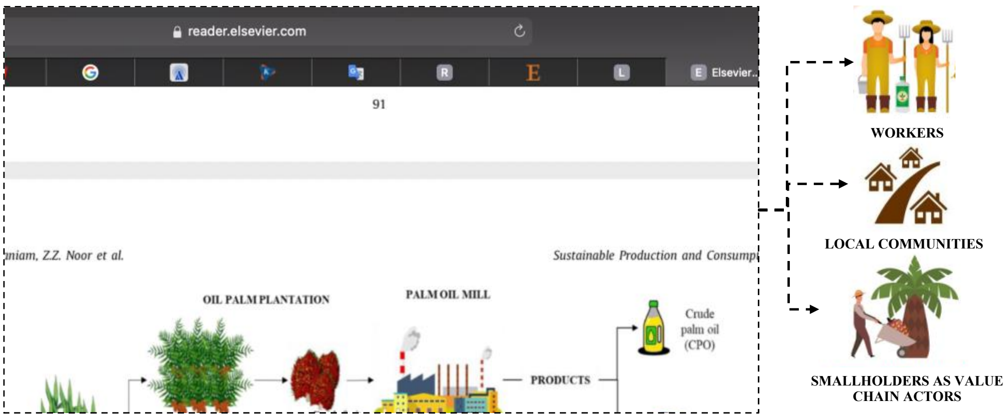

Figure 3: System boundaries of the research (adapted and modified from [19])

3.2. Identification of relevant social indicators

The selection of subcategories/social indicators from different approaches have been explored to achieve a comprehensive picture of the relevant social subcategories/indicators for the oil palm production system in North Sumatra region. The results based on screening SLCA guidelines, global sustainability standards and global and national oil palm certification standards presented in Table 3.

Guidelines for SLCA Table 3 showed that the subcategories or social indicators of the UNEP/SETAC Guidelines have the most complete criteria compared to the PSIA Guidelines. The UNEP/SETAC guidelines are also the most frequently referenced guidelines in previous studies. However, these guidelines cannot guarantee direct implementation, but the social aspects and indicators included can be considered as the basis for selecting indicators. Notably the "methodological sheet for sub-categories in the assessment of social life cycles" from UNEP [9] who has provided a comprehensive list of social aspects and indicators. Decisions about the selection of subcategories and impact indicators that apply to the entire value chain can be very challenging. In this context, impact categories also need to be assigned to each relevant stakeholder group and may differ from the guidelines. Compared to the UNEP/SETAC Guidelines, the PSIA Guideline does not include "communities" or "value chain actors" but includes "small-scale entrepreneurs" as a separate stakeholder group. The PSIA Guideline does not include subcategories "fair competition" and "supplier relationship" for small-scale entrepreneur but include fair trading relationship. While subcategories "meeting basic need" and "access to services and inputs" implicitly included in "smallholders including farmers" in the UNEP SETAC Guidelines.

Subcategories and/or indicators	GRI [15]	UNEP [13]	PSIA [16]	RSPO [17]	ISPO [18]
Workers:					
Freedom of association and collective bargaining	√	√	√	√	√
Forced labour	√	√	√	√	√
Sexual harassment	-	√	-	√	-
Equal opportunities/non-discrimination	√	√	√	√	-
Fair salary	-	√	√	√	-
Occupational health and safety	√	√	√	√	√
Working hours	-	√	√	√	-
Employment relationship	√	√	-	√	-
Social benefit/social security	√	√	√	√	-
Child labour	√	√	√	√	√
Training and education	√	-	-	√	-
Local communities:					
Access to material and immaterial resources	-	√	√	√	-
Delocalization and migration	-	√	-	-	-
Health and safety living condition	-	√	√	√	-
Community engagement	√	√	√	√	-
Respect of indigenous rights	√	√	-	√	-
Local employment	√	√	-	-	-
Value chain actors (oil palm smallholders):					
Fair competition	-	√	√*	√	√
Wealth distribution	-	√	-	√	-
Supplier relationship	-	√	√*	√	-
Meeting basic needs	-	√*	√	-	-
Access to services and inputs	-	√*	√	-	-

Table 3. Selection of impact categories and/or indicators based on screening SLCA guidelines, global sustainability standards and global and national oil palm certification standards

Sustainability standards. Global Reporting Initiative (GRI), the first and most recognized sustainability reporting system, social sustainability can be divided into four sub-categories, namely labor practices, decent work, human rights, and society and product responsibility. Sustainability reporting, as promoted by the GRI Standards, is an organization's practice of reporting publicly on its economic, environmental, and/or social impacts, and hence its contributions – positive or negative – towards the goal of sustainable development. Through this process, an organization identifies its significant impacts on the economy, the environment, and/or society and discloses them in accordance with a globally-accepted standard. The Standards are designed to enhance the global comparability and quality of information on these impacts, thereby enabling greater transparency and accountability of organizations. These standards can be considered as a practicable source of input regarding the relevance of social and socioeconomic aspects for an SLCA study [7, 8].
Global and national oil palm certification standards. The sustainability of the oil palm industry has been under the spotlight in recent decade. Amongst the sustainability certifications, Roundtable Sustainable Palm Oil (RSPO) is the most recognized standard that is well-accepted throughout the globe. The establishment of the RSPO in 2004 was a turning point for the palm oil industry in the fight against the negative allegations and showed its commitment toward sustainable development. The RSPO was founded with the objective of promoting the growth and usage of sustainable palm oil products through credible international standards. Indonesia, as the largest palm oil production in the world, also mandate the compliance of the national sustainability certification, namely Indonesian Sustainable Palm Oil Standard (ISPO). ISPO is a mandatory scheme since its establishment in 2011, whilst RSPO is a voluntary scheme whereby producers are not forced to comply with the scheme [15]. Table 3 showed that the RSPO P&C has more complete subcategories or social indicators that are relevant to the SLCA assessment than ISPO.
Scientific publication. The case studies showed that the social indicators used generally follow the UNEP/SETAC Guidelines. However, they do not provide reasons for selecting or prioritizing any subcategories or indicators in terms of sectoral context. An overview of the social indicators applied in the available SLCA case studies of oil palm production system is provided in Table 4.

Table 4: Set of social indicators applied in previous SLCA studies

Social indicators/subcategories	SLCA studies on oil palm production system				
	[16]	[17]	[18]	[19]	[20]
Workers:					
Freedom of association and collective bargaining	√	-	-	√	-
Forced labour	√	-	-	√	-
Equal opportunities/non-discrimination	√	√	√	√	√
Fair salary	√	√	√	√	√
Occupational health and safety	√	√	√	√	√
Working hours	√	√	√	√	-
Social benefit/social security	√	√	√	√	√
Child labour	√	-	-	√	-
Local community:					
Access to material and immaterial resources	√	-	-	-	-
Delocalization and migration	√	-	-	-	-
Health and safety living condition	√	√	√	-	√
Community engagement	√	√	√	-	√
Local employment	√	√	√	-	√
Respect of indigenous rights	√	√	√	-	-
Value chain actors:					
Fair competition	√	-	-	-	-

The SLCA previous case studies on the palm oil production system was conducted by [16] in Jambi Province Indonesia, involving several stakeholders such as value chain actors, employees, local community, government representatives, and non-governmental organizations related to the palm oil industry. There are eight social indicators that are assessed against workers including freedom of association and collective bargaining, forced labor, equal opportunity/nondiscrimination, fair salary, occupational health and safety, working hours, and social benefit/social security and child labor. Meanwhile, the social indicators assessed against local communities including access to material resources, delocalization and migration, health and safety living condition, community engagement, local employment, and respect of indigenous rights. Stakeholder perspectives were evaluated by determining the gap between the expected and perceived quality of each social criterion, which was measured using a seven-point Likert scale. Other studies conducted by [17] and [18] in Johor region, Malaysia focuses on two stakeholders including workers and local communities. The study used a five-point Likert Scale. There are five main social indicators that are assessed against workers including equal opportunity/nondiscrimination, fair salary, occupational health and safety, working hours, and social benefit/social security. Meanwhile, the social indicators assessed against local communities include health and safety living condition, community engagement, local employment, and respect of indigenous rights. The latest SLCA study conducted by [19] only focuses on workers. This study performed social life cycle impact assessment using Subcategory Assessment Method (SAM) with eight main social indicators that adapted from [8]. In the same period, [20] also conducted an SLCA study of workers and local communities in the Johor region, Malaysia. There are four social indicators for workers and three social indicators for local communities. The previous studies provided the view that the social indicators chosen depend on how many affected stakeholders are selected within the scope of the research system boundaries.
Social indicators selected from media coverage social issues were identified from public articles emerging from 2008 until February 2022. The search criteria were oil palm social issues in North Sumatera Province, Indonesia. There were 100 articles collected:

- Reputable national media (e.g., Kompas, Jakarta Globe, Tempo, Gatra, Detik): 42 articles
- Local media: 26 articles
- NGO media report: 32 articles

Table 5: Social risks level based on media coverage review
(Table ends on the next page)

Risk level	Social issues	Number of issues
Low	Delocalization and migration	1
	Local employment	1
	Sexual harassment	1
	Supplier relationship	1
	Training and education	1
	Wealth distribution	1
	Access to services and inputs	2
	Community engagement	2
	Equal opportunities/non-discrimination	2
	Working hours	2
	Employment relationship	3
	Freedom of association and collective bargaining	3
	Meeting basic needs	3

Medium	Fair competition	5
	Occupational health and safety	5
	Respect of indigenous rights	5
High	Child labour	6
	Social benefit/social security	7
	Fair salary	9
	Access to material and immaterial resources	11
	Health and safety living condition	11
	Forced labour	18

Table 5 show the social issues identified, classified into three categories, high, medium and low risk level. The issues identified were mapped to the material topics, and those that are frequently mentioned (> 5) are considered as high risk, while less frequent (4 - 5) is medium, and very less (< 4) is low. Based on this approach, forced labor, health and safety living condition, access to material and immaterial resources and fair salary are the most high-risk issues within oil palm production system in North Sumatera Province. By referring to the same approach, study conducted by Sharah et al., in [10] in the social LCA of poultry production in Indonesia showed that poverty and community health are the most high-risk issues, while environmental pollution, child abuse, abandon child, labor rights and treatment, community engagement, sanitation, social economic gap, and growth stunting are medium risk issues within the system studied.

3.2. Social hotspot analysis

The expert group discussion was held in Indonesian Oil Palm Research Institute which was attended by 18 experts from various agencies such as researcher, local governments, academics, child protection activists, smallholder associations, plantation trade union federations, and association of oil palm entrepreneurs. The expert discussion aimed to explore any social issues related to oil palm production activities and agree on the final social indicators to be used in the SLCA of the oil palm production system. Based on this approach, 22 social indicators have been agreed including 11 main social indicators for workers, 6 indicators for local communities and 5 indicators for smallholders. The expert participants prioritized workers' health and safety aspects and fair working conditions as well as regional value creation and opportunities for the local communities. Expert participants prioritize aspects of fulfilling workers' rights including decent working conditions, worker health and safety, social security and the fulfillment and respect of rights for local communities including health and safety, community involvement and respect for indigenous peoples' rights. In addition, the expert participants also focused their attention on smallholders, especially on aspects of fair competition, distribution of welfare, supplier relations and access to services and inputs. Details on the risk level and social issues identified based on the expert group discussion are shown in Table 6.

Table following on the next page

Stakeholders	Social indicators/subcategories	Risk level
Workers	Freedom of association and collective bargaining	High
	Forced labour	High
	Sexual harassment	High
	Equal opportunities/non-discrimination	High
	Fair salary	High
	Occupational health and safety	Medium
	Working hours	Medium
	Employment relationship	High
	Social benefit/social security	High
	Child labour	Medium
	Training and education	High
Local community	Access to material and immaterial resources	Medium
	Delocalization and migration	Medium
	Health and safety living condition	High
	Community engagement	High
	Local employment	Medium
	Respect of indigenous rights	High
Smallholders	Fair competition	High
	Wealth distribution	High
	Supplier relationship	High
	Meeting basic needs	Medium
	Access to services and inputs	High

Table 6: Social indicators risk level based on expert group discussion

The results from the media coverage review and expert group discussion then combined to determine the outcome of the social hotspots analysis for this study, as shown in Figure 4. The issues with the high-risk in each of the approaches were selected as material topics, despite the fact that they might not have a high-risk level in the other approaches. For example, based on the media coverage review, access to services and inputs is considered as low risk. However, in the expert group discussion it is considered as high risk. Hence, the risk level for access to services and inputs is considered high in the social hotspots analysis.

Figure following on the next page

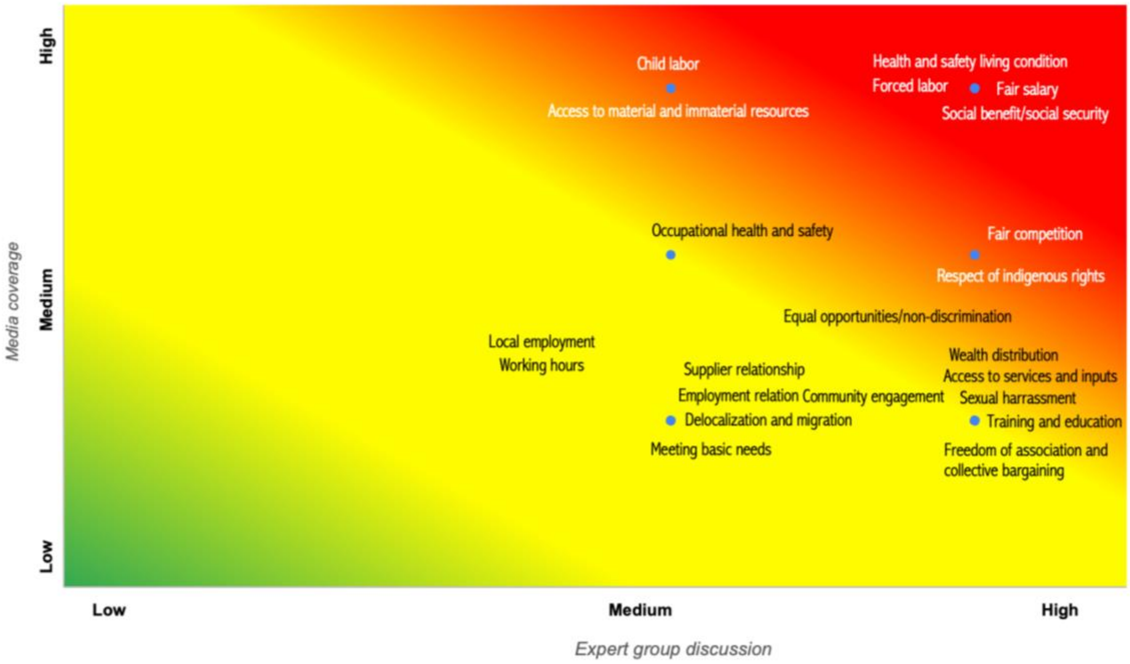

Figure 4: Set of final social indicators risk level based on media coverage and expert group discussion approach

In the selection of final set indicators, attention should be paid to selecting relevant and measurable indicators. This selection criteria utilizes triangulation, so that the adoption of this method can be justified. The approach used also considers qualitative indicators which have the same important function as quantitative indicators in the SLCA. Our findings underscore the importance of social impact assessment in terms of fulfilling basic workers' rights, opportunities for local communities and smallholders as value chain actors. Our findings have also tried to complement the social indicators that have been developed by several previous SLCA studies in the oil palm sector with a reasonable and comprehensive justification.

4. CONCLUSION

The result showed there were 22 final set of social sustainability indicators selected that can be used in assessing the social performance of the oil palm production system in North Sumatra Province. The most high-risk social impacts are related to forced labor, fair salary, social benefit/social security, child labor, access to material and immaterial resources, health and safety living condition, respect of indigenous rights, fair competition and access to services and inputs. The results of this study could become valuable inputs for monitoring of social sustainability of oil palm production system, specifically for the North Sumatra region and generally for Indonesia.

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DIGITAL TRANSFORMATION IN CORPORATE FINANCE AREA – DECISION-MAKING TOOLS

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ABSTRACT

The elaboration of this study arises from the increasing use and consequent dependence of Business Intelligence information systems, by companies and organizations, since, in times of pandemic, these same entities are undergoing a digital transformation through which it aims to update and improve their respective existing processes. However, the implementation/transition of this type of systems may have several financial, procedural and structural impacts on the organizational complex. It's a fact that the pandemic accelerated the process of digital transformation in organizations. Even so, the adaptability of its employees to a new technological context may be a challenge existing in them as well as in their existing processes, as well as in the quality of the information existing in the new Business Intelligence (BI) tool and the congruence of their data with the program. old used. In this way, this work in progress aims to understand the possible impacts that this digital transition has on a multinational in the childcare sector, especially in its financial area, through a case study, focusing on the procedural and organizational changes provided by the transition of Business Intelligence tools. The methodology adopted was a case study. As result, according to the literature review and documental analysis, the use of BI tools causes several changes in the organizational context, not only in decision making but also, in the quality of existing information, in the processes of its employees, in the execution time of certain practices, among other factors.

Keywords: *Business Intelligence, Digital Transformation, Finance, Information Systems.*

1. INTRODUCTION

The new coronavirus pandemic (COVID-19) has changed, on a large scale, the identity of several companies and organizations in the business complex, in various aspects, such as the import and export of goods, health, well-being and relationships. of its employees, causing major impacts at an organizational, structural and also financial level. Small and medium-sized companies were the most penalized by the pandemic, as they could not invest so much in their organizational development, in structural, technological or procedural terms, since these are more likely to fluctuate according to the variation of the economic situation, thus becoming exposed to risk situations (Shen et al., 2020). The same authors claim that this labor and social crisis has caused an acceleration in the process of digital transformation, on the part of companies, making them adapt to this new reality, as technology evolves, contributing to a greater network. of stakeholders, making the organization's competitiveness more globalized and efficient.

This transition has impacts in all contexts where the business operates, making information technologies play an even more important role in this organizational change, especially with regard to structural, procedural, strategic and even cultural factors (Veras, 2019). These technological advances that we are witnessing were also greatly boosted by the concept of Industry 4.0, created even before the beginning of this pandemic, also known as the fourth industrial revolution, represents the ambition of technological development in European industry. with the objective of making an entity's processes more efficient and productive (Breque et al., 2021). The same authors also state that, during this time, this type of industrialization was more focused on aspects more related to advances in digital technology and in the automation of production processes. In this way, and with a greater focus on digitalization, Industry 5.0 emerges, which aims to complement its predecessor, in the long term, through the use of artificial intelligence in the efficiency and automation of processes, not only in industrial terms but also in digital terms and a development with greater attention to the human being, in social terms and also in environmental sustainability. Thus, it can be seen from the outset that the digital transition present today will have significant advantages, primarily in industrialization, through these new concepts, which will have an impact on the social context of the population in general, on the organizational environment and also on environmental sustainability. For the present study, it is essential to relate the main elements existing within organizations today, including processes, people and technology. The implementation and consequent use of Business Intelligence systems, by employees of the financial area of the company under study, will be, for the present investigation, the main object of analysis. In this way, the following research question arises for the present study: What are the impacts caused by the transition of Business Intelligence tools in the financial complex of organizations? In order to answer the question above, a case study of the company under investigation will be carried out as a methodological approach.

2. LITERATURE REVIEW

2.1. Digital Transformation in Organizations

The digital transformation that we are currently witnessing, in the business context, can be defined as the process of change and improvement, through existing technological means, in relation to the platforms used in organizations, their existing processes and in the area of business activity, with the aim of increasing its efficiency and adding value (Ghi et al., 2022). The same authors also state that digital transformation can provide the organization with greater market competitiveness by updating its technologies in the business, thus attracting new customers. Technology, during the last twenty years, has had a large-scale impact on the organizational context in various sectors. Technological development has allowed the creation of more jobs and the emergence of new professions (Gürsoy and Varol, 2021). In addition, it changed the technical knowledge of employees in organizations from different areas, more focused on the digital context. The same authors also state that this technological development guarantees several positive aspects for organizations, regarding their supply chain, with greater control over the inventory and in the monitoring and follow-up in the transport of products. There are also benefits in the production of articles that can be translated into a reduction in cooking time, greater efficiency in the production process, which also corresponds to a reduction in costs. It is also worth noting that the COVID-19 pandemic, in turn, changed the organizational complex and accelerated the digital transformation process. With the confinements caused by the pandemic, the social context has changed radically, with people having to adapt to a new reality. However, this in the organizational context had a great impact, as human contact became exclusively digital (Barrutia and Echebarria, 2021). Therefore, companies had to adopt new ways for their employees to this new digital context, through training more focused on the technological field, video call sessions with the various teams, so that they do not suffer harm or feel excluded, in social or technical terms and so that they have a better balance with their personal life. In the study by Dwivedi et al. (2020), these authors state that the pandemic significantly and positively affected the area of information systems, with many changes and improvements in their use in organizations, through the process of digital transformation, stating that the use of technology is fundamental. and that, in turn, if there were no acceleration of transformation in its area, it could result in greater economic and social problems. In this way, organizations began to have greater consideration for information systems and their transformation or updating, taking into account that these could result in great competitive advantages for them and for their level of performance.

2.1.1. Industry 5.0

The digital transformation that exists today was greatly driven by the concept of industry 4.0, also known as the fourth industrial revolution. This industrialization concept, introduced in 2011, aimed at the technological development of societies, had the purpose of making the production processes of a given entity not only automated but also maximized, in terms of their efficiency, performance and productivity, through the emergence of of new technologies, such as artificial intelligence, robotics, internet of things, among others (Breque et al., 2021). The truth is that this concept of industry 4.0, over the years, has been applied in other realities and in other contexts beyond processes at the production level, with regard to the transformation and automation of certain existing practices in different entities, such as its application in the areas of accounting, tourism, health, among others (Madsen and Berg, 2021). However, according to authors such as Breque, Nul and Petridis (2021), they claim that this concept, during these years, was more focused on digitization and the use of emerging technologies, not taking into account the theme of environmental sustainability or the people's social context. In this way, the concept of industry 5.0 arises, which aims to have a greater focus, not only on automating existing processes and maximizing their efficiency in entities and organizations, through digitalization, but also and mainly greater concern for the environmental sustainability of the planet in the long term and concern for the population in general, regarding their personal and social well-being. The same authors also state that, in terms of future vision, the two terms may differ, taking into account that the first mentioned may portray an optimistic scenario, regarding future industrialization, with regard to the productivity and profit of organizations. However, it could have negative consequences for the sustainability of the planet and the well-being of its employees. Regarding the second concept, despite the greater concerns about the personal and environmental context, it could also translate into increased costs in the short term for companies, in the ambition to fulfill all these objectives and concerns proposed in the long term.

2.1.2. Digital Transformation Challenges

The transition to digital in the organizational context is still a topic that raises questions and problems that may jeopardize this transformation. Even though, conceptually, it is advantageous that the processes have the possibility of becoming automatic and more efficient, or even despite the existence of a better quality of information, there is a long way to go for these objectives to be fully met. It is necessary that the organization is well aligned internally, between the various areas of activity of the business and also externally, so that this transition to the digital context is properly carried out. Authors such as Heavin and Power (2018) state some challenges and dilemmas that digital transformation faces today in organizations: priorities; the storage of information; the dilemma in designing the work done by people and machines; the security; the privacy. The issue of priorities in organizations, in digital transformation, addresses the fact that their employees waste time in the elaboration of tasks related to the transition to digital, in the use of new platforms, instead of elaborating their daily work. This can translate into a digital transformation that falls short of the expectations of its possible efficiency, taking into account the current work of its employees or even the opposite of not performing their daily tasks correctly when using their time in this transition, making it difficult and adding work to the same. The dilemma in storing information, according to Heavin and Power (2018), depends a lot on the ability that organizations have to store the existing data in it and, therefore, they may have to make a choice between possible important data for a certain purpose, for the benefit of others, taking into account this maximum capacity. The same authors also state that there is also a great challenge that is present today with this digital transition, in this case the dilemma between people and computers, which states that the latter can replace the work of individuals who do not have much technical knowledge of the digital component, which could translate into a smaller number of employees. The difficulty of using new tools is also an existing challenge in this context, as it may jeopardize the security and privacy of the organization. In other words, users who do not have much technical knowledge may improperly access these tools and disseminate information in an unwanted way, or even not be able to use them. In addition to these challenges, in the study by Hai et al (2021) these authors state that there is not so much predisposition in organizations, both in end users and in the technical support of these new tools, making this transition more time consuming, less efficient and less efficient less competitive than its competitors. It is therefore necessary for organizations to adopt well-defined strategies, a plan for the implementation or transition of digital tools, adequate resources and also a great predisposition of employees to this change in their current work, corresponding to what are the needs of the business, in order to that this transformation is advantageous in terms of efficiency and competitiveness.

2.2. Information Systems

The definition of information systems can first be explained separately, taking into account that they are terms that have the possibility of being characterized independently. According to Laudon and Laudon (2007), these authors state that the term system is defined as the set of elements, norms and processes related to each other, with the objective of receiving inputs, or in this case data, which are worked on and give rise to the outputs of transformed data to the needs of your end users. Regarding the second term, the same authors state that it is defined as the set of existing data in a given context, already processed and worked on for its end users, taking into account all their needs. In turn, information systems can thus be defined as the set of interrelated elements and standards that carry out the collection and processing of data, their storage, processing and management, in order to provide greater support for decision making, meeting the existing needs, not only of employees, but also of the organization. It should also be noted that information systems need three fundamental and interdependent components for their functioning, among which are organizations, technology and people, in which they only work efficiently if these three variables are fully aligned and interconnected with each other.

2.2.1. Information Systems in Organizations

According to Lim (2013), information systems, in the organizational context, are designed to help support the management of the company, especially with regard to decision making, since there is greater detail in the existing information of your business, improving so your performance. Thus, it is essential to use information in real time from specific software or programs, thus contributing to better and faster decision making. Information systems can currently be used to provide organizational changes, transforming the structure, culture, policy, workflows and operational procedures of organizations. The implementation of this type of systems are complex tasks that, when successful, have positive effects on the organizational structure, on the skills of its employees and on new management strategies.

Technological advances in information systems are accelerating their trend towards globalized, knowledge-driven economies and flat, flexible, decentralized organizations that can coordinate with other organizations over great distances (Basoglu et al., 2007). In this way, as a company grows in terms of structure or value, these systems facilitate the vision of its managers and leaders, supporting decision-making through a single system. The growing use of this type of IS by several companies on the planet is due not only to the globalization of companies, but also to the unique and real-time treatment of information, in a single system, made possible by advances in information technologies. There is still a tendency for organizations to shift towards structures based on processes, instead of functional structures, which is directly reflected in the performance of employees, as well as in the financial performance of the company.

2.2.2. Information Systems Challenges

It should be noted that there are several challenges in the implementation or even in the use of the various IS, in its security, in the skills of its employees in relation to the program used or in the limitations of the systems themselves. The security of information systems guarantees the general protection of existing data in the organization and allows the information that end users need to be properly provided. However, IS security can be a challenge as it can trigger the disclosure of confidential information, due to behavioral factors, structural factors of the program itself or even cyber-attacks on company information. So that this type of situation does not happen, there is the international standard ISO 27000 that determines the way of using matters related, in this case, with the security of the IS, in order to prevent that this type of systems are well implemented, trying to prevent unwanted situations from happening. In addition, employees can also have a negative impact on the use of IS, insofar as they may not be receptive to a new reality or even not have the necessary training to use these new programs. It is therefore essential that companies outline objectives and strategies in order to meet the understanding, on the part of their employees, of these systems, for a better aptitude of them in their use (Maravalhas, 2010). It should also be noted that one of the challenges that arises in the implementation or even in the use of information systems is the organizational context in which they are inserted. For the most part, the organizational context has to adapt to the IS, and the opposite can hardly happen. In other words, information systems often have a standard process architecture which, in turn, can translate into complex implications when adapting the IS to your business. Therefore, it is essential that plans and strategies are drawn up that ensure that the needs of an organization, in terms of culture, structure and processes, are satisfied with the existing possibilities of the IS. It is therefore necessary for organizations to outline well-defined objectives and strategies, in order to minimize as much as possible all possible adversities when implementing information systems in their organizational structure.

2.3. Business Intelligence Tools

Business Intelligence tools are generally used to store existing data within the business context, combining them and making them more interactive and dynamic (Alaskar & Saba, 2020). Business Intelligence establishes a connection to the database of all departments of the organization, thus providing, in real time, the various information desired by end users, thus contributing to a better and more informed decision making, in a more interactive and easier to interpret the results obtained (Sharda et al., 2017). One of the great advantages of using this system is, above all, the elaboration of specific calculations in this tool, without changing the structural database. Thus, the process of making the existing procedures in the different departments of the organization automatic becomes easier, giving end users more time to analyze the data obtained.

This information can come from different sources such as other information systems such as Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), Supply Chain Management (SCM) tools, among others (Alaskar & Saba, 2020). However, through the ETL process, only essential information will be considered in what are the needs of each department, so that there is no excess of information, thus concentrating the data from the different sources of the organization, in a more agile way in the elaboration of reports in the Business Intelligence tool used. In a study by Yiu, Yeung and Cheng (2020), they claim that companies that have adopted a BI system in their organization tend to have higher profits and lower risks in their financial performance and also in the quality of the information presented by the organization. tool used. However, in the current context, there are still companies that show some fear in this digital transition of their BI system.

2.3.1. Business Intelligence Impacts

The use of BI tools causes several changes at various levels in the organizational context, not only in decision making, but also in the quality of existing information, in the processes of its employees, in the execution time of certain practices, among other factors. Addressing here the repercussions on decision making, in the study by Berhane et al (2020), these authors claim that this type of tools impact three fundamentals of this process, among which, data quality, data analysis and even in the human factor. Regarding the first factor, the authors state that it is characterized by being essential in the creation of value of existing processes. With regard to data analysis, they show that decision-making should take into account the analysis of data and its control, so that they can manage the business in a timely manner. Finally, turning now to human factors, their impact on managers' decisions depends on the nature of the problems raised. The human factor has a greater influence on problem solving in a qualitative way, contrary to what may happen with BI itself, which already has a quantitative nature. However, it will also be important to have the qualitative perspective of the employees, so that there can be more detail, reliable and understood, in the decision-making process. It should also be noted that organizations have to adopt measures so that there are positive impacts in the implementation of a BI system. In the study by Khan et al (2020), they claim that there must be adequate training for employees, so that the company's performance is maximized. These authors also state that data storage has been widely used in the business context, which could translate into a competitive advantage for them, insofar as it is strategically directed to their needs. Thus, it can be seen from the outset that the success of implementing BI systems or their use is closely linked to the human factor, in terms of the perception that end users have of these tools and in the strategies of companies to help make decisions. decision making its efficiency maximized, with regard to the quality and analysis of business information.

2.3.2. Business Intelligence Challenges

However, it should be noted that the implementation or use of BI tools may have obstacles for organizations. This type of limitations can be summarized in internal and external factors and also in technical factors. Regarding internal factors, in the study Gudginnsson and Strand (2017), these authors state that there may be limitations in the knowledge of their employees in the use of BI tools without adequate training for them. It should be noted that the IT department of organizations may not provide the necessary or adequate support to existing processes, due to the fact that they do not have the necessary knowledge of them or even of the tool itself. There is also little interest by managers in these tools that can support decision making, with a preference for information provided by existing processes. There is also a tendency for the organization's employees to use existing tools and processes instead of this type of information systems, even if this takes longer to run. Regarding external factors, the same authors emphasize that, when there are external IT consultants, difficulties may arise in obtaining the necessary support in the use of BI, in relation to organizational processes. In addition, with regard to technical factors, the same authors state that difficulties may arise in the quality of the information existing in this new tool. There are also concerns that data may no longer be available or be deleted, for various reasons, when periodically updated. Difficulties may also arise that cause the information to be manually entered into the system, which will also be a problem considering that there is a possibility that this manual process has errors or failures. Information privacy can be a technical challenge for organizations, as it can cause problems when data is loaded into the BI system (Khan et al, 2020). There may still be some fear in the use of this type of systems that make organizations opt for existing processes and tools, even if this has greater implications in terms of task execution time and the quality of information. It is, however, necessary that, so that they can maximize their performance, they outline strategies and plans, so that the Business Intelligence tools meet their needs, always taking into account all the challenges and limitations described here.

3. MATERIALS AND METHODS

3.1. Context Characterization

The company where the case study was carried out is a multinational belonging to the childcare sector, which for reasons of confidentiality, the nomenclature Company X was used for the designation of the organization. Based in Canada and with several shared service centers in several European countries, Company X has more than 3000 employees, from the most varied areas, including production, the financial area, the technological area, among others. The reason for choosing this company was due to the fact that it is the place of professional activity where the present study took place and also because the use of BI tools is a solution of great importance and, above all, necessary in today's contexts of multinational organizations (Oliveira, 2011). This study focused mainly on the financial department of Company X, which has around 70 people, at the time of its preparation, to understand the impacts generated in the satisfaction of its users regarding the new BI tool implemented. In this case, Company X aimed to transition from IBM's Cognos Analytics tool to Microsoft's new Power BI tool. Company X had already used the Cognos Analytics tool in its organizational context since 2014, where its database was the ERP used in all functional areas of the organization.

This tool only served as a basis for extracting data, so that they could later be worked on manually in spreadsheets, which, in turn, could take some time when performing certain tasks and processes for each user, with the possibility of allowing errors. or failures to work with the information obtained. This happened because this tool was not very intuitive for its users and also had little application support. In this way, Company X's objective was to make the transition from the Cognos Analytics tool to the Power BI tool, where the latter has the advantage of being able to integrate several information systems, in addition to the ERP used in the organization, having the possibility of being implemented in real time several interactive reports (dashboards) more intuitive for its end users, offer more application support in satisfying the requests of the organization's employees and also to automate certain processes in the financial area. In this case, there was a great challenge ahead in this transition of Business Intelligence tools, as the data that existed in Cognos Analytics had to migrate to Power BI properly, the reports that were in the first BI had to be prepared in the second , provide adequate training to its end users and also in the application support that the IT department would have to provide to employees in the financial area in satisfying their requests.

3.2. Investigation Methodology

The choice of the case study as the methodology of this work is explained by the fact that this investigation implies an exploration in the real context of the transition of Business Intelligence tools through the collection of data from sources of information such as document analysis, interviews and questionnaires. In this case, the case study methodology is the most appropriate for this context, taking into account that it seeks to answer questions of "how" and "why", in their natural and real context of events, regarding the transition from BI, when the investigator has no intervention in the study process (Yin, 1994). Therefore, through an exploratory study with a mixed approach, in this case quantitative and qualitative, the objective of the present investigation will be to understand the impacts generated in the transition of BI tools, whether positive or negative, regarding the acceptance of the new tool. by users, whether from the IT department or the finance department. Furthermore, as this investigation is a combination of a qualitative and quantitative approach, these two complement each other, in order to obtain in-depth results and to encourage a more detailed discussion of the case under study.

3.3. Data Collection Process

For the present investigation, as previously mentioned, the techniques used for the collection of empirical data were interviews, questionnaires and also documental analysis, applied in Company X, thus having a mixed approach, that is, quantitative and qualitative. In addition to the literature review, documentary analysis was carried out on BI tool manuals and documents produced by these tools. The interviews are ongoing and will be conducted with two employees of the IT department. The questionnaire will be launched to employees of the finance and finance department. The techniques performed in the data collection process will be related in order to perform a triangulation of the empirical data collected.

3.3.1. Documental Analysis

There were several characteristics of the two BI tools under study for the fundamental or data collection process carried out previously and to perceive the existing differences of each one.
Figure 4 presents a Gartner magic quadrant (2022), regarding the magic BI platforms used in the business context, where it is shown here as current market trends, through a two-dimensional matrix that evaluates a study of vision and execution capacity.

Figure following on the next page

Figure 1: Magic Quadrant for Business Intelligence Tools
(Source: Gartner, 2022)

Furthermore, in the study of Boas et al (2020), the authors refer to what they consider to be the fundamental characteristics of each of the BI tools under study. Regarding Cognos Analytics, these authors considered the following characteristics:

- Data Protection
- Reports Schedule
- Web Version

Regarding Power BI, these were the characteristics mentioned by the same authors:

- Easy Learning
- Intuitive
- Web, Desktop and Mobile Version
- Wide Range of Visualizations
- Data Cleaning and Transformation

In addition to these characteristics described above, the same authors responded to the following variables in these two BI tools, namely in terms of accessibility, that is, ease of use of the tools, connection to the database, preparation and cleaning of data and also in their safety, shown in table 1:

Variable	Cognos Analytics	Power BI
Acessibility	Obsolete; Bigger Learning Curve	Intuitive; Office 365 User Friendly
Database Connection	Easy to Connect	
Preparation and Data Cleaning	Not much flexibility	Tools that helps in Preparation and data cleaning
Security	Solid Security	

Table 1: Comparison of Variables of Different Tools
(Source: Boas et al, 2020)

3.3.2. Interviews

The interviews for the present case study are of semi-structured origin, in order to understand the perception that employees of the project management team and the development team had on the variables presented in Table 2, regarding the transition of the BI tools used at Company X. In turn, an interview guide was prepared based on a theoretical basis of the authors mentioned in the same table, through a literature review, in order to meet the question of the present investigation.

Variable	Source
Information Reliability	Yiu, Yeung & Cheng (2020)
Information Quality	Yiu, Yeung & Cheng (2020)
Process Automation	Pervan & Dropulić (2019)
Information Availability	Khan et al (2020)
Privacy	Khan et al (2020)
Segurity	
Support	Gudginnsson & Strand (2017)
Data Transition	Khan et al (2020)
Functionalities	Sharda et al (2017)
Preference for the new tool	-
BI Tools Transition Decision	-

Table 2: Interview's Variables

Two people from the IT department were therefore questioned, including one of the employees belonging to the project management team and the other belonging to the development team. The interviews carried out with the project management team aim to understand, in a first phase, the reason for the transition of the BI tools, how this transition was carried out, regarding the management and organization of the project, and also the perception that this team has towards this kind of tools.

Regarding the second team mentioned, the objective here will be to understand how they ensured that certain needs of the project and even the organization were met, on a more technical level and also what their perception of this new tool was.

3.3.3. Questionnaire

The questionnaire was developed with the objective of understanding whether the new tool had a positive impact on the human factor, on the existing processes in the finances of Company X and which is the preference of each of these, being divided into five phases. It should also be noted that the structure of this questionnaire was adapted from the study of Castanheira (2019). In the first phase, a preliminary treatment of the data that are necessary for this study is carried out, in this case, only the population that uses BI tools, in order to increase the relevance of the study. In the second phase, the dimensions belonging to the human factor were introduced in order to understand whether there is a positive impact of Power BI on the decision-making process, productivity and other variables that were added to this base, as shown in table 3, in 5-point Likert scales (from 1-Strongly Disagree to 5-Strongly Agree).

Variable	**Source**
Decision Making Support	Berhane et al (2020)
Analytical Capacity	Berhane et al (2020)
Information Reliability	Yiu, Yeung & Cheng (2020)
Productivity	Berhane et al (2020)
Information Quality	Yiu, Yeung & Cheng (2020)
Task Execution Time	Gudginnsson & Strand (2017)

Table 3: Questionnaire Human Factor's Variables

In the third part of the questionnaire, the dimensions referring to procedural factors were introduced, based on assumptions taken from some authors presented in table 4, regarding process automation, privacy and other variables, again on a 5-point Likert scale.

Variable	**Source**
Process Automation	Pervan & Dropulić (2019)
Information Availability	Khan et al (2020)
Privacy	Khan et al (2020)
Segurity	Khan et al (2020)
Support	Gudginnsson & Strand (2017)
Data Transition	Khan et al (2020)
Functionalities	Sharda et al (2017)

Table 4: Questionnaire Processes' Variables

Regarding the fourth phase of the questionnaire, the dependent variables were created here, in which what is intended to be understood is the preference of users for the new tool, with regard to procedural factors and human factors, determined in the two previous phases. The sociodemographic characterization of the sample thus appears in the fifth and last part of the questionnaire, in relation to the age, gender and education of the respondents.

4. RESULTS

Regarding the magic quadrant for BI tools, in this case, Microsoft, which uses the Power BI tool, presents itself as a market leader, with very positive indicators, both in its vision and in its execution capacity.

IBM in the other hand, which uses Cognos Analytics, presents itself as a visionary in terms of market trends, since it has positive indicators in its vision but negative indicators in terms of its ability to execute. Referring now to the study of Boas et al (2020), the authors state that the most important features of Cognos Analytics are related to data protection, report scheduling and a web version, that is, in the browser, available to its users, in addition to the ease of connecting to the different databases and also **a** solid security of the existing information. However, it should be noted that they claim that Power BI allows them to offer more functionality to their users, in terms of their range of views in the construction of reports, with tools that allow cleaning and transformation of data in an intuitive and also allow, in addition to a browser version, the possibility to get this tool on desktop or mobile phone. In addition, they claim that it is easier to learn in Power BI because it is a very intuitive tool, unlike what happens with Cognos Analytics, in which, in addition to being outdated, there is a need to obtain adequate training for it. Regarding the data collected with the interviews and questionnaires, as this is a study in progress, it is still being collected and analyzed.

5. CONCLUSION

The main objective of this study was to understand the possibility of the digital transition namely in BI. A case study was carried out in a multinational company in the childcare sector. In conclusion, as we can see, the use of BI tools brings several changes in organizations, not only in decision making but also in information quality, financial processes, task execution time, and employees' roles, among other factors. Regarding the analysis of the BI tools, it was concluded Power BI as the main Business Intelligence tool has more advantages than Cognos Analytics for several reasons, including mainly the functionalities that provide, the intuitive report creation process and also the easy learning curve for the end users. In addition, Power BI is very well known by the organizational community, as the top leader of Business Intelligence tool that exists in the market, due to all these characteristics and functionalities, shown on the 2022's magic quadrant for BI tools figure by Gartner. Power BI, in this way, will be a very helpful tool for all companies to increase the productivity of all end users, due to its easy learning curve and intuitive system that will support analytical capacity and also the decision-making process. This study has some limitations, it is a work in progress. The results of the analysis of the interviews and the questionnaire will be published later, since they are still being carried out. However, the presented work allows, not only to verify the impact of digital transformation in companies namely the use of BI tools, but also, criteria that should be taken into account when choosing BI tools. As future scientific work in this area, we propose to carry out the same analysis in other contexts, namely in other activity sectors. Regarding the comparison/migration of the tools, we can also carry out a study with a much larger sample.

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RELIGION AND ISLAMIC FINANCE: THEORY AND PRACTICE

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ABSTRACT

The economics of religion has become a specific field of economics in recent decades. From households to markets, various economic entities, religious groups, and institutions are analysed. It is emphasized that religiosity can influence economic performance and behaviour. In addition, various studies examine the impact of religion on economic growth and development and vice versa. Islamic finance has only recently established itself in the contemporary financial world. Islamic finance, led by Islamic banks, is considered more socially responsible than conventional banking due to the profit and loss sharing paradigm. It can be said that Islamic finance is one of the attempts to develop religion-based businesses. The purpose of this study is to identify and analyse the impact of religiosity on consumer attitudes and preferences toward Islamic financial services. Islamic finance is one of the fastest growing segments of the global financial industry today. Many factors have contributed to the strong growth of Islamic finance. Nevertheless, religion can be considered as the most important reason why customers prefer Islamic financial institutions, i.e. Islamic banks. From the literature analysed, a huge number of research has stated that religion is a main reason for using Islamic banking services. On the other hand, some studies show that religiosity does not play a major role in the selection criteria for Islamic banks. In this paper, the research method of a literature review is used. Theoretical and empirical studies show different approaches, methods and results in analysing the relationship between religiosity and Islamic banking. The main findings of this research are the comparative analysis of different empirical scientific studies on the impact of religiosity on consumers' behaviour, attitudes and preferences towards Islamic banking products and services. It is expected that the results of this study will contribute to a better understanding of religious consumers' behaviour towards Islamic banking products.
Keywords: *Islamic finance industry, religious behaviour, religious consumer*

1. INTRODUCTION

In recent decades, the economics of religion has become a specific field of economics. From households to markets, various economic entities, religious groups, and institutions are analysed. It is emphasized that religiosity can influence economic performance and behaviour. Economic studies of religion can contribute in three ways (Iyer, 2015): (I) they show how economic and statistical tools can be used to evaluate the role of religion in society; (II) they continue to point out the economics of non-market behavior illustrating the role that norms, values, social capital, and 'spiritual capital' may play in influencing human behavior by affecting both beliefs and actions; (III) they show how culture more broadly, whether through religion or other types of cultural beliefs, can affect economic systems. As will be shown in the following section, various studies examine the impact of religion on economic growth and development and vice versa. Islamic finance has only recently established itself in the contemporary financial world. Today, Islamic finance represents one of the fastest growing segments of the global financial industry. The growth of the global Islamic finance market can be attributed to the strong investments in the Halal sectors, infrastructure, and Sukuk bonds, especially through electronic modes in all products and services (Market Reports World, 2022). Islamic finance, led by Islamic banks, is considered more socially responsible than conventional banking due to the profit and loss sharing paradigm. The similarities and differences between conventional and Islamic banks can be seen in the paper by Cerović, Suljić Nikolaj, Maradin (2017). Nevertheless, Islamic banks play an increasingly important role alongside conventional banking systems and have become an essential part of the financial structure of many Muslim and non-Muslim countries (Maradin, Suljić Nikolaj, Olgić Draženović, 2021). Islamic banking is the largest sector in Islamic finance, contributing to 71% or USD 1.72 trillion of the sector's assets. The sector is supported by an array of commercial, wholesale, and other types of banks. However, commercial banking continues to be the largest contributor to the sector's growth (Market Reports World, 2022). The concept of Islamic banking comes from Islam itself, and is about moral and ethical values derived from the tenets of Islam, the Quran, and Shariah. In other words, Islamic banking can be defined not only as banking that prohibits interest (known as riba), but also shows how ethics and finance can be combined as a concept to serve society and lead it to good purposes (Baber, Zaruova, 2018). It can be said that Islamic finance is one of the attempts to develop religion-based businesses. Many factors have contributed to the strong growth of Islamic finance. Nevertheless, religion can be considered as the most important reason why customers prefer Islamic financial institutions, i.e. Islamic banks. Given the above-mentioned, the purpose of this study is to identify and analyse the impact of religiosity on consumer attitudes and preferences toward Islamic finance, i.e., Islamic banking products and services.

2. RELIGIOUS PREFERENCES AND ECONOMIC ACTIVITY

To explain the relationship between religious behavior and economic activity, it is first necessary to define the term "*the economics of religion*". The economics of religion is a relatively new field of research in economics, introduced to a wide audience of economists and other social scientists by economics professor Laurence R. Iannaccone in his seminal article "Introduction to the Economics of Religion," published in the *Journal of Economic Literature* in 1998 (Iannaccone, 1998). The economics of religion is best defined as the use of the tools of economic analysis to study phenomena related to religion, where religion can be either the outcome of interest (religion-as-dependent-variable) or the influencing factor on the outcome of interest (religion-as-independent-variable) (North, 2018). This is consistent with Iyer (2015), who explains that the economics of religion is research that uses the tools and methods of economics to examine religion as a dependent variable or as an independent variable for other socio-economic outcomes. Furthermore, economics of religion must be distinguished from what might be called 'religious economics' which is the use of religious ideas to provide social commentary on economic systems or behaviors (Iyer, 2015). Although the economics of religion is intellectually based on the work of Smith and Weber, it became a "scientific" field of study when a quantitative, mathematically-based methodology for social surveys developed during and after World War II and was applied to sociological issues (McCleary, 2011). The first formal model of religious participation was developed by Corry Azzi and Ronald Ehrenberg (1975).

In the last 20 years, economists have come to realise that religion is inextricably linked to its subject matter, from fertility decisions in the household, to risk sharing schemes in a village, to major political movements, and to economic growth. A deeper understanding of religion is perhaps more important today than ever before (Carvalho, Iyer, Rubin, 2019). Given the diversity of religious topics studied by economists today, there are studies on the economics of religion that focus on the role of religion at the macroeconomic level, while others focus on gaining insights from microeconomics. Cross-country regressions have been the main feature of macroeconomic research on religion since its inception (Iyer, 2015). The literature specialising in the study of the relationship between religious beliefs and economic development is vast and diverse (Dragos Constantin, Luana Alexandra, 2015). Studies can be distinguished that examine the effects of religiosity on economic growth and/or development (e.g., Barro and McCleary (2003) examine the effects of church attendance and religious beliefs on economic growth), and vice versa. That is, there are also many studies that analyse the effects of economic growth and/or development on religiosity (e.g., McCleary and Barro (2006b) examine how religiosity responds to economic development and other variables). In addition, many researchers in the field of religion and economic development are concerned with noneconomic factors and their role in the development of an economy. It is considered that religion is the most important non-economic factor that forms the basic institutional infrastructure of a society (Qayyum, Anjum, Sabir, 2020). On the other hand, the microeconomic approach has provided many important insights for the study of religion (Iyer, 2015). Within the framework of the economics of religion, various aspects of social life are studied, from households to markets, various economic entities, religious groups, and institutions. For example, Maradin, Cerović and Malnar (2021) examine the impact of the COVID-19 pandemic on religious behaviour, beliefs, and attitudes of believers and consequently on their mental health and health outcomes.

3. THE ROLE OF RELIGIOUS BELIEFS ON SELECTING THE ISLAMIC BANK

Numerous studies have been conducted to investigate the role of religiosity and religious beliefs in customers' choice of Islamic banks' products and services. The most important previous studies are mentioned in this section. Zafar, Muhammad and Akhtar (2021) investigate the bank selection criteria used by customers of both conventional and Islamic banks in Pakistan. A sample of 1000 customers was selected from six different cities to find out the factors that influence their choice of a bank. The results show that the variable Security of Money was considered as the most important factor in choosing a bank by the customers of both conventional and Islamic banks. The results also revealed that customers of Islamic banks ranked Competence of Staff, Online Banking Facility and Confidentiality of Information, respectively, as the most important factors in the selection of their banks. The study indicates that Islamic banks should not take their customers' expectations for granted by assuming that they are prompted to deal with the bank only because of their religious awareness, but they should also ensure the security of money, staff competence, online banking facilities, and other factors to satisfy and attract customers. Zuardi, Marpaung and Lubis (2021) analyse customer loyalty and the influence of product attributes, promotions, and religious commitments on savings product decision in Shariah Bank in Indonesia from June to August 2021. The population of this study is customers who use the savings products of Sumut Syariah Bank. Purposive sampling was used as the sampling method. The data analysis method used in the study was structural equation modelling - partial least squares (SEM-PLS) using SmartPLS software. Some of the results show that religious commitment has a positive impact on the decision to use Shariah banking products and also has a positive impact on customer loyalty. Murtala et al. (2020) examine the role of religion in influencing customers' selection decision to bank without interest in Nigeria. Using a multistage sampling technique, they analysed the responses of 395 customers of an Islamic bank in Bauchi State. The study found that Bank Selection Decision correlate positively with all independent variables, i.e., Religious Affiliation (RA), Preference for Religion (PR), Staff Religiosity (SR) and Religious Fundamentalism (RF). The result of multiple regression analysis shows that RA, PR and RF are the most significant factors influencing customers' Bank Selection Decision, while SR has an insignificant influence on the predicted variable. From the conducted research, it can be concluded and recommended that the management of banks should ensure the provision of products and services that are in line with the religion of their existing and potential customers, and they should design their marketing strategies to meet the needs and expectations of customers, thus becoming leaders in the industry. Hatmawan (2019) examine the impact of religiosity on savings choices in Shariah banking in Madiun, Indonesia. The survey used 685 samples using purposive sampling technique. The analysis technique used in this study is multinominal logit. The results indicate that religiosity has an impact on the likelihood that the customer's choice to save in Shariah banking is lower than saving jointly in a Shariah and conventional bank and saving only in a conventional bank. This shows that religiosity influences the probability of saving only in Shariah banking, which is dominated by an emotional, religious-ideological mindset rather than an economic-rational mindset of the customer. Mansour (2019) investigates the importance of Shariah compliance compared to other criteria influencing the selection of Islamic banks in Sudan, a fully Islamic banking system. Primary data were collected through self-administered questionnaires distributed to a sample of 393 respondents from banking locations in Sudan. Respondents' perceptions of the importance of Islamic bank selection criteria were analyzed using mean and independent t-test, and exploratory factor analysis. The results of the study indicate that even across the Islamic banking system and despite the fact that all banks in Sudan operate under a fully Islamic banking system, Shariah compliance is the most important factor that customers consider. It can be said that consumers pay the most attention to the extent to which their bank's services comply with Islamic principles. Therefore, it is not possible for Islamic banks to ignore the religious sentiments of their customers. Religious commitments and religious norms must be used as a strategy to attract new customers or retain existing ones, especially for believing groups. Yusoff (2019) identifies whether intrinsic and extrinsic factors influence the selection of an Islamic banking institution and analyses which factors influence Muslim consumers more in selecting an Islamic banking institution in Malaysia. The method used is quantitative data collection through questionnaire. Multiple regression analysis is used as the analysis tool. The results show that one significant factor, namely religious adherence, has the strongest influence on Muslim consumers in selecting an Islamic banking institution. Other extrinsic factors such as reputation and recommendations, product services and product promotion, and intrinsic factors such as understanding have a significant influence on Muslim consumers' choice of an Islamic banking institution. On the other hand, the dimensions of awareness and perception in the intrinsic factor are not significant in influencing the choice of an Islamic banking institution. Baber (2018) investigates the impact of various factors such as attitude and behaviour, subjective norms, and religiosity on non-Muslims' intention to accept Islamic finance as an alternative financial system in India. An adopted questionnaire with 20 items was used to collect data from 932 respondents from three religions: Hinduism, Christianity, and Sikhism. Statistical tools such as reliability analysis, correlation of independent variables, sampling adequacy, and regression analysis were used. The results of the study indicate that subjective norms and religiosity have an impact on the acceptance of Islamic finance as an alternative. On the other hand, the joint variable of attitude and behaviour has no relevance to the development of intentions regarding the acceptance of Islamic finance. Selvanathan et al. (2018) determine and identify the factors that influence consumers in choosing products and services from Islamic banks in Malaysia. The data were collected using simple random sampling without probability sampling in the Selangor region.

The results show that bank reputation, religious and cost-benefit factors are significant factors, while convenience does not have a significant influence on customers' choice of Islamic banking. The analysis shows that religion has a negative relationship with the choice of Islamic banking. This indicates that religion is not the main factor but risk is important in choosing a bank. Shome, Jabeen and Rajaguru (2018) analyse and explore factors influencing the choice of Islamic banking and financial products and services in the United Arab Emirates (UAE), a predominantly Muslim country. Data were collected through a survey of students enrolled in a university in the UAE. Responses were analysed using descriptive statistics, analysis of variance, and regression analysis. The results indicate that the decision to open an account at an Islamic bank is influenced by consumers' expectations of the conformity of banking transactions with Islamic principles, as well as consumers' Arabic language skills. Variables such as nationality, gender, education, and familiarity with Islamic banking do not significantly influence the decision to open an account at an Islamic bank. The variable religion does not seem to play a significant role in the decision to open an account at an Islamic bank in the study, so this variable was removed from the analysis. Usman et al. (2017) investigate the indirect effect of religiosity on customers' decision to use Islamic banking services and also review the assumption used in previous studies that all Muslims accept and believe in the law prohibiting bank interest. The study uses an exploratory approach and the natural experimental design with apparent causal models. A total of 363 questionnaires were distributed to three groups of Muslim bank customers in Indonesia, i.e., customers of Islamic banks, customers of conventional banks, and customers of both banks (121 respondents in each group). The results show that the role of religiosity in customers' decision to use Islamic banking services depends on the variable "religious norms". Religiosity affects the decision of customers in the traditional group, but it does not affect the modern group. Abou-Youssef et al. (2015) explore the effect of Islamic religiosity on consumer attitudes toward Islamic banking in Egypt. The study employs a mixed methods approach using both in-depth qualitative interviews and quantitative surveys. The main findings of the study show that religiosity has an impact on consumer attitudes toward Islamic banking in Egypt, i.e., the level of religiosity has a significant linear relationship with attitudes toward Islamic banking. Important religiosity clusters were identified in the sample that were associated with attitudes toward Islamic banking. Usman (2015) investigates the effect of religious norms on customers' decision to use Islamic banking services, and accordingly examines Muslims' religious norms in relation to their beliefs about the law prohibiting bank interest. The methodology used is a natural experimental design with Analysis of Variance (ANOVA) and Pearson Chi-Square Test. The results indicate that Muslims' religious norms have a significant impact on their decision to use Islamic banks and their religious norms are classified into two categories, namely traditional and contemporary group. Echchabi and Olaniyi (2012) analyse the preferences of Malaysian banks' customers regarding the characteristics of Islamic banking. The study uses a mixed methodology, both a quantitative and qualitative approach. A self-administered questionnaire was used to collect primary data from 500 customers of Islamic banks in Malaysia. From the quantitative approach, it is found that the preference for Islamic banking attributes in Malaysia is a combination of the quality of services offered by Islamic banks and the convenience associated with them. On the other hand, the qualitative approach revealed that the choice of Islamic banks is mainly due to the Islamic religious motivation of the customers. Hasan, Subhani and Osman (2012) observe the criteria for selecting an Islamic bank using questionnaires randomly filled out by 300 different consumers in 9 banks in Karachi, Pakistan. Ten factors were selected to examine consumers' criteria for choosing an Islamic bank. These factors include convenience, quality of banking services, consumers' religious motives, availability of ATM, privacy and confidentiality, bank reputation and image, variety of financing options, high profits and low service fees, recommendations from friends and relatives, and friendliness and responsiveness of bank staff. The results indicate that high profits and low service fees are the most important factor in consumers' choice of Islamic banking, followed by religious motives and quality of service. Awan and Shahzad Bukhari (2011) determine the conditions under which Islamic banks can successfully compete with conventional banks by examining customers' attitudes toward Islamic banking products. A sample of 250 respondents was drawn from four Pakistani cities to investigate customers' awareness of the main products/services offered by Islamic banks, usage of these services, and customers' satisfaction with the services offered by pure Islamic banks and conventional banks with Islamic bank branches. The data for this study were collected using a structured questionnaire that contained two sections. Analysis of the data revealed that most customers considered product features and service quality as the main factors influencing their choice of an Islamic bank and gave less importance to religious belief as a factor influencing their choice of an Islamic bank. Naser, Jamal and Al-Khatib (1999) assess the degree of customer awareness and satisfaction toward an Islamic bank in Jordan. A sample of 206 respondents was used for the survey. The analysis of their responses revealed a certain level of satisfaction with many facilities and products of Islamic banks. The results of the survey show that the majority of customers deposited with the Islamic bank for religious reasons, as the bank adheres to Islamic Shariah principles. In addition, it is cited that the top three reasons supported by the vast majority of respondents can all be considered religious.

4. CONCLUSION

This paper identifies and analyses the impact of religiosity on consumer attitudes and preferences toward Islamic financial services. Islamic finance is one of the fastest growing segments of the global financial industry today. Many factors have contributed to the strong growth of Islamic finance. Nevertheless, religion can be considered as the most important reason why customers prefer Islamic financial institutions, i.e. Islamic banks. Moreover, religion is also believed to be the most important non-economic factor that forms the basic institutional infrastructure of a society. From the literature analysed, a huge number of research has stated that religion is a main reason for using Islamic banking services. On the other hand, some studies show that religiosity does not play a major role in the selection criteria for Islamic banks. In this paper, the research method of a literature review is used. Theoretical and empirical studies show different approaches, methods and results in analysing the relationship between religiosity and Islamic banking. The main findings of this research are the comparative analysis of different empirical scientific studies on the impact of religiosity on consumers' behaviour, attitudes and preferences towards Islamic banking products and services. The relationship between religiosity and religious beliefs to the Islamic banking selection criteria is determined. It is expected that the results of this study will contribute to a better understanding of religious consumers' behaviour toward Islamic banking products.

ACKNOWLEDGEMENT: *This work was supported by the University of Rijeka; under Grant uniri-drustv-18-61 and Grant uniri-mladi-drustv-20-13.*

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SEVERE HOUSING DEPRIVATION OF SENIORS IN THE SLOVAK REPUBLIC

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ABSTRACT

One of the global phenomena in the EU member countries is the aging of the population and the increase in the proportion of people of post-productive age. According to Eurostat's forecast, up to 32% of the population in Slovakia will be aged 65+ in 2070. One of the problems that people face in old age is the quality of housing. In recent years, we can observe a growing trend of older people, especially women, living alone, which increases the risk of insufficient income to provide basic needs at an adequate level. In the paper, we focus on the problem of severe housing deprivation of seniors in Slovakia and compare the severity of this problem with the average of the EU27 countries. We also examine the gender aspect of this phenomenon in the conditions of Slovakia and analyse it through several dimensions of severe material deprivation in the field of housing. We use statistical data from the regular statistical survey on the income and living conditions of EU residents (EU-SILC). Based on the analysis, we concluded that in the period from 2010 to 2020, the rate of severe housing deprivation reached decreasing trend in the average EU27 countries, and in Slovakia the development of this indicator was unstable. In the period 2014 and 2019, the rate of severe housing deprivation in Slovakia was above the EU27 average. Since the beginning of the EU-SILC statistical survey, we can observe that severe housing deprivation is higher among women 65+ than among men of this age category in Slovakia, although we note a positive trend in the decrease of women exposed to severe housing deprivation . The higher representation of women who are exposed to severe housing deprivation is a consequence of lower pensions, a higher life expectancy, as well as the fact that some live alone. Considering the persistence of severe housing deprivation of seniors in Slovakia, we will outline possible solutions to reduce the share of residents 65+ living in indecent housing conditions.

Keywords: *Housing, Severe housing deprivation, Seniors*

1. INTRODUCTION

One of the important demographic phenomena in the EU member states is the aging of the population. According to the latest data from the 2021 AgeingReport, life expectancy for men in the average of EU will increase from 78.7 years in 2019 to 86.1 in 2070. For women, life expectancy will increase by more than 6 years from the current 84.2 to 90.3 in in the year 2070. In the Slovak Republic in the examined period, we observe a similar trend, when the average life expectancy of men will increase by 9.7 years to 84.1 by 2070, and for women by 7.8 years to 89.0. In 2070, the share of 65+ inhabitants in Slovakia will be almost 32% of the total population. In recent decades, we can observe a growing trend of older people, especially women, living alone, which increases the risk of insufficient income to ensure basic conditions at an adequate level. The health and independence of older people are also influenced by the quality of the physical and social environment, where we also include housing. The aim of the paper is to characterize the severe housing deprivation in Slovakia of population aged 65+ and to compare it with the EU27 average. We focus on one of the vulnerable groups, namely population over 65 years of age, who are largely economically inactive and often face a lack of income and it is connected with lower quality of life.

We investigate the gender aspect of housing deprivation for seniors 65+ in Slovakia. In the paper, we will point out the different dimensions of housing for this target group, such as severe housing deprivation or the housing cost overburden. When examining the issue of housing, we will use statistical data from Eurostat, which are mainly based on the European Union Statistics on Income and Living Conditions (EU-SILC).

2. THE QUALITY OF HOUSING IN THE EUROPEAN UNION

The right to decent housing is one of the basic human rights. Individual EU member states are responsible for the implementation of the fundamental right of their citizens. The priority of this right is different in individual countries, which is also reflected in the quality of housing. The quality of housing in EU member states is very different not only between them but also within them. The conducted studies have identified the main determinants that influence the quality of housing such as the socio-economic characteristics of the population, the implementation of the welfare state model, the economic performance of country or the involvement of the public and private sectors in the real estate market (Guio, Marlier, Nolan, 2021, Dewilde, 2017, Dewilde, De Decker, 2016, Borg, 2015; Stephens et al., 2015; Mandic, Cirman, 2012; Norris, Shiels, 2007). Other studies made conclusion that the housing policy applied in previous years affects the quality of the housing stock, the availability of housing, the price and quality of real estate (Malpass, 2011; Bengtsson, Ruonavaara, 2010, 2011). These factors also influence the degree of severe housing deprivation, which is the subject of our research. It is necessary to realize that housing deprivation depends on long-term resources and needs/costs, and households with the same resources may have different needs and thus face different costs (Verbunt, Guio, 2019, Nolan, Whelan, 2011).

2.1. Current state of severe housing deprivation of population 65+ in the Slovak Republic and the EU27

Considering the investigated issue and our aim, we defined two hypotheses. Our hypothesis No. 1 is that the severe housing deprivation rate is lower in Slovakia in the long term than the EU27 average, and hypothesis No. 2 is that women 65+ face a higher risk of severe housing deprivation than men 65+ in the conditions of the SR since the beginning of EU-SILC statistical surveys. Statistical data from EUROSTAT is used, and data from EU-SILC, which covers all EU member states to test the hypotheses and to fulfil our goal. We will work with the latest published data from EU-SILC2020, examining longer time series. We will focus on the analysis and comparison of an extensive set of indicators related different aspects of housing deprivation and the housing costs overburden.

According to EUROSTAT (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary), severe housing deprivation rate is defined if household is living in a dwelling that is simultaneously:

- overcrowded (i.e. if the household does not have at its disposal a minimum number of rooms equal to one room for the household, one room per couple in the household, one room for every single person aged 18 or more, one room per pair of single people of the same gender between 12 and 17 years of age, one room for every single person between 12 and 17 years of age and not included in the previous category or one room per pair of children under 12 years of age);
- exhibiting at least one of the following housing deprivation problems: • a leaking roof, damp walls, floors or foundation, or rot in window frames or floor, • no bath/no shower, nor indoor toilet, • darkness.

We analyse each of the mentioned areas separately.

Table 1: Severe housing deprivation rate and its components, over-crowding and cost-overburden household 65+ by EU Member State (%, 2020)

State	Severe housing deprivation	Over-crowding	Leaking roof	No bath/shower	No indoor toilet	Darkness	Housing cost over-burden
EU27	1,7	7,0	12,7	1,9	2,1	5,8	8,0
Belgium	0,4	1,5	11,2	0,5	1,3	5,4	11,4
Bulgaria	3,1	15,4	9,8	8,5	15,1	3,8	24,5
Czechia	0,5	5,7	5,9	0,1	0,4	2,6	8,7
Denmark	0,1	0,8	6,7	1,1	0,2	2,7	18,0
Germany	0,2	2,9	7,3	n	0,0	:	10,3
Estonia	1,1	5,1	12,6	11,2	8,5	4,0	3,0
Ireland	0,2	0,6	13,2	0,4	0,4	2,7	2,4
Greece	2,6	11,5	14,1	0,3	0,3	6,0	23,2
Spain	1,1	2,4	16,9	0,4	0,5	10,1	4,9
France	0,5	2,2	12,4	0,6	0,8	8,9	7,3
Croatia	2,9	18,3	11,0	1,8	2,4	5,4	7,3
Italy	2,7	10,0	20,3	0,8	0,8	5,7	4,9
Cyprus	0,1	0,4	42,9	1,6	1,6	1,8	2,1
Latvia	7,7	27,5	15,5	12,2	10,6	5,0	6,1
Lithuania	2,4	9,9	12,4	10,6	11,6	7,0	2,6
Luxembourg	0,2	1,4	11,1	n	n	5,9	5,2
Hungary	2,5	6,5	18,0	0,7	0,7	6,5	2,9
Malta	0,2	1,6	8,1	0,1	n	8,8	2,0
Netherlands	0,2	1,2	8,5	n	n	2,9	10,1
Austria	0,8	4,0	6,3	0,8	0,9	4,1	5,5
Poland	:	23,5	6,1	2,2	1,8	:	7,2
Portugal	1,3	2,9	26,2	1,1	0,9	7,2	2,6
Romania	6,5	17,8	10,6	26,2	27,5	5,6	8,1
Slovenia	1,3	4,8	22,6	0,2	0,1	4,2	4,9
Slovakia	1,5	15,7	5,0	0,7	1,1	2,6	3,4
Finland	0,2	3,4	2,4	0,6	0,8	3,5	4,9
Sweden	0,4	4,2	4,9	0,1	0,0	4,9	10,4

n – not significant
: - not available
Source: author's own processing based on EU-SILC data, EUROSTAT database

The quality of housing for residents 65+ is very different between member´s states of the EU. The indicator of severe housing deprivation for 2020 ranged from 0.1 percentage points (p.p.) to 7.7 percentage points. Most residents 65+ suffered from severe housing deprivation in Latvia and Romania. On average in the EU27, 1.7 % of the population aged 65+ had insufficient quality housing, which caused them severe housing deprivation. In the Slovak Republic, the share of seniors in severe housing deprivation was below the EU average (1.5% of the population 65+) by 0.2 p.p., which partially confirmed our hypothesis No. 1. When we look at the development of this indicator for the period 2010 to 2020, we can observe several development trends. From 2010 to 2014, the rate of severe housing deprivation for inhabitants aged 65+ in Slovakia was below the EU27 average, and from 2015 to 2019, the quality of housing for seniors in Slovakia worsened, while the rate of severe housing deprivation exceeded the EU27 average. In 2020, the rate of severe housing deprivation for seniors in Slovakia decreased and thus the value of the indicator again fell below the EU27 average. While the rate of severe housing deprivation for residents 65+ exceeds the EU27 average in the examined period from 2010 to 2020, it reaches a continuous decline, in Slovakia the development of this indicator is unequal. Soon, we can expect an increase of seniors at risk of severe housing deprivation due to unfavourable economic development and war conflict.

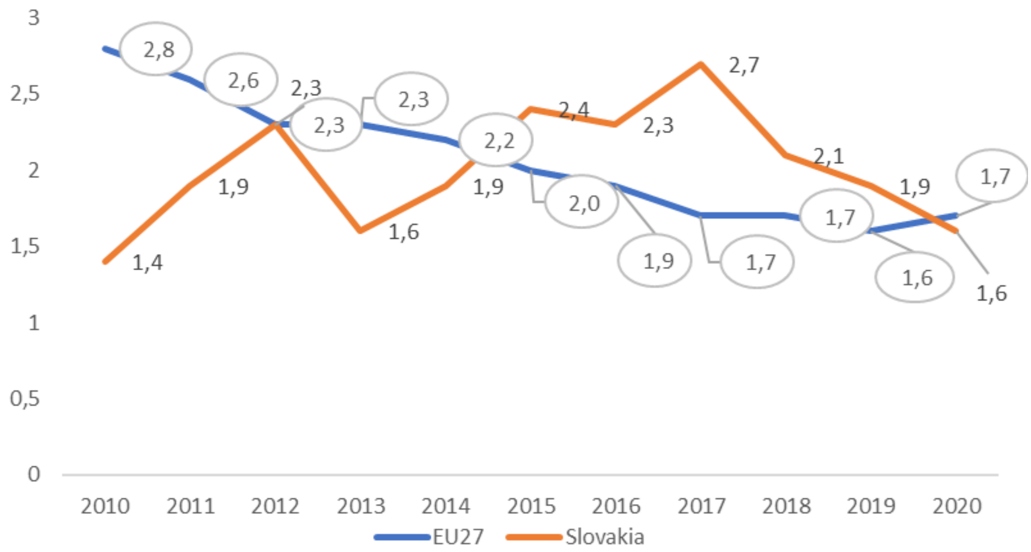

Figure 1: Severe housing deprivation rate development of population 65+ in the EU27 and Slovakia (%, 2010-2020)
(Source: author's own processing based on EU-SILC data, EUROSTAT database)

Examining the indicator of severe housing deprivation of seniors for the year 2020 in EU member states according to its subcategories, we note that the major problem for seniors' households in the EU average is with leaking roof, damp walls, floors or foundation, or rot in window frames or floor and subsequently with overcrowding. On average, most elderly households in the EU are already equipped with a shower or indoor toilet. In Slovakia, 15.7 % of seniors 65+ lived in a over-crowded household and 5 % of seniors 65+ had problems with leaking in 2020. The fewest households of Slovak seniors were not equipped with a shower.
Another examining indicator is the housing cost over-burden. The housing cost over-burden rate is defined according to Eurostat as the percentage of the population living in households where the total housing costs represent more than 40 % of disposable income (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary). In recent times, a larger share of the household budget has been devoted to housing-related expenses (rent, energy costs, fuel, real estate tax as well as interest on mortgage loans). This indicator is very heterogeneous in EU member states. In countries like Greece and Bulgaria, housing costs accounted for more than 40% of their disposable income in 2020 for almost a quarter of 65+ citizens. Conversely, just over 2% of the 65+ population in Cyprus and Malta had a share of housing costs compared to other expenses. In 2020, on average in the EU27, 8 % of 65+ households had housing costs higher than 40 % of the total household costs, and in Slovakia it was only 3.4 % of 65+ citizens.

The development of this indicator in the average of the EU27 countries in the period from 2010 to 2020 shows a positive trend, and the share of seniors excessively overburdened by housing costs decreased by 1.6 p.p. in 2020 compared to 2010.

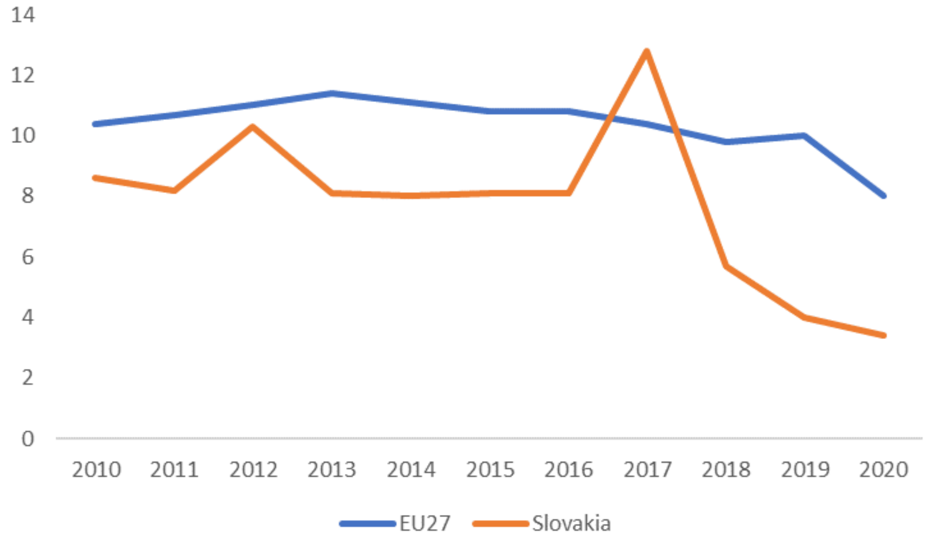

Figure 2: Housing cost overburden rate in EU27 and Slovakia in 2010 -2020 (%)
(Source: author's own processing based on EU-SILC data, EUROSTAT database)

In Slovakia, the long-term share of seniors housing cost overburdened is below the EU27 average, with the exception of the year 2017, when housing expenses increased, and a larger share of seniors was household cost overburdened. Recently, there has been a decrease in the share of seniors burdened by excessive housing costs, which can be positively reflected in the consumer behaviour of seniors' households. Despite the positive development regarding the economic situation and rising inflation, we can expect that in the near future the number of seniors will increase, for whom housing costs will increase significantly and will significantly part of the total household expenses.

2.2. Gender dimension of severe housing deprivation of population 65+ in the Slovak Republic

Even Slovakia achieves values of indicators relating to severe housing deprivation below the EU27 average, it must be remembered that some groups of people are more at risk of severe housing deprivation in Slovakia than others. We will focus on comparing the indicators of severe housing deprivation between men and women aged 65+. Since the beginning of the EU-SILC statistical survey, we can observe that severe housing deprivation is higher among women 65+ than among men of this age category, which confirmed hypothesis No. 2. The share of women in severe housing deprivation is even higher than the share of the 65+ population as a total. However, there was a positive development between 2005 and 2020, when the proportion of women 65+ experiencing severe housing deprivation declined by more than half. In 2020, for the first time, the share of women in severe housing deprivation was lower than that of men. It is difficult to predict whether this trend will continue in the coming years, as it is influenced by several determinants, so we have to wait for the results of the following surveys.

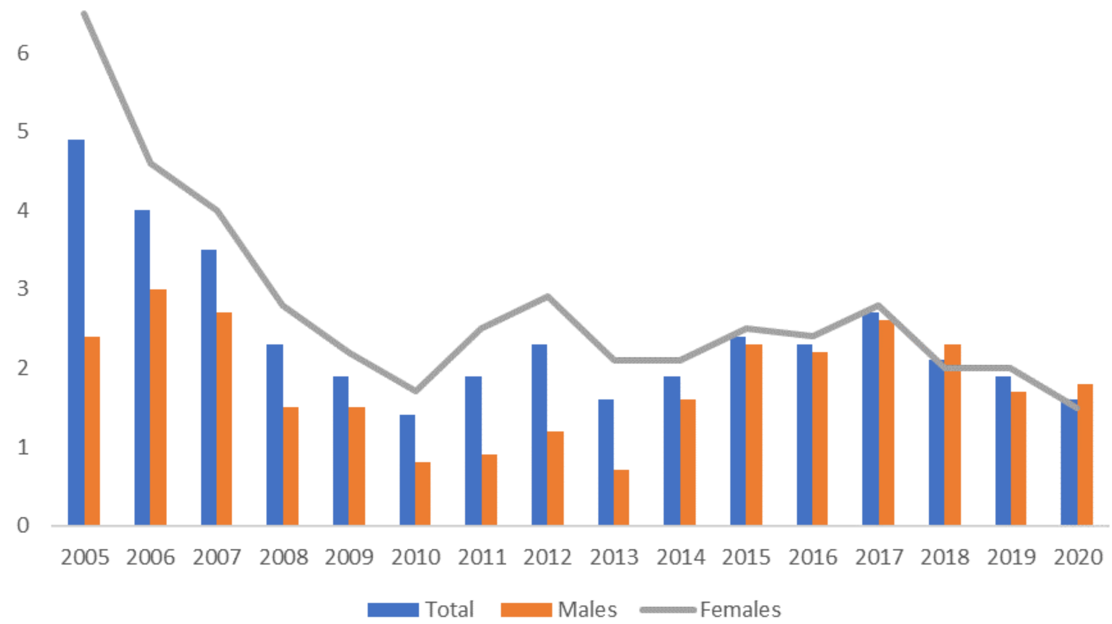

Figure 3: Severe housing deprivation rate of population 65+ by sex in Slovakia (%)
(Source: author's own processing based on EU-SILC data, EUROSTAT database)

When we look at the individual components of the indicator of severe housing deprivation in the conditions of the Slovak Republic for residents 65+, we can conclude that from 2005 to 2019, women achieve worse results than men in all areas of housing. The year 2020 is the exception, when the indicator of severe housing deprivation was 0.3 p.p. for women lower than men thanks to better results in the component no bath/shower, no indoor toilet and darkness. Women 65+ live much more often in overcrowded households compared to men and are exposed to worse housing quality conditions.

Table 2: Severe housing deprivation and its compoment in the SR household 65+ (%)

	Severe housing deprivation		Over-crowding		Leaking roof		No bath/shower		No indoor toilet		Darkness	
	M	F	M	F	M	F	M	F	M	F	M	F
2005	2,4	6,5	17,3	33,7	7,5	10,0	1,4	3,2	4,9	7,5	5,7	6,6
2006	3,0	4,6	18,3	31,1	7,7	10,2	1,4	3,5	5,2	7,6	4,1	4,4
2007	2,7	4,0	13,2	22,3	7,7	9,7	1,4	4,1	5,0	8,0	4,9	6,0
2008	1,5	2,8	14,6	20,6	8,5	13,4	0,1	0,5	0,9	1,0	4,9	6,4
2009	1,5	2,2	11,8	17,3	6,6	10,0	0,3	0,7	1,3	2,4	2,8	4,4
2010	0,8	1,7	12,8	16,2	6,2	7,6	0,3	0,6	1,7	2,5	1,9	3,6
2011	0,9	2,5	11,6	16,8	6,1	10,3	0,3	0,6	1,5	2,4	2,1	3,4
2012	1,2	2,9	10,8	17,7	7,9	11,7	0,5	0,5	1,6	1,8	3,1	4,0
2013	0,7	2,1	9,5	19,2	5,6	9,1	0,3	0,3	0,9	1,2	2,3	3,3
2014	1,6	2,1	11,2	18,5	6,5	8,4	0,1	0,3	1,3	1,5	3,5	3,4
2015	2,3	2,5	11,8	18,2	6,8	8,5	0,3	0,3	1,5	1,7	2,8	2,7
2016	2,2	2,4	14,0	19,0	7,3	7,6	0,2	0,2	1,8	1,8	3,4	2,9
2017	2,6	2,8	16,1	19,8	6,4	7,4	0,5	0,4	2,0	1,9	3,2	2,9
2018	2,3	2,0	15,6	18,8	5,4	4,4	0,7	0,5	1,8	1,5	4,0	3,1
2019	1,7	2,0	13,8	18,7	4,3	5,4	0,6	0,8	1,7	1,2	2,8	2,4
2020	1,8	1,5	12,0	18,1	4,9	5,1	0,7	0,6	1,4	0,9	2,7	2,5

Notes: M – males, F - females
(Source: author's own processing based on EU-SILC data, EUROSTAT database)

One of the reasons for the insufficient quality of housing for seniors in Slovakia may also be insufficient income for housing, given the number of household members and the size of the occupied property. At an older age, seniors often live in the property themselves, and according Eurostat statistics, in 2020 almost every fourth woman aged 65+ (22 %) lived in under-occupied dwelling (https://ec.europa.eu/eurostat/statistics-explained /index.php?title=Glossary:Under-occupied_dwelling) and more than every fourth man (27.7 %). This also negatively affects the burden of total household housing costs. In Slovakia in 2020, 4.2 % of women aged 65+ had housing costs higher than 40 % of total costs and 2.2 % of men 65+.

Figure 4: Housing cost overburden rate by sex of population 65+ in Slovakia (%)
(Source: author's own processing based on EU-SILC data, EUROSTAT database)

In the period from 2005 to 2020, the share of pensioners 65+ whose housing costs are higher than 40 % of total costs is decreasing for both genders.

3. CONCLUSION

Based on the analysis and comparison of EU-SILC statistical data, we can conclude that certain groups of the population aged 65+ face the problem of severe housing deprivation. The degree of severe housing deprivation of 65+ is different in individual countries, depending on the measures applied not only in the field of housing but also at the old age. While the severe housing deprivation rate of residents 65+ in the EU27 average reaches a continuous decrease in the period from 2010 to 2020, in Slovakia the development of this indicator is unequal. Hypothesis No. 1 was not confirmed to us, because the examined period it has been changed of phases of growth and decline of indicator. In some period, the severe housing deprivation rate in Slovakia was higher than the EU27 average and in some periods this indicator in Slovakia was lower than the EU27 average. In 2020, although the severe housing deprivation rate for residents 65+ of the Slovak Republic was again below the EU27 average, given the unfavourable economic development, we can expect an increase the number of residents 65+ who will be exposed to unfavourable housing conditions. From the point of view of the individual components of the indicator of the degree of severe housing deprivation in 2020, the number of seniors 65+ in Slovakia is more than double compared to the EU27 average living in overcrowded households. In Slovakia, as well as in the average of EU countries, most seniors 65+ struggle with leaking roofs and dark dwellings. In Slovakia less seniors 65+ are exposed to excessive housing costs compared to the EU27.

By examining the gender aspect of the severe housing deprivation rate for residents 65+ in Slovakia from 2005 to 2020, we concluded that women are more exposed to housing deprivation than men, thus confirming hypothesis No. 2. For a long time, in all components of this indicator, there is a higher representation of women than men. The exception is the last year of the study (2020), when we can see a change in the trend, but it is questionable whether it will be a long-term trend or not. We have to wait for the results of further statistical surveys, but due to women's lower pensions, higher life expectancy, we can assume that more women will continue to be exposed to severe housing deprivation than men. Even if the proportion of seniors 65+ exposed to severe housing deprivation is not high in Slovakia, it is necessary to address their unfavourable housing conditions and provide them alternative housing if it is necessary. One of the solutions to protect seniors from severe housing deprivation is to move them in social service facilities. However, their own willingness to leave their homes and thus share of their lives in a new environment the last years and with a new collective is necessary. Very old people are dependent on the help of others, so they cannot live alone, and their health status often requires complex long-term care. However, the problem is the fact that, while the costs of health care are covered in Slovakia by public health insurance, the costs of long-term social care are largely covered by the elderly person who needs this care or their family. Another measure that can ensure decent living conditions for seniors is guaranteeing a minimum income. Since 2015, the minimum pension institute has been introduced in Slovakia, which guarantees a minimum level of income above the subsistence minimum, which can have a positive effect on housing as well as protection against the loss of one's own housing. Due to their age and income situation, some pensioners cannot afford adequate housing, so it is necessary for the state and other subjects to create conditions so that citizens can meet their needs in housing with the help of social housing. In terms of the volume of public rental housing, Slovakia ranks among the countries with a very low share of rental housing, as it reaches less than 10 %. Supporting measures for investing in real estate are therefore necessary, which can attract new subjects to social housing, thereby increasing the total volume of resources intended for social housing (Sika, Vidová, Gurašek., 2022). Households that use public services have lower personal costs and thus higher incomes for improving housing quality.

ACKNOWLEDGEMENT: *The paper is the output of the research grant VEGA no. 1/0251/19 "Investments of households in housing and the possibility of their alternative use as additional income at the time of receiving the pension benefit".*

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TRENDS ON THE ROLE OF SOCIAL NETWORKS IN INFORMING CROATIAN CONSUMERS

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ABSTRACT

The aim of this paper is to investigate the role of social media in informing consumers and to try to determine if there is a correlation between the growth of the use of social media in the Republic of Croatia as a source of news, with the increasing influence of these media on making purchasing decisions. To examine the established relationship, secondary sources were used, or better to say research on media usage trends were conducted by WARC (World Advertising Research Centre, 2021) and the Reuters Institute for the Study of Journalism (Digital News Report, 2021) were analysed. The results indicate that it cannot be confirmed that the increase in the use of social media as a source of information is correlated with the increase in the influence of social media on purchasing decisions, especially since the use of this form of media is characteristic of the younger population.

Keywords: *social networks, consumer information, advertising*

1. INTRODUCTION

In modern business conditions, the success of business entities is unthinkable without their good communication with the environment. A good product, its availability on the market and an acceptable price are no longer enough for success. Active promotional activities are necessary, not only towards current and potential customers, intermediaries in the distribution channel, suppliers, but also towards all other interested participants, as well as the entire public. Therefore, retail chains, as well as manufacturers, undertake various promotional activities to stimulate sales growth in a turbulent and competitive environment. The development of new communication technologies, primarily the Internet and social networks on it, has potentially opened a very effective medium for interaction with consumers, and thus for communication for the purpose of successful promotion of products and services, but also of business entities themselves (Kovac and associates, 2016). With new channels of information and communication, it wants to get even closer to the consumer, differentiate itself from the competition, and in this way better meet the wishes and needs of ever more demanding consumers. Just a few decades ago, television and print advertising were fundamental components of marketing strategies, and today the Internet is a key medium. The Croatian Association of Marketing Communication Associations (HURA) predicts that global investment in advertising will increase in 2022 with the intention of growth in 2023 as well, and that e-commerce platforms will lead this growth. New media have become an essential component in market expansion. Effective use of social media has become a key part of creating and maintaining a competitive advantage. Companies therefore place significant value on how social media can be used to shape consumer brand perceptions and influence their purchase intent. Companies that integrate a strategic approach to social media use have advantages over those that do not.

Therefore, the goal of this paper is to investigate the role of social media in informing consumers and to try to determine whether there is a correlation between the growth of the use of social media in Croatia as a source of news.

2. CONSUMERS OF THE DIGITAL AGE

Due to the speed of changes in environmental factors, trends in the way of information and decision-making related to shopping and other segments of consumer life are changing.

2.1 Sources of information for "new" consumers

Consumer behaviour is influenced by numerous social, personal, and psychological factors that are interconnected (Kesić, 2006: 10). Social factors include factors to which an individual is exposed in the complex environment in which he lives, and which influence the decision-making process and consumer behaviour. For example, these are culture, social status, social groups, family, and situational factors. It is considered that the family has the greatest influence on an individual's behaviour during his development and that it influences the development of fundamental values and beliefs that can later be reflected in his behaviour. Social groups represent those groups of individuals whose attitudes, behaviours, opinions, preferences, and values are used by individuals as a basis for forming their own attitudes, opinions, preferences, values, and behaviours. Situational factors are certain situations and changes in situations that can influence the decision to buy, such as the physical environment in which shopping takes place, the social environment, the time of shopping, the purpose of shopping, and the mental and physical state of the individual. (Kesić, 2006: 11). As for personal factors, five variables of special importance for consumer behaviour can be segregated, namely motives and motivation, attitudes, knowledge, perception of information, personality features, values, and lifestyle (Berelson and Steiner, 1964: 88). An important role in consumer behaviour is also the understanding of psychological processes to be able to influence consumer behaviour through various channels of information and communication. According to the author Kesić (2006: 13), psychological processes especially include:

- Learning where the individual is exposed to receiving a large amount of information and acquiring certain knowledge and experiences and is ready to store only certain information in the "memory warehouse"
- Group communication and personal influences, which represents the social aspect of individuals, where in the process of socialization through communication with other group members, individuals create certain attitudes and opinions based on the knowledge and abilities of influential group members
- Changing attitudes and behaviour
- Information processing - it is a process in which an individual receives, processes, meaningfully organizes, and uses the received information to be able to make certain conclusions and decisions.

Many consumer choices are made within different social groups, and even when consumers make their own choices, word of mouth from other people can influence them (East and associates, 2008). Word-of-mouth in traditional communication theory is considered to have a strong influence on consumer decision-making behaviour at all stages, especially in information search, alternative evaluation, and product selection (Silverman, 2011). Such communication form from person-to-person about brands, products, services, companies, and organizations that influence consumers' purchase decisions is called Word-of-Mouth (WOM) (Evans and associates, 2009). A special place is occupied by online word-of-mouth communication, which takes place through online social networking sites, blogs, online discussion formats, virtual communities, and rating websites (Goldsmith, 2008). Particularly prominent is online WOM, which allows consumers to gather and obtain information from different groups of people, not just from people they know. According to research by Li and associates (2007), 50% of adult online social networks users share and talk about products they like. Therefore, this type of communication is a more reliable and effective form of marketing compared to traditional marketing tools. Social influences, for example WOM, can change people's feelings, actions, opinions, or behaviour (Huang and associates, 2011). One's direct recommendations have power and influence on purchase decisions which can be extremely positive but also detrimental if negative WOM occurs. Negative and positive WOM spread easily, especially online (Solomon and associates, 2010). According to the mentioned authors, information obtained on the Internet is considered more reliable and accurate than information obtained through other media. The Republic of Croatia also follows the mentioned trend. Research on media habits by the research agency Ipsos in cooperation with 24sata showed that the Internet is the medium that most influences consumer behaviour, whether it is a decision to purchase, detailed information about a product or creating a general impression of a brand. The survey was conducted through an online data panel on a sample of 1023 respondents (Figure 1). The results of the research showed that by far the largest number of respondents, 69.3% of them, believe that information can be found on the Internet that cannot be found anywhere else. They are followed by TV with 19.9% and radio with 4.4%, while weekly newspapers are in last place with 0.9%. When looking at the accuracy and reliability of information, the Internet again takes first place with 42.1%, followed by TV with 32.4%, while magazines are in last place with 1%. Regarding trust, 45.3% of respondents consider the Internet to be the most trusted medium, followed by TV with 34.6% and magazines with 2%. Given that the results of the research on the variables of accuracy and reliability of information and trust are compatible, it is not surprising that more than half of the respondents, 62.4% of them, use the Internet as the main source of information, while TV is in second place with 26.9% and in last place with 0.1% are magazines.

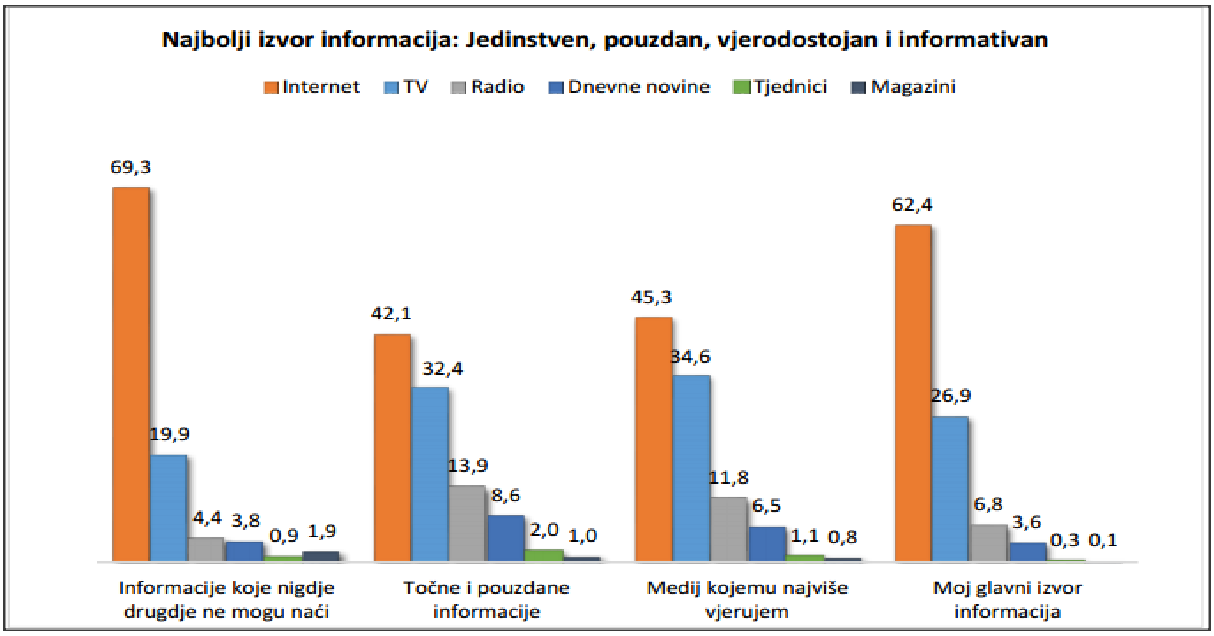

Figure 1. Source and reliability of obtained information
(Source: Ipsos, March 2019)

In contrast to the already mentioned research, Reuters conducted a global survey in 46 countries on 6 continents at the end of January/beginning of February 2021 about which media are most used as a source of news.

The data was collected through an online panel on a sample of 92,000 respondents, of which 2,008 respondents participated in Croatia. Due to the before mentioned method of data collection, it should be noted that the Reuters and Ipsos survey samples are more representative for the online population, as the survey does not include older people who primarily use traditional forms of media, as well as those who for certain reasons do not even have access to the Internet. Since the aim of the paper is to investigate the role of social media in informing consumers, an attempt will be made to determine whether there is a correlation between the growth of the use of social media in Croatia as a source of news, and the increasing influence of these media on making purchase decisions. A Reuters survey showed that in Croatia, the internet has been firmly in first place as a source of information since 2017, while dailies, weeklies and magazines are showing a downward trend by 14% (Figure 2).

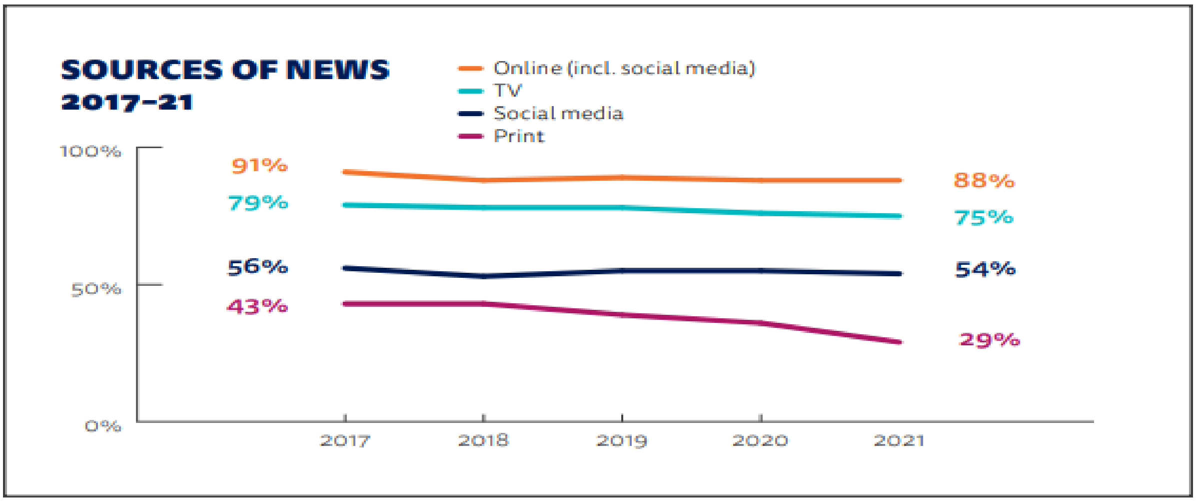

Figure 2. Sources of information, period 2017.-2021. year
(Source:Reuters Institute Digital News Report 2021: 70/71)

In addition, the emergence of the covid-19 virus pandemic at the beginning of 2020 influenced the increased consumption of television news significantly higher compared to the year before in several European countries, which reaffirmed the importance of media that is accessible and reaches a wide range of demographic groups. The same results were shown by a survey of the public's perception of the media and media content from December 2020, which was conducted by a research team from the Faculty of Political Sciences of the University of Zagreb as part of the project "Research Journalism Laboratory: Media Credibility through the Culture of Experiments and Innovations in Newsrooms". (Abbreviated name "JOURLAB") on a representative sample of 1009 respondents showed exactly that. According to that research, most respondents are informed daily via television, followed by internet portals, social networks, radio, daily press, and weekly and magazines. But when it comes to the younger population, from 18 to 22 years old, Internet portals come first, followed by social networks.

3. TRENDS OF MEDIA USED FOR ADVERTISING

In the following, the results of the research on trends in media use conducted by WARC (World Advertising Research Centre, 2021) and the Reuters Institute for the Study of Journalism (Digital News Report, 2021) are analysed.

3.1. Trends in the use of media in the world

How much the trends in the use of media for advertising have changed is reflected in the data on global advertising spending. They show continuous growth. In 2021, compared to 2020, consumption increased by 23.8%, which marks the highest growth in the four decades since

WARC has been monitoring market trends. WARC projections show that the value of the e-commerce sector could double by 2023 compared to 2020, with the share of the Chinese advertising market shrinking and the Western one growing (due to the projected growth of Amazon). Their research showed that Premium online video platforms - known as over-the-top (OTT) - such as YouTube and Amazon Prime Video in 2021 are even 41.6% more than the year before. Further growth of 19.7% and 14.2% is expected during 2022 and 2023. Alphabet was the world's largest media owner in 2021, with Google the largest single platform whose advertising revenue grew by 40.6%, taking 79.7% of total search spending and 19.0% of total advertising spending worldwide. Predictions are that in 2022 Google's growth will decrease to 14.8%. In addition, research has shown that social media is the fastest growing online sector in 2021. Their advertising spending increased by 41.9% compared to the previous year. Instagram has become the largest social media platform, overtaking Facebook. It is predicted that Instagram will grow and control a third of the global social media market in 2023. Also, the Tik Tok platform is taking an increasingly important position. Their income increased by 151.5% in 2021, and a significant growth of 75.4% is expected in 2022 as well. Looking at traditional media, WARC predicts that advertiser spending – including linear TV and broadcast catch-up services – will grow by 3.3% in 2022, after increasing 5.5% in 2021. Linear TV should remain larger than OTT services (YouTube and Amazon Prime Video), although its share of global ad spending will drop below a fifth. Investments in broadcast radio advertising grew by 8.4% in 2021 and is expected to grow by 3.5% in 2022 and a further 1.5% in 2023. It is the only traditional medium to see continuous growth over the forecast period. As in the news sector, the gains from investment in online titles have not been enough to stem the loss of print. The overall market fell by 6.6% in 2021, with a forecast decline of 6.1% in 2022 and a decline of 5.2% expected in 2023. In many countries, the downward trend in print usage is partly the result of distribution problems caused by the pandemic. If manufacturing sectors are observed, WARS research and projections show that this sector will have the highest investment growth in 2022 compared to the period before COVID-19 and that most sectors will manage to recover compared to 2021. Exceptions are the transport and tourism sectors, where the level of consumption before the pandemic has not yet been reached. Routes also conducted a survey on trust in the news, which is very significant. It showed that it increased by an average of 6% after the onset of the pandemic, which reversed the trend of falling confidence. Finland remains the country with the highest level of trust in the news (65%), while the USA has the lowest level at 29% (Figure 3). In Croatia, trust is at the level of 45%. If looking globally, it can be observed that concern about false and misleading information has increased, and Facebook is considered the main channel for the spread of false information.

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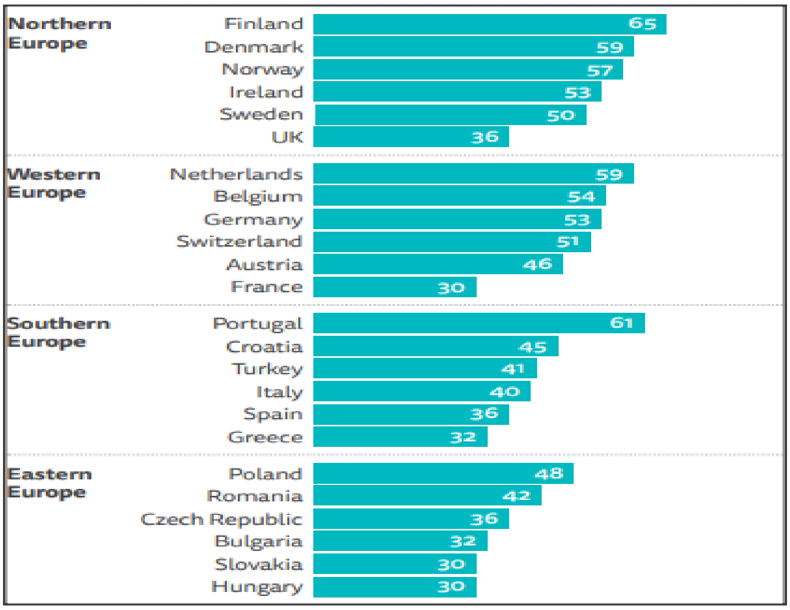

Figure 3. Level of trust in news in Europe, 2021
(Source:(Reuters Institute Digital News Report 2021: 18/19)

3.2. Trends in the use of media in the Republic of Croatia

In the analysis of trends in the use of media for advertising in the Republic of Croatia, data from a Reuters survey (2021) on which media are most used as a source of news were used. As already mentioned, 2008 respondents participated in Croatia. Given that the survey was conducted online, the sample does not include an older population that uses more traditional forms of media. Although the observed variables do not have absolute compatibility with the variables from the WARS research, the obtained research results meet the needs of this research work and the set goal. According to a Reuters survey on whether traditional media are observed and their representation in consumer information (2021), several observations can be made. When ranking traditional media in Croatia in 2021, Nova TV and RTL were used the most (Figure 4). Of the newspapers, 24 sata and Jutarnji list were the most used, and of the radio stations, Otvoreni radio. In the online media, Indeks.hr and 24sata online are leading, and Novilist.hr is in last place.

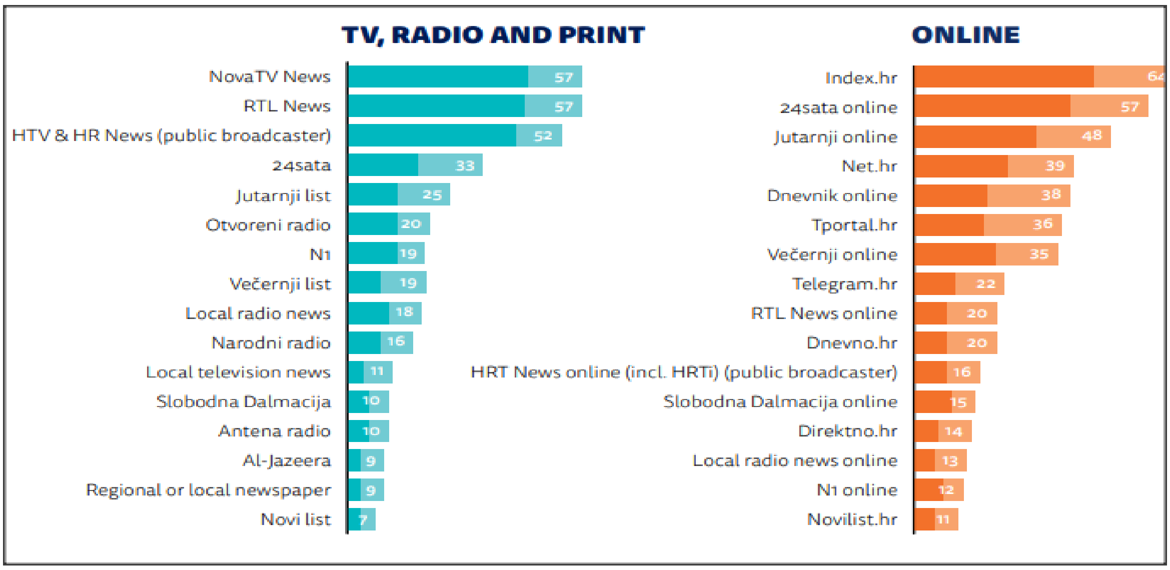

Figure 4. The most used media in the Republic of Croatia in 2021
(Source: Reuters Institute Digital News Report 2021: 70/71)

Furthermore, based on both researches, it can be observed that the Internet as a medium in recent history has had the greatest influence on consumer behaviour both in the world and in the Republic of Croatia, whether it is a decision to purchase, detailed information about a product or creating a general impression of a brand. A special place is occupied by online word-of-mouth communication that takes place through online social networking sites, blogs, online discussion formats, virtual communities, and rating sites (Goldsmith, 2008). Consumers are no longer passive recipients of messages from sellers but take an active role in spreading opinions and sharing experiences through social networks. Online interactions and recommendations influence the choice of certain products and services. Digital technology has changed the way media content is created, but also the way it is followed and consumed (Perišin and associates, 2019). The growth of internet users as well as users of social networks is continuously increasing. In January 2022, there were 3.34 million Internet users and 2.9 million social network users in Croatia (WeAreSocial Digital 2022. Croatia). The number of users of social networks increased by 3.6% (WeAreSocial Digital 2022. Croatia) compared to 2021, while the growth in 2021 compared to 2020 was 4.8% (WeAreSocial Digital 2022. Croatia). Observing the ranking of social networks in Croatia, in 2021 the first place belongs to Facebook, the second is YouTube, and the third is WhatsApp (Figure 5).

TOP SOCIAL MEDIA AND MESSAGING

Rank	Brand	For News		For All	Rank	Brand	For News		For All
1	Facebook	55%	(-)	72%	4	Viber	16%	(+2)	60%
2	YouTube	26%	(-2)	71%	5	Facebook Messenger	11%	(-)	48%
3	WhatsApp	19%	(+3)	65%	6	Instagram	11%	(+1)	40%

Figure 5. Top social networks in Croatia in 2021
(Source: Reuters Institute Digital News Report 2021: 70/71)

Figure shows that WhatsApp had the biggest growth trend compared to the previous year.

4. CONCLUSION

The intention of this paper was to investigate the role of social media in informing consumers and to determine the existence of a correlation between the growth of the use of social media in the Republic of Croatia as a source of news and the influence of these media on making purchasing decisions. In order to examine the established relationship, research on media usage trends conducted by WARS and Reuters in 2021 was analysed. It has been established that the popularity of social networks is continuously growing, and that compared to other advertising media, they have the greatest influence on consumer behaviour. Their popularity is also growing on the side of advertisers, which is not surprising since they provide companies with many advantages such as raising brand awareness, increasing visibility and brand loyalty, lower costs compared to traditional media, and the like. Of course, the most important thing is the possibility of direct interaction with customers, which allows to provide quality customer service and the possibility of an effective response in the form of feedback. On the other hand, there is also a negative side of social networks (Social media best practice for business, 2020). It must be highlighted the lack of quality resources that would manage communication on social networks, that is, provide efficient answers. This requires increased investment costs in personnel.

It is also difficult to measure the level of brand awareness and reputation that social media can bring. Social media if used ineffectively such as inadequate response to negative feedback can damage a company's reputation. Based on the above, it cannot be confirmed that the increase in the use of social media as a source of information is correlated with the increase in the influence of social media on purchasing decisions, especially since the use of this form of media is characteristic of the younger population.

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AI SHAPING AGRICULTURE: SMART TECHNOLOGIES FOR SMART PRODUCTION IN BULGARIA

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ABSTRACT

With the rapid development of digital technologies agricultural productions have been faced with new opportunities. The efficient use of land resources and optimization of the fertiliser usage have been some of the key issues for which technological solutions have been provided. Artificial intelligence (AI) has the capabilities to transform agriculture through automation of these optimisations and thus achieving societies' goal of better use of our limited resources. The goal of the study is to analyse the ways AI technologies are shaping Bulgarian crop production. This study is part of a larger research framework focused on the issues of competitiveness of agricultural productions in Bulgaria and its increase through the use of digital technologies. Current events have also raised the question of food security and in the future the optimal production levels may be the key benchmark for farmers. In such circumstances the implementation of AI technologies alongside other digital solution for information collecting will prove vital for achieving society's evolving goals.

Keywords: *Competitiveness, Digitalization, Smart agriculture*

1. INTRODUCTION

Bulgarian agriculture has undergone a series of transformations after the transition form planned economy in the last 30 years. The accession to the European union has greatly impacted the evolution of productive models of Bulgarian farms (Beluhova-Uzunova, et al. 2018). This transition was marked by a general concentration and specialization of productions with smaller farms struggling to be profitable (Van Herck and Swinnen, 2015). The saturation of larger farms in Bulgaria has led in term to the specialization of production and introduction of new, more productive technologies. Information technologies has changed every productive sector of Bulgarian economy, and agriculture is no different (Ahmedova, 2021). The introduction of smart productive technologies in Bulgarian farms is an ongoing process with widespread data collection and monitoring stations, GPS solutions being practically used by most farmers and social networks providing for an extensive knowledge sharing and cooperation among farmers. The automation of the production process is more common among crop producers, while simple monitoring systems are more common among animal husbandry farms. The main goal of this study is to discover the ways in which AI technologies are or can be used by Bulgarian farmers as well as the way these technologies can improve productions by reducing costs or minimizing risks. To achieve this goal the study is focused on presenting the main AI solutions that are being implemented in Bulgaria, as well as evaluate which are the key technologies supplied to local producers and to study the vector of transformation these technologies can provide for farmers.

2. AI TECHNOLOGICAL CONCEPTS

Artificial intelligence has become a crucial part of the modern economy. That is why it is necessary to understand the essence of that technology. Originally, the term "Artificial intelligence" is used by John McCarthy in 1955 (Singh and Kaur, 2022) and refers to the combination of science and engineering for making intelligent machines. Up until today, the AI has received many definitions referring to the core of the term. According to them (Ahmad and Nabi, 2021; Hossain and Islam, 2022; Redhu *et al.*, 2022, among others), the major understanding for AI is an intelligent system using various approaches and algorithms for creating an intelligent machine that have the ability to think, reason, learn from the past experience, predict, plan, make decision, react and adapt like a human being in order to solve a complex problem without further guidance. Therefore, the AI is an intelligent form simulating human rational behaviour that can create and utilize connections within the real world, gather information, process and analyse it, make predictions and offer solutions for different tasks. According to the capabilities of AI-based system to perform like a human that are developed through the years, AI can be classified into three stages (Ahmad and Nabi, 2021; Redhu *et al.*, 2022; Types of Artificial Intelligence—AI Types & Techniques, 2022) (types) (see Figure 1):

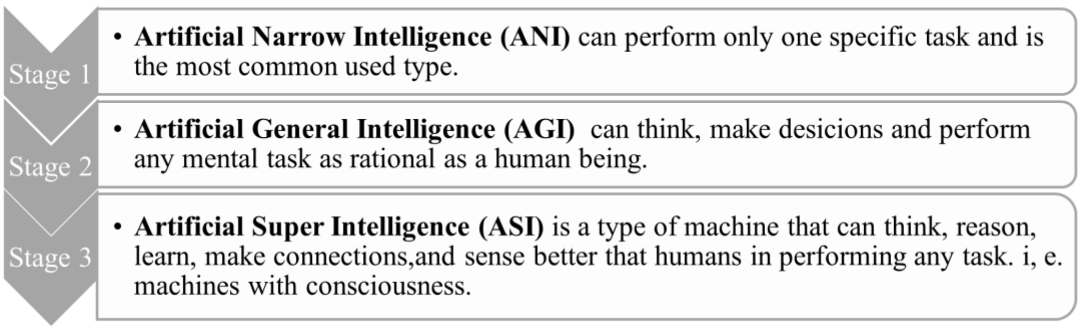

Figure 1: Stages of Artificial Intelligence

Artificial Intelligence can also be classified into four types (Ahmad and Nabi, 2021; Types of Artificial Intelligence—AI Types & Techniques, 2022) based on AI system functionalities (see Figure 2):

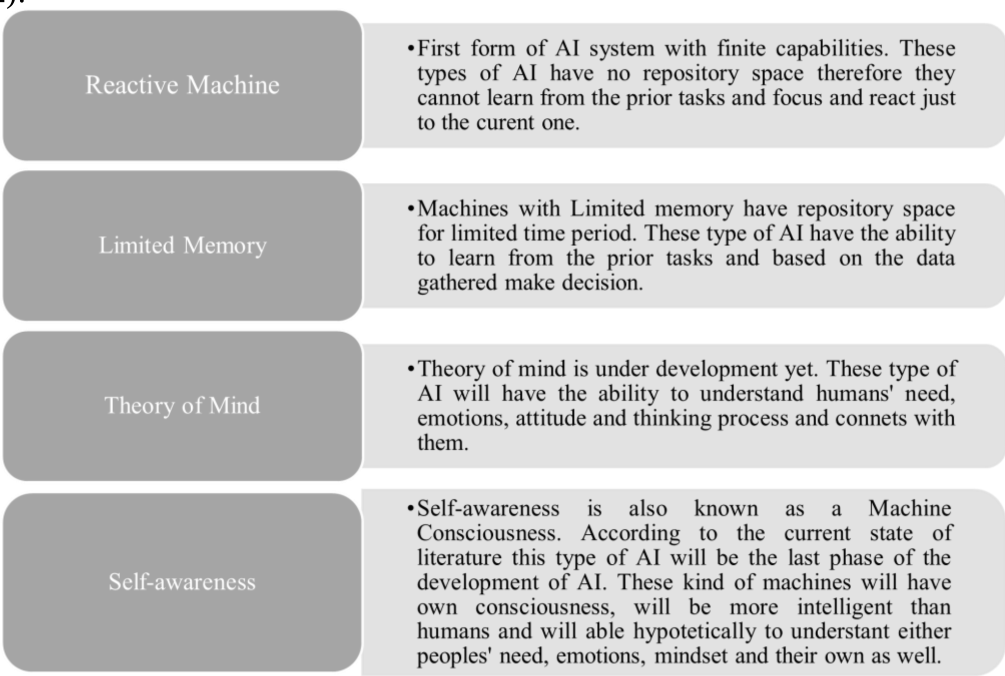

Figure 2: Types of Artificial Intelligence (based on functionalities)

Artificial Intelligence has many subsets and applies various approaches, techniques, processes, and algorithms to solve different kinds of complex problems. Figure 3 lists the primary subareas of AI (Kumar GN, 2018; Ahmad and Nabi, 2021; Types of Artificial Intelligence—AI Types & Techniques, 2022, among others). These AI subsets enable the AI-based systems to perceive human behaviour, study past experiences without further detailed manner, make a decision and act like a human. The most frequently used AI subareas in agriculture are Machine Learning, Deep Learning, Expert Systems, and Computer Vision.

Artificial Intelligence	Machine Learning (ML)	Deep Learning (DL)→ ANNs
		Supervised Learning
		Unsupervised Learning
		Reinforcement Learning
		Transfer Learning
		Predictive Analysis
	Natural Language Processing (NLP)	Machine Translation
		Slassification
		Context Extraction
		Question Answering
		Text Generation
	Expert Systems	
	Robotics	
	Speech Recognotion	Speech to Text
		Text to Speech
	Computer Vision	Machine Vision
		Image Recognition
	Planning	

Figure 3: Subareas of Artificial Intelligence

All these AI fields operate with large sets of data that are manipulated by cognitive science for action to be taken. These vast volumes of data are part of AI life cycle and technological stack layers. The sequence of the layers of the AI technology pyramid is as follows (Redhu *et al.*, 2022): *Hardware* including Accelerator and Head node; *Interface* that facilitates the communication between hardware and software layers; *Platform* which applies different methods, techniques, and algorithms for optimization via four elements: Framework, Algorithm, Architecture, Methods; *Trainings* where the data type using in AI analyses is defined; and *Services* where the solution of the problem is derived.

3. AI IMPLEMENTATION IN AGRICULTURE PRODUCTIONS

In the digital transformation age, advanced digital technologies have penetrated every economic sector, including agriculture. Artificial intelligence has the capabilities to transform agriculture sustainably and handle the growing challenges of rapid population growth and increasingly scarce resources - land utilization, water availability, workforce shortage, costly capital assets, and inventory. Innovative solutions for all these challenges leading to increasing productivity and efficiency could be found by applying AI technologies and systems. In the field of Agriculture, AI-based technologies and systems are applied in each stage of the crop value chain including preproduction, production, processing, and distribution (Bannerjee *et al.*, 2018; Asvini and Amudha, 2021; Singh and Kaur, 2022; Hossain and Islam, 2022, among others) in order to ensur good product quality.

3.1. Preproduction

Preproduction is the first stage of crop production which includes field mapping and land utilization, soil and nutrient management, and irrigation management:

3.1.1. Field mapping and land utilization

The agricultural land cultivating is focused on the limited space as well as asset occupancy. With the rapidly growing world population farmers aided by AI-based systems and technologies are willing to optimize the usage of land and gain more crop productivity. In order to do that farmers need information on the exact geographic and geologic parameters of cultivated lands and all relevant objects within them. This information can be obtained by using data from different sensors, GPS and GIS systems, Satellite images, and others snapping pictures from various machines like agrobots and drones. All these techniques use different ML and DL algorithms like various linear programming and regressions, neural networks, also Computer vision, and Expert systems like Multi-Layer Perceptron (MLP) to check for land borders, soil and water parameters, nutrient and environment conditions in order to make decisions for proper crops planting.

3.1.2. Soil and Nutrient management

Good soil quality is mandatory for growing a good-quality products. It is known that proper soil quality depends on the level of nutrients contained in it. The fertilizer optimization is based on the AI prediction model using data gathered from different sensors, drone and satellite images, and processing with help of computer vision technology. Other major soil parameters that need to be monitored and kept at optimal levels are soil pH and organic matter, moisture, texture, and temperature. All these parameters are detected by sensors like proximity sensor of remote sensing units and satellites or by drone surface images using image analysis. Then data is processed with an artificial neural network (ANN) model or other AI prediction models to foresee the soil health.
Effective soil and nutrient management will lead to better water management and reduction of production costs.

3.1.3. Irrigation management

Irrigation management AI-based systems control the water needs of growing plants based on data regarding the crop’s reaction to moisture and other soil parameters. The system utilizes the real-time data gathered from sensors and uses deep learning predictive algorithms to forecast meteorological condition, rainfall and floods.

3.2. Production

The next stage of the AI-based production system is focused on the issues of *crop management*. In general crop management, AI-driven systems cover all actions needed for a plant to grow. These actions include s*eed germination, planting seeds, yield monitoring, weed and herbicides control, disease and pest detection management including crop scouting, weather tracking and forecasting or environment management, and robotic harvesting*. In each part of production different automated machines and sensors are used with implemented AI-based software performing the suitable AI technique to perform specific tasks. Detecting crop diseases or pests, also weeds and herbicides control requires images that are photographed via a computer vision approach and processing analysis. A vast number of sensors and satellite imaging are used to gather data for soil health, plant needs, crop stage of growth, and climate conditions. All gathered data is stored in the data cloud where proper machine and deep learning algorithms are performed to predict the weather condition, rainfall and regulate water, soil, nutrient and disease management systems.

For weeds, herbicides and pest management systems data is gathered from cameras attached to different robots, and therefore, a different action is committed via argrobots like autonomous sprayers, small tractors, etc. driven by AI-based expert systems.

3.3. Processing

The third phase of the AI-driven agricultural system is Processing. It deals whit crop storage, drying, and classification of harvested products for better quality assurance before transporting them to the market based on an AI-driven expert system that imitates a cognitive human brain. At this stage of the supply chain operation results from previous crop strategies related to demand and crop forecasting are considered in correlation with accounting for market and other trends through the new digital technologies in order to optimize the economic results for the farm.

3.4. Distribution

The final phase of the agricultural supply chain is Distribution. AI systems are applied in order to facilitate crop price forecasting and after-sales services, logistic, and crop yield prediction for marketing strategies to be provided. Agriculture is an economic sector that faces many problems and depends on many external factors and circumstances that do not allow farmers to achieve optimal price for their products. Therefore, it is usually difficult for farmers to predict the cost of production, the market prices, the local and international demand and consumption patterns, the local market conditions, etc. AI models for predicting and forecasting based on various regression and neural networks are suitable for application in this stage to provide necessary information for decision-makers. Also, an online platform for purchases can help producers to expand their market reach and reduce information asymmetry for some consumers.

4. AI SOLUTION AVAILABLE TO BULGARIAN PRODUSERS

When discussing digital solutions available to Bulgarian farmers we conducted interviews with farmers, digital companies providing such solutions on the local market, as well as an online survey conducted in August 2022 (see Table 1). The keywords used in the online survey were: Agricultural software; Agricultural management software; Automation agricultural processes software and Smart solutions in agriculture. All words were written only in the Bulgarian language.

Table 1: Software products and smart solutions for agricultural management in Bulgaria (Table ends on the next page)

Software product/Solution	Company	Description of smart software/ solution
TechnoFarm	Nik.bg (BG) (Precision Agriculture and intelligent machines| NIK, 2022)	Full functional modular software for management of agricultural holdings. It could be used for field monitoring, land and contract management, surveys, planning operations for the cultivated fields, reporting of the processing performed, and many more. The software's modules are Map, Fields, Agrotechnique, Storage, Managerial module, Share Capital, Mobile App, and TechnoFarm Connect.
FarmTrack	Nik.bg (BG)	Modular software for tracking and analysis of data for agricultural machines. It is a platform for monitoring and control of various movable and stationary objects. The modules are: GPS navigation, Fuel control, Surveillance, Data Analysis, Reports, Mobile App and Order management.
Trimble	Nik.bg BG (established representator)	Smart technologies like Navigation displays and control systems like automatic steering, automatic pilot, inventory management system and others, that could optimize their inputs like seeds, fertilizers, pesticides, etc. and increase their work efficiency.

Meteobot	Prointegra Ltd. (BG) (Meteobot – Technologies for Precision Agriculture in Bulgaria, 2022)	Meteobots are automatic stations that provide in real-time complete agrometeorological information for rainfalls; wind; soil moisture and temperature; humidity and atmospheric air pressure; leaf moisture and solar radiation. Also, they provide an automatic management system for irrigation, silo ventilation, misting, raining, cooling, anti-frost machines, etc. A mobile app gives access to a 10-day forecast and historical weather data.
GeoScan Platform	Nik.bg (BG)	This is a Crop Development Monitoring Platform. The software solution comprises of 4 main areas: Fields, Machines, Irrigation, and Meteo stations, and allows farmers to monitor in real-time soil maps with their nutrient supplies based on soil analyses; maps tracking crop's growing stage through NDVI and NDWI; the data received from agri machines; irrigation systems' information; and parameters from all meteo stations.
AgroBalance	Nik.bg (BG)	A comprehensive agronomic service that provides to farmers full traceability – from field sampling to final results and recommendations. The service includes automated sampling in preproduction and production stages of crop; soil analysis; preparation of digital agrochemical maps; preparation of recommendations for balanced fertilization for each field and crop.
Ondo Platform	Ondo (BG) (Dragoev, 2022)	A Bulgarian modular system for automated management of drip irrigation, precision fertilization, sensing of soil temperature and humidity, wireless valve control via LoRaWan, climate control via data gathered from meteorological station ONDO Weather and monitoring for all crops. The farmers save up to 85% on water costs using the smart solution. The platform is suitable for greenhouses, field crops, vineyards and orchards.
ONDO Weather	Ondo (BG)	A flexible modular system for monitoring the amount of rainfall, wind speed and direction, leaf wetness, air and soil temperature and humidity, radiation shield and others. The station also allows to measure climate and soil data for greenhouses and open fields alike, as well as to access the weather forecast via mobile app.
365 Farmnet	UniversalNVG (established representator) (About 365FarmNet, 2022)	A software for automated and complete documentation in the field and in the stable. It is a software solution cover areas like field mapping service, cultivation overview, determination of fertiliser requirements, graphical farm map management, basic weather, interactive annual calendar, aerial views of the fields, nutrient report and price management.
Beebot	Pollenty (BG) (Beebot - The Smart Hive Remote Monitoring System by Pollenity, 2022)	Beebot is a smart system for remote monitoring of hives which algorithm analyses a cloud data for parameters such as temperature and humidity in the beehives, as well as the oscillation frequency of the bees in real time received via sensors. The solution helps beekeepers to ensure the necessary attention to the hive. One of the advantages of the Bulgarian development is that the used sensors are needed only a single battery that lasts between 6 and 8 months.
Bevine technology	Bevine (BG) (Bevine – We make vines talk, 2022)	Software for the analysis and monitoring of vineyards by combining IoT sensors and AI intelligent assistance. Via implemented IoT sensors in the vineyard arrays the meteorological data for air and soil temperature and humidity, leaf humidity, amount of rainwater, wind speed, and direction are extracted. The data is processed and analysed by the AI software and visualized using a mobile application.

5. HOW AI SOLUTIONS CAN BE IMPLEMENTED BY AGRICULTURAL PRODUCTIONS IN BULGARIA

Our research focused on the implementation of AI solutions in Bulgarian agriculture, by analysing available options presented previously and collection available information on their implementation by local producers. We have also used previously collected data (2020 – 2021) from interviews with farmers and IT solution providers. Artificial Intelligence software is still rarely used by Bulgarian farmers. Their general efforts of introducing new technologies are focused on the automation of production within an already set number of states and based on fixed set of parameters. Most producers have yet to find a need for an AI solution to adapt these fixed parameters to the ever-evolving environment. Farmers we have interviewed ware reluctant to transfer the decision-making process to software and would rather rely on their experience, knowledge, and advice from fellow farmers. Adaptation to the environment is still not an important issue for Bulgarian farmers due to local climate conditions, the selection for crop types to be produced and the frame for social support for the sector based on EU's CAP.
There are few and far between examples of AI implementation in Bulgarian farms. One of the solution providers – Bevine has been cooperating with one of Bulgaria's largest wine producers – Terra Tangra. Their efforts are focused on the implementation of AI software as an assistant to the producer and not for a full automation of the production process. These first steps are important, but we should note here that this specific implementation is focused on cooperation between the software creator and user and the wine producer is yet to publish any data that can provide an assessment of the AI solution's viability. Throughout the research we have collected information on all software products and smart solutions for agricultural management in Bulgaria as shown in Table 1 and found that their implementation is highly fragmented with most of their clients focusing on a singular technology. The CEO of Ondo Ivailo Enev has stated that "Ondo fills a deep niche in modern smart farming solutions by saving farmers the hassle of searching for and integrating different solutions for individual activities on their farmland. When you only have automated drip irrigation, but you don't monitor in real time how it works and how it synchronizes with fertilizing, for example, the risk of problems occurring that bring you significant financial losses is huge. Ondo solves exactly these problems". Although Ondo has many clients in Bulgaria, as evident even on their web page, most of them are focused on automation based on fixed states (in some cases in excess of 30 or more, but still defined states) and not AI software with adaptive decision-making capabilities. Another large organization focused on providing smart solutions for precision farming to Bulgarian producers is NIK.bg. They have more than 20 years of experience on the market and provide a number of different technologies – from basic GPS systems and meteorological stations to automated robots, precision systems, agro-drones etc. NIK.bg also implements a training centre, that provides theoretical and practical training for working with the latest technologies and equipment for precision agriculture. Their "Academy" provides modern technologies as demonstration equipment for conducting theoretical and practical trainings related to agriculture. NIK.bg have already provided education for more than 900 producers in Bulgaria and most of them are their clients and have implemented automated technologies. The use of AI in those technologies is yet very limited if at all present.

6. WHAT IS THE FUTURE OF AI IN BULGARIAN AGRICULTURE

Bulgarian agricultural producers are still focused on automation as the end goal of technological implementations in the farm. The cost reduction is a key selling point for all of the solutions presented in this study. Bulgarian farmers are yet to feel the impact of rapid environmental change and the need for a fast adaptation has still not been understood by them. Farmers rely on their experience and knowledge in order to formulate fixed states for their production and are willing to implement automated solutions that can transition between these states.

There is an evident trend of implementation of an ever-increasing number of technological solutions in Bulgarian farms. Combined with the evolving IT sector in the country and the governmental support for "smarter agriculture" the implementation of AI solutions will increase. Most AI technologies are currently focused on grape production, greenhouse vegetable and fruit production support. AI solutions are also provided for farm management. In the future this is the area that artificial intelligence should be most valuable in – productions with high added value and the management of the farm, in order to optimize the use of available resources.

7. CONCLUSION

Bulgarian agriculture is constantly evolving into a highly technological production sector with significant automation, influenced by the governmental support for such transition. Some smaller producers are still reluctant to introduce precision farming technologies based on the cost of entry as well as the lack of knowledge and confidence in them. The younger generation of farmers welcome new technologies and the large-scale implementation of automation and the high number of clients for all organization studied in this paper is evidence of that. There are still hurdles before the impact of these new technologies can be felt on the results of the sector as a whole. The social support towards the modernization of Bulgarian agriculture has to continue and evolve towards the inclusion of AI solutions, that will make Bulgarian farms more resilient towards environmental changes and quicker to react to rapid shift in market trends. The inclusion of organizations providing automation software and hardware in national research programs focused on "smart agriculture" is a step in the right direction. The collaboration between these firms, farmers and researchers is creating a network for knowledge sharing that can be used as a base for the development of Bulgarian agriculture. The results from the implementation of the few AI solutions in Bulgarian farms highlighted in this paper are still uncertain and will be the subject of future research.

ACKNOWLEDGEMENT: *This work was supported / (partially supported) by the Bulgarian Ministry of Education and Science under the National Research Program "Smart crop production" approved by Decision of the Ministry Council №866 / 26.11.2020.*

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INCREASING THE COMPETITIVENESS AND SUSTAINABILITY OF SPORTS ORGANIZATIONS THROUGH RISK MANAGEMENT

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ABSTRACT

In today's highly variable and dynamic development of economic and social relations, the international situation and the impact of the pandemic and the conflict in Ukraine, it is obvious that organizations are influenced by a number of factors that have the potential to fundamentally influence their activity and further development. In such an environment, every organization must focus on implementing procedures and processes that will enable it to survive and thrive. Sports organizations are specific both in the content of their activities and the risks they have to deal with. Within society, sports activities represent an important component that shapes its social and cultural context. At this level, it is necessary to perceive sport from the point of view of leisure social activity but also from the point of view of the professional earning activity of a part of the population and part of the economic system at the regional, national and international level. If sports organizations want to meet their goals in the current turbulent environment, they must pay attention to prevention and implement an adequate risk management process. The aim of the paper is to define the specifics of the risk management process for sports organizations in order to increase their competitiveness and sustainability in the current business environment as a prevention of the emergence of a crisis. Risk management should be in line with building the sustainability of sports organizations and be an integral part of their management and prevent the occurrence of financial losses as well as other negative events and crises.

Keywords: *Business, Risks, Risk management, Sport organizations, Sustainability*

1. INTRODUCTION

The sports business has undergone great changes, which were mainly caused by recent events. Here emerged the massive vulnerability of global sport, together with its controversial sustainability for the future. The COVID 19 pandemic has joined the ranks of other persistent global challenges of climate change and other social and economic issues that have further amplified the urgency of sustainable development. Sports and physical activities should have their undisputed place within the notion of sustainable development in Slovakia as well as around the globe. This fact was confirmed by the call of 118 UN member governments, in which they urged all countries of the world to include sport and physical activity in their recovery plans after the COVID-19 pandemic, including national strategies for sustainable development (Kovac, 2020). Therefore, it may be deemed highly beneficial for the sports organizations to be able to equally respond to and deal with the risks accordingly and diligently. It should be noted; however, that these risks are not necessarily negative in nature and do not necessarily expose the organization to an imminent threat.

Risks can also bring forth certain opportunities that provide organizations with room for growth and further development. In this context, it is most appropriate to reflect on the topic of implementing a risk management process in sports organizations, not only as crisis prevention but also as a tool for seizing opportunities. It follows from the above that this article is aimed at defining the specifics of the risk management process for sports organizations for the purpose of increasing their competitiveness and sustainability in the current business environment as a tool to tackle and prevent the crisis. The methodology of the article is based on the evaluation of the current situation and the drawing of conclusions from which the proposed solutions are made. It consists of empirical research, analysis and synthesis of knowledge from domestic and foreign literature and comparison of data from statistical surveys.

2. BUSINESS AND SPORT IN CONTEXT

In addition to its purpose of health promotion, sport is a growing social and economic phenomenon with an educational dimension as it fulfils a social, cultural, and recreational function (European Commission, 2007). Therefore, it has become a fundamental economic and social driver of development worldwide, with increasing importance in contemporary society (Ratten, 2011a, Naia, 2017).

2.1. Business in Sports Organizations

Entrepreneurship is an integral part of sports management and creates a competitive advantage for people and organizations involved in sports. The sports industry is known for its entrepreneurial spirit and ability to adapt to new market conditions. However, previous crises have tended to be related to financial and political events rather than health (Ratten, 2018, Kraus et al., 2020). That said, the sports industry provides a good context for understanding how the COVID-19 pandemic has affected business. As entrepreneurial activity in the sport grows, it provides a unique way of assessing entrepreneurial capacity in times of crisis (Ratten, 2020). Sports entrepreneurship is a relatively new field of business that combines sports management with innovative behaviour. Sports management journals, such as The Sport Journal, refer to a sports entrepreneur, defined as a person who organizes, operates, and assumes the risk for a sports-related business venture. There are several sub-categories, including social, technology, and international entrepreneurship, that affect the development of entrepreneurship in the sports industry. Recently, there has been an increased emphasis on entrepreneurship in sport due to the notion that sport has an inherent entrepreneurial nature distinguishing it from other industries (Ratten, 2011a, Ratten, 2012, Escamilla-Fajardo, et al., 2020). Sports entrepreneurship can be seen in a broader sense as an entrepreneurial approach to identifying new opportunities in the sports market. Therefore, sports entrepreneurship as a theory is important for understanding how the changing environmental conditions caused by the COVID-19 crisis affect sports organizations. This is important in moving the disciplines of sports management and business into a more interdisciplinary perspective (Ratten, 2018). In the context of a crisis such as the COVID-19 pandemic, it allows sports organizations to tackle issues, assess and manage risks, as well as to take advantage of new market opportunities. Action is needed in a crisis, otherwise, the situation will escalate. This means that hesitancy and indecision can lead to a worsening of the crisis (Kirk - Rifkin, 2020). Therefore, sports entrepreneurs become change agents in overcoming the crisis. A key strategy for sports organizations is to do business to harness creativity in difficult times. The hallmark of entrepreneurs is an emphasis on risk-taking. It is generally accepted that people participating in sports take risks (club owners, athletes, sports event organizers, officials, coaches, etc.). The level of risk-taking behaviour in sports depends on personality traits that include emotional and physical risk (Olivier, 2006). Risk-taking in sports is thus not limited to athletes only.

Sports organizations are exposed to many threats, such as business, innovation, and social hazards (Kedar-Levy et al., 2008). Business risk is often taken by sports team owners who offer multi-million-dollar contracts to athletes based on future potential. In addition, the cost of expanding sports stadiums and increasing franchise fees affect their exposure to business risk. Many sports team owners take financial risks in the hope of a return in the form of fun and power (Zimbalist, 2003). Social risk in sports often involves extracurricular activities involving people who engage in sports or watch sports.

2.2. Current State of Development of Sports Organizations in Slovakia

According to the available information, a total of 7233 legal entities operate in the Slovak Republic active in the field of sport gathering athletes at the professional and amateur level. These organizations can be divided into the following categories (Legal, 2022):

- National sports organization - 4 legal entities.
- National sports association - 74 legal entities.
- Sports club - 5678 legal entities.
- Sports association - 208 legal entities.
- Other sports organizations - 447 legal entities.
- Other organizations engaged in sport - 832 legal entities.

These organizations operate in a competitive environment that is associated with several risks affecting their operations. However, for the purposes of applying risk management in the sports organization environment, there is currently no specific framework that focuses specifically on this issue. In this case, it is possible to use principles and knowledge based on general standards and approaches, or standards for enterprise risk management. Authors Vamus, Ferenc, and Kubina (2019) show how the following three sets of objectives emerge when European and American cultures converge in the management of sports organizations:

- Profit making - commercial purpose.
- Achieving sporting results - the performance sport.
- Achieving profit and sporting results.

These three objectives are necessary to set risk level (severity) assessment criteria to which a sports organization is exposed and limit its functionality, and if risks are ignored or underestimated a crisis can occur.

3. RISK MANAGEMENT IN SPORTS ORGANIZATIONS

Following the above, it can be said that the objectives of sports organizations, as well as the objectives of businesses, and particularly the way they are achieved, overlap in many areas. This opens up the possibility of applying best practices and processes in the area of enterprise risk management to risk management in the area of sports organizations. However, as there is no specific standard or best practice in this area, it also opens the possibility to implement new approaches and optimize them for the needs of sports organizations. This would provide the sports organization with a functional tool to identify risks early and select appropriate preventative or reactive measures to mitigate them.

According to Ratten (2011b), sports business is dynamic and is influenced by several management areas such as business strategy, crisis management, new sports development, performance management, product innovation, promotional strategies, social issues, sustainability concerns, and technological development. However, it should be noted that from the crisis prevention perspective, risk management should be an integral part of the sports business (see Figure 1).

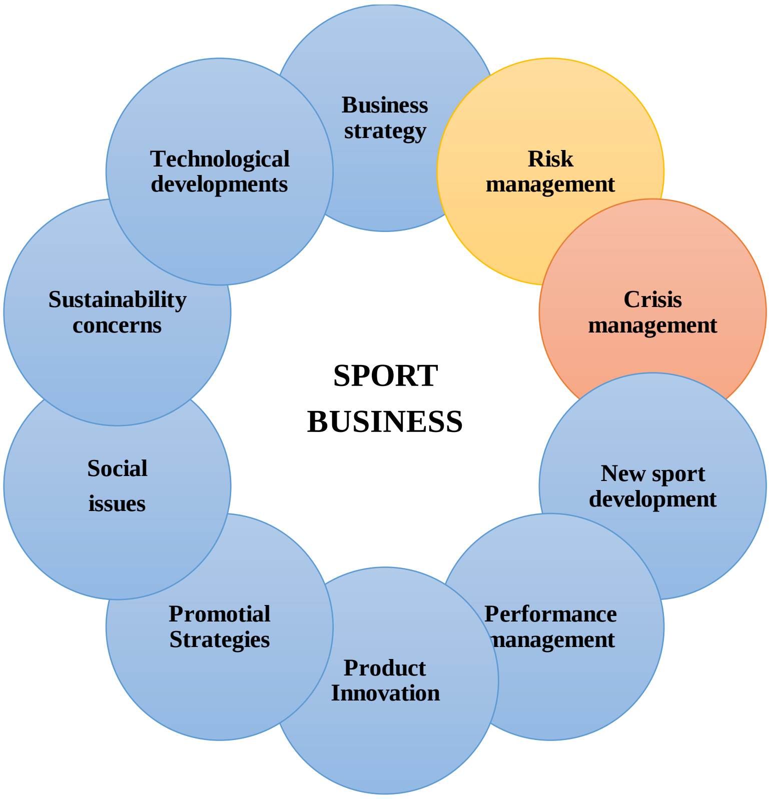

Figure 1: Dynamic aspects of sports business
(Source: modified by Ratten, 2011b)

Risk management should be seen as a tool to prevent crises and crisis management rather than as a response to unforeseen crises. The temporal aspect is obvious, since a risk is an event that we can predict with a certain probability and estimate its consequences, and therefore calculate its severity. If we manage risk, we can significantly increase the resilience of a sports organization. Risk is an integral part of hobbies, events, tourism, and sporting activities. Such risk is mainly associated with the four main characteristics of services, which are intangibility, inseparability, heterogeneity, and perishability, which cause irregularities and uncertainty in service delivery (Piekarz et al., 2015). There are several risks currently affecting sports organizations that have the potential to threaten their operations and existence. These risks are variable and occur dynamically depending on both external and internal factors. According to their origin, they can be divided into:

- External risks - originate in the external environment surrounding the organization.
- Internal risks – originate in the internal environment of the organization itself.

Major problems in this area were particularly evident in the context of the COVID-19 pandemic, where measures included the banning and cancellation of sporting events and competitions. During the worst part of the pandemic, sports venues were closed, making it difficult or impossible for athletes to access regular training and affecting the business activities of their owners (Hrabek et al., 2020). The current global socio-economic situation also poses several risks to the functioning of these organizations, particularly due to the threat of cancellation of international events and the associated issue of hosting foreign athletes. Other risks may include cuts in funding and the consequential shortfall of financial resources, which are the main cause of the failures of sports organizations in Slovakia (Adámik, 2020).

Furthermore, it includes poor sporting results and their impact on club finances and the interest of fans, the rise in costs in connection with the current economic situation, the loss of interest of fans and the consequent economic and performance decline of organizations, injuries to athletes, or the insufficient number and quality of sports venues, which in many cases require major restructuring. Political impediments to the involvement of foreign athletes pose a particular risk because of the Russian attack on Ukraine (Adámik, 2020; Buganová et al., 2021; Hrabek et al., 2020; Sport, 2022; Zajíčková et al., 2020, Lusková et al., 2016). Risk management in a sports organization can be applied in line with current standards and best practices in the field of risk management. For sports businesses and sports organizations, we recommend ISO 31000:2018 Risk Management - Guidelines, which provides a common approach to managing any type of risk and is not industry or sector specific. It is also advised to implement IEC 31010:2019 Risk management - Risk assessment techniques, which is published as a dual-logo standard with ISO and provides guidance on the selection and application of risk assessment techniques in a wide range of situations. Techniques are used to assist the decision-making process in the face of uncertainty, provide information on specific risks, and become part of the risk management process.

The risk management process in a sports organization should be based on the systematic application of policies and procedures during risk assessment and mitigation, communication with affected parties, and monitoring of changes in the environment. Risk management is aimed at reducing the likelihood of exposure, damage (injury), or loss by taking steps to assess (identity, analyse, and evaluate) and mitigate risks, as well as monitoring, reporting, and communicating them effectively. The stages of risk management in sports organizations should be regular and logical and should be adapted to the nature of the sports organization's activities (Buganová et al., 2021, Dvorský et al., 2022, Havierniková et al., 2019, Masár et al., 2019).

Risk assessment and setting appropriate criteria for the risk analysis are of great importance in the implementation of the risk management process. The identified risks can be summarized in a risk catalog (risk register). In addition to the risks themselves, the risk catalog includes an assessment of the risk severity, the level of acceptability, and the mitigation measures. The semi-quantitative multicriteria method of assessing the probability and consequences of risk exposure can be used to assess the risks identified (Table 1 and Table 2). Multi-criteria decision-making (MCDM) approaches are useful methods for dealing with complex problems. They support managers and other decision-makers assess different criteria and evaluate different alternatives (Azadeh et al., 2016; Moradian et al., 2019). The setting of the criteria is customized for sports organization businesses due to their key objectives.

Score	Probability	Incidence in Time
5	**Very High**	Recurring Incidence (1 per 3 months)
4	**High**	High Incidence (1 per 6 months—high risk of recurrence)
3	**Medium**	Medium Incidence (1 per year—potential recurrence)
2	**Low**	Low Incidence (1 per 2 years)
1	**Very Low**	Negligible Incidence (less than 1 per 2 years, recurrence is not expected)

Table 1: Incidence-Based Risk Exposure Probability Assessment (Source: Autors)

Score	Severity of Consequences	Finances	Sport Results	Fan Interest
5	**Very High**	Decrease in annual finances by more than 51%	Drop by more than 71% in the final ranking compared to the previous year	Reduction in annual attendance by more than 51%
4	**High**	Decrease in yearly finances by 31% to 50%	Drop by 51% to 70% drop in the final ranking compared to the previous year	Reduction in annual attendance by 31% to 50%
3	**Medium**	Decrease in yearly finances by 16% to 30%	Drop by 31% to 50% in the final ranking compared to the previous year	Reduction in annual attendance by 16% to 30%
2	**Low**	Decrease in yearly finances by 6% to 15%	Drop by 11% to 30% in the final ranking compared to the previous year	Reduction in annual attendance by 6% to 15%
1	**Very Low**	Decrease in yearly finances by up to 5%	Drop by up to 10% in the final ranking compared to the previous year	Reduction in annual attendance by up to 5%

Table 1: Risk Consequence Multi-Criteria Assessment (Source: Autors)

The RBS can be used to summarize the results by indicating the probability of incidence and severity, which can be combined by multiplication as the Cartesian product of the two parameters. It is also possible to use risk matrices, which usually show the probability level on the vertical axis and the severity level on the horizontal axis (Figure 2).

		Consequences				
		1	**2**	**3**	**4**	**5**
Probability		**Very Low**	**Low**	**Medium**	**High**	**Very High**
1	**Very Low**					
2	**Low**					
3	**Medium**					
4	**High**					
5	**Very High**					

Figure 2: Risk Matrix 5x5 (Source: Autors)

According to the resilience of the organization, it is possible to set a level of risk acceptability. Then based on the severity there of good mitigation measures are proposed. As this is still about prevention, sports organizations suffer much smaller costs than they would have suffered in dealing with the crisis resulting from negligence.

4. CONCLUSION

Risk management is a tool that currently provides sports organizations with an opportunity to increase their resilience and competitiveness from a prevention perspective. Crisis management is better seen only as a tool for responding to an unforeseen crisis. However, risk management can also be very helpful in the event of an unforeseen crisis situation, as planned measures aimed at mitigating the risks can be used to mitigate the effects of crises. Therefore, it is imperative that the risks are not underestimated, which often happens due to a lack of theoretical knowledge and practical experience on the part of the sports organization management. It is also important that management does not preferentially focus on financial risks only, but instead, they should consistently focus on the outputs of the current situation analysis and integrate all risk exposures into their decision-making processes. Risks that are not identified are not subsequently assessed and can be a source of the crisis. Therefore, risk management should be seen in sports organizations mainly from the prevention perspective and apply the standards and best practices available when implementing and managing a crisis as an effective tool for responding to unforeseen crises.

ACKNOWLEDGEMENT: *The paper was prepared with the support of the project APVV-20-0481 - Sustainability Strategy of a sport organization in the conditions of the Slovak Republic.*

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A MODEL FOR THE USE OF DESIGN IN PRODUCT INNOVATION

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ABSTRACT

In the last decade, there has been much discussion about the introduction of a new role for design. Concepts such as eco-design, green design, sustainable design, and circular design have emerged, seeking alternative ways to contribute to the transition to a sustainable society. Designers have an excellent opportunity to influence how products will impact the environment and society throughout their life cycle. It is at the product design stage that decisions are made about cost, appearance, choice of materials, performance, and quality attributes such as repairability, ease of maintenance and durability. The aim of this paper is to verify the impact of the use of design in product innovation on the economic performance of firms. The research, conducted between July and November 2021 on a sample of 239 firms operating in the Slovak Republic in different areas of industrial production, focuses on the firms' approach to the use of design in product innovation, the achieved level of design management, the willingness of firms to invest in product design and the impact of product design on the economic performance of firms. This study involves factor and regression analysis methods. The authors identified the relationships between the variables and based on the statistical confirmation of these relationships, they developed a model of the use of design in product innovation with interrelationships between four variables: (1) the degree of use of design in firms' product innovation, (2) the level of design management achieved, (3) the firm's willingness to invest in product design, and (4) the firm's economic performance. The model suggests that firms need to develop individual design management skills in order to use design more intensively and effectively in product innovation, of course, it is important that the firm is able to secure investment in design and this together promotes firm performance improvement.

Keywords: *Circular design, Design management, Product design, Sustainable design.*

1. INTRODUCTION

Growing competition, technological changes as well as changes in consumer behavior require new solutions and unconventional approaches in product design. Product designers focus on improving the ease of use of products, and their graphic and aesthetic features help differentiate competitive product offerings and attract customers. Design is closely connected with innovation, and the need to clarify its concept and the relationship with the economic results of companies is growing. Design not only leads to improved products, but also affects the financial performance of companies. Incorporating design in an innovative production process can significantly reduce a company's costs, but it can also lead to innovative and improved products that can increase sales. Most of the studies aimed at analyzing the impact of design on the economic results of companies did not only examine the financial "impact" and the return on investment in design, but also related other aspects to design, such as the achieved level of design implementation, the firm's design strategy, better market interpretation through design, and more. Companies recognize the importance of design as a necessary means to increase their competitiveness, but it is difficult to obtain accurate data that shows a direct correlation between design and, for example, increased sales of products.

2. LITERATURE REVIEW

Product design is developing very quickly, using new knowledge, materials, and product creation processes. Customer expectations are also evolving. Functionality, ease of use, affordability are characteristics that customers take for granted in everyday products. The latest design trends lead to products that inspire and improve the lives of their users. We can define product design as both an art and a science that brings technological, financial, operational, and emotional aspects together to create a differentiated product (Jindal et al., 2016). Product design is an element of differentiation and is an important resource for gaining a company's competitive advantage in the market. In order to be able to say that the design is good, it should meet the following conditions (Blazeska – Ristovska, 2016): (1) usability of the product – it is a good and practical design where the consumer does not have to worry about how the product works, (2) ergonomic settings - it is necessary to adapt the design to the physical and psychological needs of people. Good design should offer ease of use, comfort, hygiene, and safety, (3) aesthetic sensitivity – design should influence consumer preferences, (4) brand consistency – design should be synergistic with the overall corporate design. Design as part of the innovation process has the potential to significantly contribute to the improvement of the brand image, increase in sales and profitability of the company. Creativity and design can thus be linked to innovation because creativity is the first to contribute to the expansion of creative ideas that are available, and design gives a greater chance for the successful commercialization of creative ideas in the form of new products (Mlákay, 2015). The approach to design called "user-centered design" suggests that product development should be based on an in-depth analysis of user needs. The premise is that a firm can gain unique insight into product innovation information by asking users about their needs, or more effectively by observing them using existing products and tracking their behavior in consumption processes. Based on several studies, models of the user-centered design process have been proposed, describing appropriate steps and tools. On the one hand, these models effectively combine methods for better understanding of customer needs - ethnographic research and its variations, and on the other hand, they provide tools and guidelines for improving creative abilities (Kumar - Whitney, 2003; Patnaik - Becker, 1999; Rosenthal - Capper, 2006; Sutton, 2001). Braga (2016) explains user-centered design as a "bottom-up" design approach and includes the concept of design thinking and emotional design in this approach. The term "design thinking" refers to the use of design sensitivity in business strategies and innovation models. Design thinking enables interdisciplinary teams to systematically and iteratively generate new ideas through imagination and creative methods, using design insight as a framework for understanding and creating innovative business propositions (Pilloton, 2009). Norman (2008) describes a design professional as someone responsible for discovering consumer needs that they cannot express themselves. It develops the argument that emotions play a fundamental role in better product use. People feel more motivated to solve problems or understand the use of products because of the emotional connection created based on the product's symbolic attributes. Verganti (2008) introduced the concept of design as the driving force of innovations (design-driven innovation), according to Braga (2016) it is a "top-down approach". Firms that practice this approach (e.g., successful Italian manufacturers such as Alessi, Artemide and Kartell) have developed excellent skills to design innovations that radically redefine what the product means to the customer. For them, design-oriented innovation is radical innovation in terms of the meaning of the product it represents for the customer. Design-focused innovation is driven by a firm's vision of possible breakthrough meanings and product styles that could emerge in the future (Verganti, 2008). The question of the product design value has been addressed by many authors who have tried to understand the role of product design in the current economic and business conditions.

Product design is one of several key areas that are critical to new product development, along with research and development (R&D), marketing, manufacturing, and sales. Product design contributes to the development of new products by better connecting the customer with the product, through the ease of use, features, and appearance of the product. Over the past two decades, there has been an increased awareness of the role that product designers play in new product development (Hertenstein et al., 2005). Greening is a new trend and at the same time an opportunity for companies for many reasons, such as achieving competitiveness, legal regulations, or social and environmental responsibility of companies. Many companies thus try to include environmental sustainability factors in their product concept (Ko, 2020). The first approach to the incorporation of environmental aspects into the design of the so-called "green design" focuses only on individual issues, such as reducing the amount of material used, replacing original materials with recycled ones, or reducing energy consumption. Ecodesign brings another dimension to traditional design – design is evaluated in terms of the product's impact on the environment throughout its entire life cycle (Dostatni, 2015). Ecodesign is a widely used concept for improving the environmental performance of products and is also recognized for several potential business benefits. It aims to improve the environmental performance of the product throughout its life cycle without affecting other fundamental criteria such as performance, functionality, aesthetics, and quality. Among the main environmental impacts that are taken into account in eco-design are the minimization of material and energy consumption, the selection of less adverse materials and the promotion of long-lasting products (Albæk, 2020). The aim of ecodesign is to minimize the consumption of natural resources, energy and the subsequent impact on the environment while maximizing benefits for customers. In ecodesign, the environment has the same status as traditional industrial values such as profit, functionality, aesthetics, ergonomics, image, and overall quality. Although the focus of ecodesign on the whole life cycle provides significant advantages compared to the initial practice of green design, it also has significant shortcomings. Ecodesign focuses exclusively on environmental properties and does not take into account the social dimensions of sustainability, which cover issues related to the distribution of resources and the associated social impacts of the product (Ceschin, 2016). Sustainable design has subsequently taken a step forward by considering social issues including usability, socially responsible use, and sourcing (Moreno et al., 2016). Sustainable design offers companies the opportunity to improve their sustainability performance while increasing their profitability. By applying the concept of sustainable design, companies can: (1) reduce the environmental impact of their products and processes, (2) optimize the consumption of raw materials and energy, (3) improve waste management and pollution prevention systems, and (4) support the innovation process (Lofthouse - Bhamra, 2007). However, this approach still follows a linear model of the economy. Circular design aims to reduce the loss of value contained in products and materials by keeping them circulating in closed loops. These cycles, such as reuse, repair, refurbish or recycle, extend the product's life cycle, and increase resource productivity. Both circular design and sustainable design focus on environmental, economic, and social aspects. However, they differ greatly in how they achieve their goals. Sustainable design gives a central role to the product, the protection of the product's value and its ecological impact. On the other hand, circular design starts with optimizing the economic potential of resources through new business models and at the same time, emphasis is placed on resource renewal and quality of life (Medkova – Fifield, 2016). The field of design is considered one of the key prerequisites for the transition to a circular economy. There is a growing body of research (e.g., Berg – Bakker, 2015; Hollander et al., 2017; Moreno et al., 2016) outlining the role of design in the circular economy and proposing frameworks, tools, and strategies for implementing circular design principles.

3. METHODOLOGY

The aim of this paper is to verify the impact of the use of design in product innovation on the economic performance of firms. In line with the aim of this paper, we set out the following hypotheses:

H1: The level of design management in a firm influences the intensity of the use of design as a product innovation
H2: The level of design management in a firm affects the economic performance of the firm
H3: The amount of a firm's investment in product design affects its economic performance
H4: The amount of a firm's investment in product design affects the intensity of the use of design as a product innovation

The object of primary research were Slovak companies with predominant activity in industrial sectors according to four levels of technological complexity. The OECD defined four basic industrial sectors classified according to technological intensity: high technology, medium high technology, medium low technology, low technology. The degrees of the technological sector are defined according to the intensity of research and development in the given sector (expenditure on research and development/added value). Data collection took place in the period July - November 2021 and, due to anti-pandemic measures, it took place mainly online through a structured questionnaire. The basic set consisted of 239 companies from various areas of industrial production.

To verify the factor structure of the company's economic performance, we used confirmatory factor analysis, the purpose of which was to confirm and verify the already known, expected existence of factors. The factor structure for the economic performance of the company is based on the study by Venkatraman (1989) and the study by Chiva and Alegre (2009). The relationships between the variables of the proposed model were tested for statistical significance of the model and we expressed them using Pearson's sample correlation coefficient.

3. RESULTS

Confirmatory factor analysis was used to confirm the factor structure that evaluates the company's performance and is based on the study by Venkatraman (1989) and the study by Chiva and Alegre (2009). When evaluating the performance of companies, due to the difficulties in obtaining objective data and differences in accounting, we approached the method of self-evaluation of companies. Research has also shown that self-reported measures of firm performance are positively related to objective measures of firm performance (Gatignon et al., 2002; Powell, 1992; Wall et al., 2004). Firms were asked to rate their firm's performance based on six questions based on the validated economic performance scale of Venkatraman (1989) and Chiva and Alegre (2009).

Companies had to rate their company's performance over the past three years in 6 areas: Eko1 = Sales growth, Eko2 = Satisfaction with the rate of sales growth, Eko3 = Profit from market share compared to competitors, Eko4 = Satisfaction with the company's return on investment, Eko5 = Net profit, Eko6 = Satisfaction with profitability of sales. Figure 1 shows the one-factor model of firm performance verified by confirmatory factor analysis with the individual factor loading values of each variable indicated.

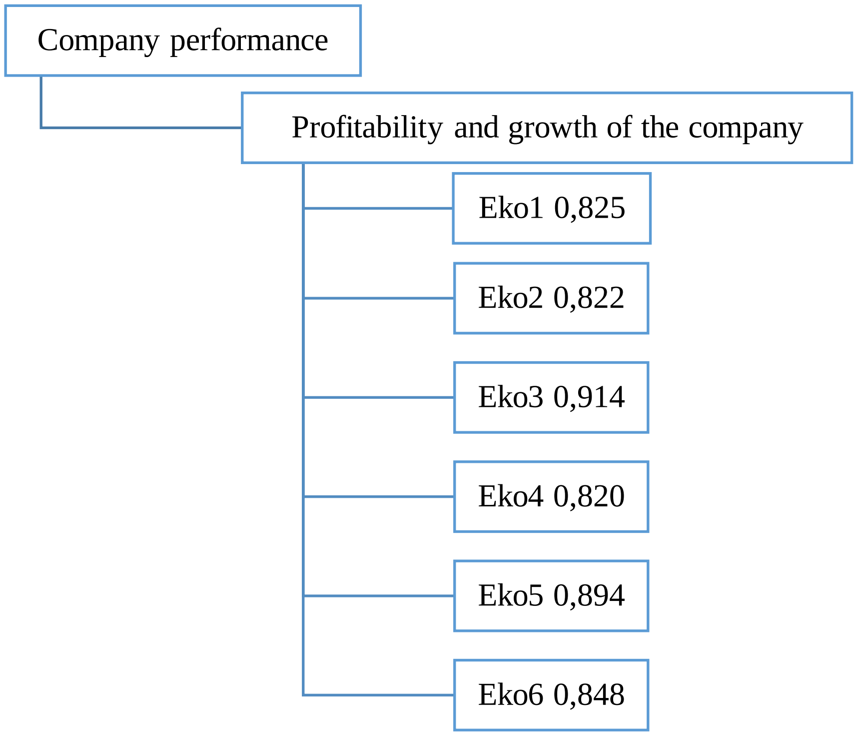

Figure 1: One-factor model of company performance validated by confirmatory factor analysis (Source: developed by the authors)

The confirmatory factor analysis indices presented in Table 1 show acceptable values and entitle us to conclude that the developed one-factor model presents a good level of fit to the real data and is applicable in this form. The Chi-square test confirms the suitability of the model for the processed data.

Table 1: Model characteristics

Index	**Value**
Comparative Fit Index (CFI)	0.997
Bentler-Bonett Normed Fit Index (NFI)	0.996
Bentler-Bonett Non-normed Fit Index (NNFI)	0.996
RMSEA	0.116
Chi-square test	$\chi = 30.537$; ($p < 0.001$); df = 9

(Source: developed by the authors)

Applying regression analysis, we identified the relationships between the variables and, based on the statistical confirmation of these relationships, created a model of design use in product innovation with interrelationships between four variables: (1) the degree of design use in firms' product innovation, (2) the level of design management achieved, (3) the firm's willingness to invest in product design, and (4) the firm's economic performance (Figure 2).

Figure following on the next page

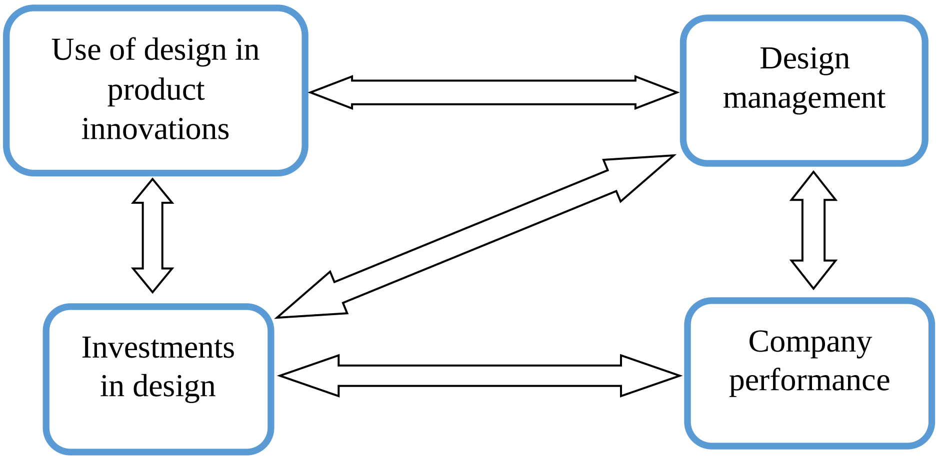

Figure 2: A model for the use of design in product innovation
(Source: developed by the authors)

The results of the individual regression equations with one independent variable are shown in Table 2. The first part of the table, titled Model Summary, reports the value of the coefficient of co-relation (R) and the coefficient of determination (R2) of each model in the simple regression analysis. Comparing the individual correlation coefficients, the strongest relationship within the model appears to be between the variables (1) the use of design in product innovation and (2) the amount of investment in design, R=0.47. According to the calculated value of the correlation coefficient, each model shows a moderate degree of correlation (R>0.3). The Anova section of the table indicates how well the regression model describes the data. We use F - test to test the goodness of fit of the models used, in our case all p-values are <0.001, so the models are statistically significant and fit. The last part of the table shows the coefficients of the regression equation, from which we can construct the regression equation for each model (Y = b0 + b1* X). Based on the t-test and p-values <0.001, we can confirm the statistical significance of all the coefficients of each model.

Table 2: Characteristics of the model of design use in product innovation
(Table ends on the next page)

	Model Summary		**Anova**		**The coefficients of the regression equation**		
MODEL	**R**	**R^2**	**F – test**	**p – value**	**b_0, b_1**	**t – test**	**p – value**
dependent variable = design as innovation independent variable = design management	0.305	0.093	18.219	<0.001	b_0 = 2.437 b_1 = 0.527	4.003 4.268	<0.001 <0.001
dependent variable = investment independent variable = design management	0.392	0.153	32.271	<0.001	b_0 = 1.618 b_1 = 0.556	3.353 5.681	<0.001 <0.001
dependent variable = firm performance independent variable = design management	0.434	0.189	41.354	<0.001	b_0 = 1.597 b_1 = 0.544	3.831 6.431	<0.001 <0.001

dependent variable = design as innovation independent variable = investment	0.47	0.220	50.348	<0.001	$b_0 = 2.520$ $b_1 = 0.572$	6.912 7.096	<0.001 <0.001
dependent variable = firm performance independent variable = investment	0.352	0.124	25.244	<0.001	$b_0 = 2.885$ $b_1 = 0.311$	10.312 5.024	<0.001 <0.001

(Source: developed by the authors)

Based on the model characteristics presented in Table 2, we can test the stated hypotheses.

H1: The level of design management in a firm influences the intensity of the use of design as a product innovation.

The hypothesis we wanted to test was whether the level of design management achieved in a firm influences the intensity of the use of design as a product innovation. We established the null hypothesis, which we subsequently tested.

H0 - There is no relationship between the use of design in product innovation and the level of design management.

The correlation coefficient between the two variables shows a moderate positive correlation with a value of 30.5%. The correlation coefficient is statistically significant at the significance level of 1%, i.e., we reject the null hypothesis H0. We have shown that there is a statistically significant relationship between the level of design management knowledge attained and the use of design as a form of product innovation in firms, we accept hypothesis H1.

H2: The level of design management in a firm affects the economic performance of the firm.

Our hypothesis was to test whether there is a relationship between the level of design management achieved in a firm and the economic performance of the firm. We established the null hypothesis, which we then tested.

H0 - There is no relationship between the level of design management achieved and the economic performance of the firm.

The correlation coefficient between the two variables shows a moderate positive correlation with a value of 43.4%. The correlation coefficient is statistically significant at 1% significance level, i.e., we reject the null hypothesis H0. We have shown that there is a statistically significant relationship between the level of knowledge attained in design management and economic performance of firms, we accept hypothesis H2.

H3: The amount of a firm's investment in product design affects its economic performance.

Our hypothesis was to test whether there is a relationship between the amount of investment a firm makes in product design and its economic performance. We established the null hypothesis, which we then tested.

H0 - There is no relationship between a firm's economic performance and the amount of investment a firm makes in product design.

The correlation coefficient between the two variables shows a moderate positive correlation with a value of 35.2%. The correlation coefficient is statistically significant at 1% significance level, i.e., we reject the null hypothesis H0, and we have shown that there is a statistically significant relationship between the amount of firm's investment in product design and economic performance of firms, we accept the hypothesis H3.

H4 The amount of a firm's investment in product design affects the intensity of the use of design as a product innovation.

The objective of the hypothesis was to test whether the amount of investment a firm makes in product design influences the extent to which design is used as a product innovation. We established the null hypothesis, which we then tested.

H0 - There is no relationship between the use of design in product innovation and the amount of investment firms make in product design.

The correlation coefficient between the two variables shows a moderate positive correlation with a value of 47%. The correlation coefficient is statistically significant at 1% significance level, i.e., we reject the null hypothesis H0, and we have shown that there is a statistically significant relationship between the use of design in product innovation and the amount of firm investment in product design, we accept the hypothesis H4.

4. CONCLUSION

The created model of the use of design in product innovations describes the interrelationships between four variables: (1) the degree of use of design in product innovations of companies, (2) the achieved level of design management, (3) the company's willingness to invest in product design and (4) the economic performance of the company. Based on statistical verification, we can confirm a statistically significant correlation of these variables. The positive connection between the level of knowledge achieved by Slovak companies in the field of management and the intensity of the use of design in product innovations and the economic performance of these companies is in accordance with the claims of foreign studies by many authors (Chiva - Alegre, 2009; Kootstra, 2009; Gemser - Leenders, 2001; Hertenstein et al., 2005). An important role in this model is also played by the amount of investment that companies make in product design, which supports the use of design in product innovations and is positively related to the economic performance of companies. It is necessary to develop the individual skills of design management in companies so that design can be used more intensively and effectively in product innovations, but an essential part is that the company knows how to secure investments in design, and this together supports increasing the company's performance.

ACKNOWLEDGEMENT: *The paper was created as part of a grant project VEGA no. 1/0398/22 „The current status and perspectives of the development of the market of healthy, environmentally friendly and carbon-neutral products in Slovakia and the European Union “.*

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SECURITY MANAGEMENT OF SPORT EVENTS IN SLOVAK REPUBLIC

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ABSTRACT

A sport event is an event where people gather to satisfy their needs to play sports, to perform specific physical activities in competitive or non-competitive form, while these activities are also carried out with the participation of non-sporting actors, referees, technical workers and especially spectators. Organizers of sports events must meet certain conditions and requirements when organizing these events which also includes preventing possible risks that these events bring with them. The aim of the paper is to present the duties and tasks of the organizers of sports events and other entities involved in ensuring the smooth running of the event from the point of view of security management and to define the procedure for creating a security plan for the protection of the football facility stadium.

Keywords: *management, risks, safety, security, sport event*

1. INTRODUCTION

Participants of sports events often see them as a leisure activity, a work opportunity, or even as an important commercial commodity. For many people, sport means relaxation, a lifestyle, or a philosophy of life. People, whether sportsmen or spectators, give their energy and time to sport daily, and in doing so, they improve their quality of life. People participate in sporting activities on a recreational or professional level. The type of sport depends on whether the person does it alone or as part of a team.

Major sporting events tend to be organized at the national or international level. They often attract the attention of the world's media and are attended by people from all over the world. The organization of major sporting events has many positives, for instance, the development and improvement of the quality of sporting venues, on the other hand, with increasing globalization and sports media coverage, its core objectives may be disappearing from sport and being replaced by economic objectives (Buganova et al, 2014).

Ensuring the security of participants is an important element in major sporting events. Security can be compromised by natural forces or human activity. When organizing sporting events, the event organizer has the greatest responsibility for the event's safety and security. According to the law, the organizer must fulfil certain tasks and obligations, which are necessary to facilitate the security and fluidity of the event. Other parties support the organizer in providing security such as the event management service providers and the Police Force. Participants in sporting events have their own set of duties also. If they fail to respect their duties, the organizer must be prepared to react to security incidents and try to prevent them or minimize their consequences. The paper aims to present the duties and tasks of sports events organizers and other parties involved in ensuring the smooth running of the event from a security perspective and to define the procedure for creating security contingency plans for the protection of the football stadium.

2. SECURITY RISKS OF SPORT EVENTS

Act 1/2014 Coll., Public Sports Event Organization Regulation, entered into force in the Slovak Republic on 2014-01-02. A sporting event as defined in the law is a sporting competition, match, tournament, race, tourist event, or other event associated with the physical recreational activity of individuals regarding physical culture. A sporting event is defined as open to the public if it is available to spectators without invitations.

The organization of sporting events brings several positive impacts on society, such as improving the image and international awareness of a city, region, or state, investment funds increasing the prosperity of a given region, improving transport infrastructure, building sports complexes, or recreational facilities, and others. However, the organization and management of sporting events may also be threatened by several smaller or larger, expected or unexpected risks, such as a natural disaster, terrorist attack, epidemic, technical failures, fire, misconduct of event participants, spectator violence, acts of vandalism, rioting, hooliganism, abuse of sporting events for political purposes, and others. A very detailed classification of risks from different aspects is presented by Simak (2006), Fig.1.

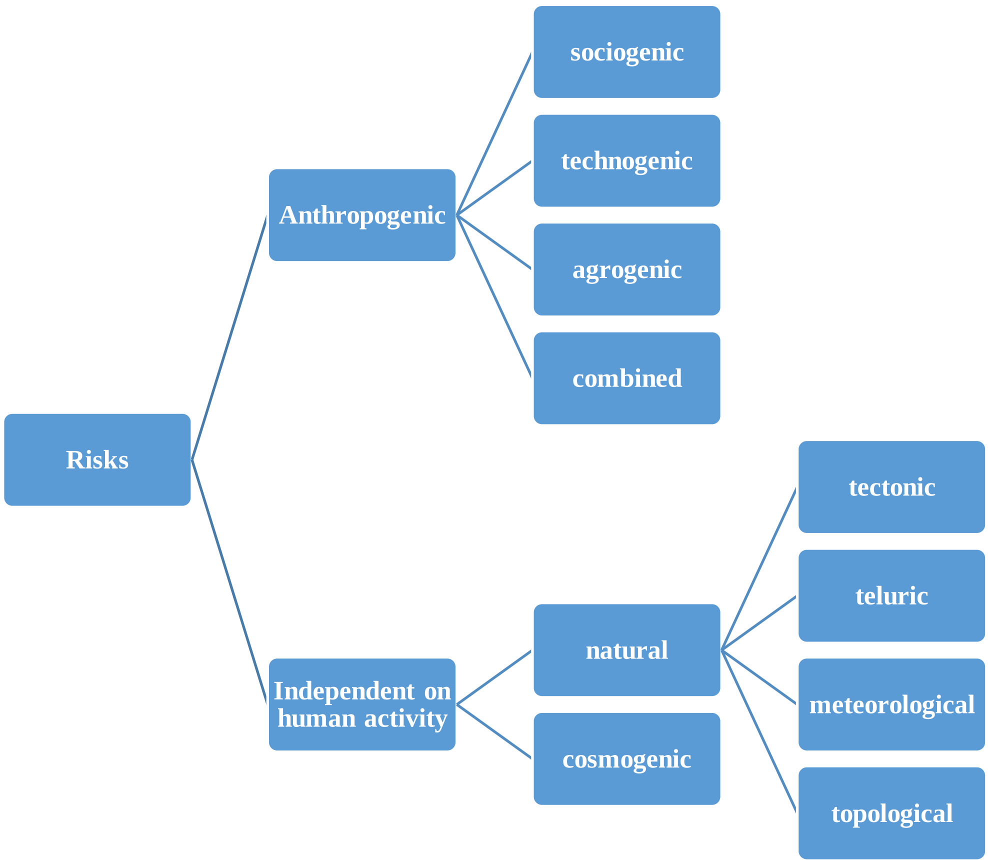

Figure 1: Classification of risks (Simak, 2006)

From a general perspective and depending on the origin, they divide the risks into two basic groups:

a) Anthropogenic Risks - related to human activity in the process of creating optimal conditions for life:
- Sociogenic risks - associated with social phenomena and human behaviour of people with their unique personalities;
- Technogenic risks - posing major threats to production processes and various services;

- Agrogenic rsks - agricultural and food production systems are exposed to these risks that can have a negative impact on people and nature;
- Combined risks - most often arising from a combination of technogenic and sociogenic risks; the process of reducing such risks is much more complicated and the prevention of crisis phenomena is demanding on material and human resources.

(b) Risks Independent of Human Activity:
- Natural hazards - coming from the diversity and complexity of nature:
    - tectonic - earthquakes;
    - telluric - volcanic activity;
    - topological - landslides;
    - meteorological - related to the weather conditions, e.g., wind, snow, storm;
- Cosmogenic - they are minimal, e.g., the Earth colliding with another planet or another cosmic body.

Sporting events are mainly exposed to technogenic and sociogenic risks.

Technogenic risks are related to the technical equipment of sporting grounds. As the age of sports facilities increases, so does the possibility of adverse consequences caused by technogenic risks. The poor state of the sports facilities is due to the lack of funds needed to service them. The risk of a negative phenomenon can be caused by outdated or poor-quality structures, the collapse of which can compromise the security of people or property. Another risk comes from the technologies, which have insufficient funds for overhauls. An example is the technical condition of ice rinks, which are mostly outdated and can easily leak ammonia used to cool the ice. A leak of this substance can endanger the participants of the event, as well as other people located up to several kilometres around the stadium.

Sociogenic risks are related to social phenomena and human behaviour. A person is an individual and has a unique personality that can create a whole chain of risks through their behaviour. Without the presence of people, sporting events would certainly not happen. Apart from the sportsmen, spectators are an integral part of sporting events, who may spark conflicts and compromise public safety. A person thus becomes the most likely originator of adverse effects threatening the organization and management of a sporting event.

Spectator violence is mainly associated with football and football hooligans are the biggest threat. Some football hooligan conflicts can have tragic consequences. For instance, in the well-known case from 2012 in the Egyptian city of Port Said, 74 people died in a football fans' riot. Part of the stadium went up in flames after fans violently entered the playing field. Football supporters attacked the players and security personnel, and organizers were among the victims. Most of the wounded, who numbered around 1,000, suffered concussions or deep cuts. A three-day state of mourning has been declared in the country (SPORTNET, 2012).

There are many known cases of accidents in football stadiums, e.g.

- On October 20, 1982, in Moscow, Russia, 340 people died during Spartak Moscow's match versus Haarlem. Shortly before the final whistle, the police tried to evict some spectators from the stadium, but after the overtime goal, the excited fans wanted to come back and trampled people in the middle. It was the second biggest disaster in the history of football.

- On May 11, 1985, in Bradford, England, 56 people died and 200 others were injured. A discarded cigarette caused the wooden terrace at Bradford's Valley Parade stadium to catch fire during a match against Lincoln City.

- On May 29, 1985, in Brussels, Belgium, 39 fans did not survive the fall of a wall after a fight between Liverpool and Juventus supporters during a European Cup match at the Heysel Stadium in Brussels. More than 400 spectators sustained injuries.

- On March 12, 1988, in Kathmandu, Nepal, 93 people died and more than 100 were injured as they tried to escape the hailstorm through locked exits.

- On April 15, 1989, in Sheffield, England, 96 fans lost their lives during the FA Cup semi-final match between Liverpool FC and Nottingham Forest. The police opened one of the main entrances, causing too many fans to enter the stadium and the stands to collapse.

- On May 5, 1992, in Bastia, France, 18 casualties were caused by the collapse of the terrace at the Bastia Stadium on the island of Corsica during the French Cup semi-final match against Olympique Marseille.

- On October 16, 1996, in Guatemala City, Guatemala, 84 people died and about 150 others were injured in a mass stampede that broke out in the stadium before the World Cup qualifying match between Guatemala and Costa Rica.

- On November 25, 2007, in El Salvador, Brazil, 8 soccer fans were killed when the stands collapsed at the Fonte Nova stadium in the north-eastern Brazilian city of Salvador. The tragedy took place shortly after the end of the match Bahia - Vila Nova (0:0), whereby the home team was to be promoted to the second highest Brazilian league.

- On March 29, 2009, in Abidjan, Côte d'Ivoire, 22 people did not survive the fall of a wall during a World Cup qualifying match between Côte d'Ivoire and Malawi. Tens of thousands of fans packed into a packed Houphouet-Boigny Stadium.

The news of the tragedies above provoked a negative response from the sporting and other public and an urgent need to pay more attention to this issue. Achieving the safety of persons attending sporting events has become a matter of concern at the state level almost throughout Europe. The Slovak Republic is also actively involved in this process.

3. LEGAL ENVIRONMENT FROM THE POINT OF VIEW OF ORGANIZING SPORTS EVENTS AND ENSURING THEIR SAFETY AND SECURITY

The seriousness and widespread nature of the phenomenon of spectator violence, particularly in England and subsequently in other European countries in the 1970s and 1980s, was the reason for the execution of the European Convention on Spectator Violence and Disorder at Sporting Events, and at Football Matches (CETS 120) at the Council of Europe in 1985 (CE, 1985). By adopting this Convention, the signatory states have committed themselves to cooperation between all entities involved in the elimination of spectator violence (state, police, sports associations, clubs, municipalities, travel agencies, transporters, fan clubs), whereby the security and safety and comfort of decent supporters and the effective punishment of offenders, including criminal sanctions, is provided to prevent troublemakers from attending sporting events.

This convention was based on the recognition that while the phenomenon of spectator violence is strongest at football matches there is always a real threat that once this negative phenomenon is eliminated from football stadiums or even for other reasons, it may move on to other sports (NCSR, 2013). Act No 1/2014 Coll. Public Sporting Events Organization Regulation came into force in the Slovak Republic on 2014-01-02, which follows the European Convention CETS 120 mentioned above. This Act regulates the conditions for organizing public sporting events, the powers and duties of the event organizer, the activities, powers and duties of the organizer, the roles of the municipality and the Police Force, the duties and prohibitions of the event participants, the safety and health provisions, and liabilities and penalties resulting from non-compliance with this Act. The Act regulates the organization of sporting events to create an effective system of legal instruments, means, and procedures, which in addition to systematically regulated rules for the organization of sporting events will also bring about appropriate control and sanction mechanisms aimed at the protection of public order, safety and comfort of participants in public sporting events on one hand and at the prevention and elimination of the occurrence of spectator violence at such events on the other hand.

The primary aim of the law is to regulate those events where spectator misbehaviour and violence occur (football, hockey), as well as events where the security risk comes naturally with the presence of many people at the stadium or when the sports facility is almost completely full of people without taking into the account the level of safety of people inside, to which the law responds by defining events subject to special restrictions. The Act also regulates the operation of the information system on safety at sporting events, the content of the individual records, the persons authorized to use the data from the records, as well as the data handling methods. The information system records must also contain agreements executed by the organizer and the Police Force, or between the organizer and the municipality, whereupon the Police Force or the municipal law enforcement will assist in the provision and performance of the organizer's service for a fee. The Act also regulates the tasks and duties of the Security Manager, who (whether an individual or a company and as a qualified and competent authority) already performs important tasks on the part of the organizer in the field of preparation and management of security measures carried out in connection with a sporting event based on football and hockey sports association regulations. Another document at the EU level that deals with security at sporting events is the Council of Europe Convention (CETS 218) on Integrated Security and Services at Football Matches and Other Sporting Events, ratified in 2017. The purpose of this Convention is to ensure that football and other sporting events provide a safe and welcoming environment for all individuals through the implementation of an integrated approach to safety, security, and sporting event services.

The Convention binds the authorities of the signatory states (CE, 2017):
- Encourage public agencies and private stakeholders (local authorities, police, football clubs, national federations, and fans) to work together in the preparation and conduct of football matches,
- Ensure that stadium infrastructure complies with national and international standards and regulations to ensure effective crowd management and safety emergency and contingency plans are produced, tested, and fine-tuned during regular joint trials;
- Making spectators feel welcome and well treated during events, for instance by making stadiums accessible to children, the elderly, and people with disabilities, and improving sanitation and refreshment facilities.

4. FOOTBALL STADIUM SECURITY PLAN

An important tool for ensuring public protection and the security of participants in public sporting events is the football stadium security plan. The security plan shall include the list of all potential risk exposures that could lead to interruption or destruction of the facility, vulnerabilities, and safety precautions to protect the facility and eliminate the risk of an emergency.

The security plan design process consists of eight consecutive steps, which include security environment analysis, security risk identification and classification, security risk identification and classification, security risk assessment, and security project design, design of new and additional security solutions, assessment and selection of the win-win solution, production of technical documentation of the used Mechanical Means of Restraint (MMR) and Technical Means of Protection (TMP) and production of the operating rules for the protection of the facility (Fig.2.).

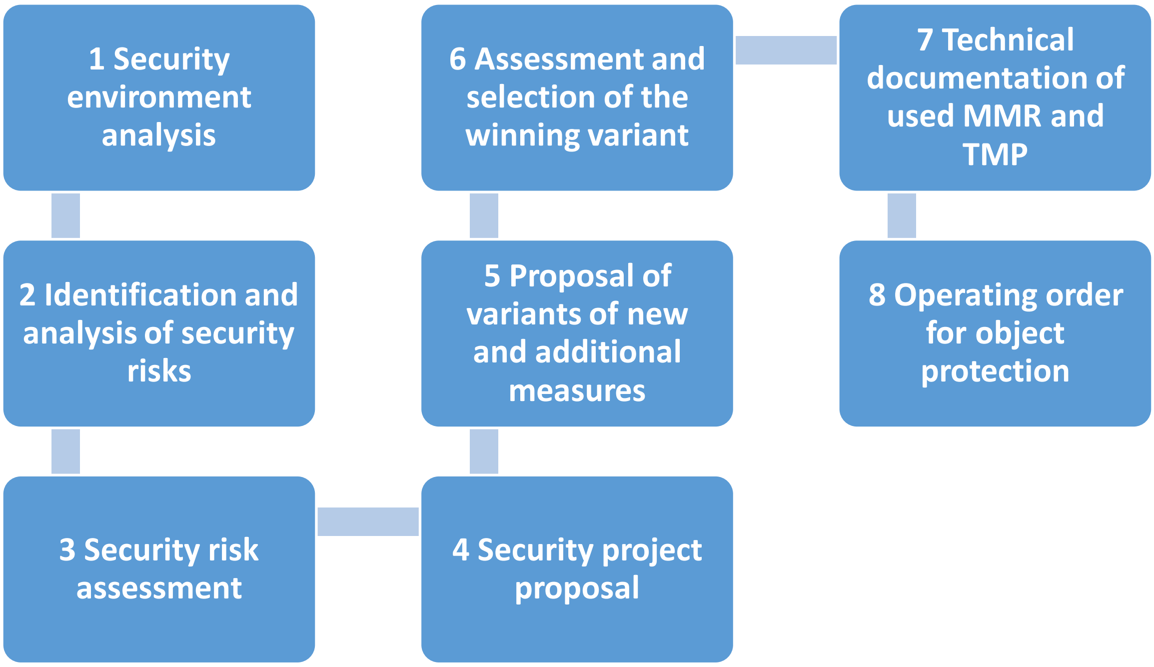

Figure 2: Procedure for developing a security plan

Step 1: Analysis of the security environment - the security environment represents a part of the social environment wherein an adequate security situation arises in a specific time and space because of the interaction of actors and the influence of environmental factors. The analysis of the security environment of the protected object should focus on the internal and external environment of the facility. The security environment analysis includes (Hofreiter, 2015):

- Characteristics of the facility: address, organizational structure, premises.
- Characteristics of the facility environmental aspects - the economic and social situation in the region, the state of public order and protection of property and the facility, the structure of the population, and national and ethnic composition.
- Definition of the facility type and its surroundings - description of the facility according to its design, purpose, and openings, description of the facility's layout, description of the facility in terms of access routes and terrain ruggedness, evaluation of the existing protection system.
- Identification of the protected interest - description of the type and value of the protected interest.

Step 2: Identification and analysis of security risks - the aim is to identify sources of risk, events, their causes, and potential consequences, to establish risk criteria. This leads to the production of a list of safety risks containing basic information about the risk such as threat, source of threat, scenario, probability of risk, consequences, and severity.
Step 3: Security risk assessment - involves the comparison of the risk severity with the risk criteria during the analysis, prioritizing the risks that require treatment.
Step 4: Security project proposal includes the production of the facility safety system based on an effective combination of protection technologies. These are mainly a combination of Mechanical Means of Restraint (MMR) and Technical Means of Protection (TMP).
Step 5: Proposal of variants of new and additional measures - three variants of the security system are stipulated, which differ in the qualitative level of the used protection elements and price.
Step 6: Assessment and selection of the winning variant - when assessing each solution, it is important to consider the fact that the use of each MMP or TMP requires a certain cost; therefore, it is necessary to assess not only how much the risk is reduced but also the costs associated with it.
Step 7: Production of MMR and TMR technical documentation - it includes the description of the components, their properties, the material, the possibilities of their use, and technical parameters.
Step 8: Production of the facility protection operating rules - the facility protection operating rules must be designed in line with Act 1/2014 Coll., Public Sporting Event Organization Regulation. Its purpose is to ensure the security, safety, health, and protection of the participants of a sporting event and the sporting facility.

5. CONCLUSION

The organization of major sporting events is a challenging process governed by different legal standards. As the legal rules relating to sporting events are of a different private and public law nature, they fall under the regulations of different branches of law. In addition to legal norms, various sporting norms are established to govern the organization and management of sporting events. These standards are issued by sports associations and regulate, for instance, the rules of individual sports, disciplinary action in the event of a breach of sporting rules, and the inclusion of athletes and teams in competitions. The enormous efforts of politicians, organizers, and law enforcement to prevent various tragedies at sporting events are yielding positive results, but the problem is that while one form of football hooliganism, for example, is being addressed, others are taking its place. Fortunately, most sporting event visitors have nothing to do with rioting and hooliganism.

ACKNOWLEDGEMENT: *The paper was prepared with the support of the project APVV-20-0481 – Sustainability Strategy of a sport organization in the conditions of the Slovak Republic.*

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IMPACT OF PUBLIC SUPPORT FOR INNOVATION ON COMPANY PERFORMANCE: REVIEW AND META-ANALYSIS

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ABSTRACT

In recent years there has been a significant shift in public policy with several governments launching public measures to support enterprises. To promote firms' innovation, governments can implement incentives, such as subsidizing companies, inducing them to undertake those investments. In parallel with the increase in public support, there has been also an increase in the number of studies that attempt to evaluate the impact of such public support for firms' innovation. Hence, the aim of this study is to review the results of a set of studies published on evaluation of public support to firms' innovation. To achieve this goal, we conduct a literature review which combines bibliometric analysis, network, and a quantitative analysis through meta-regression. The research is conducted using the Scopus database, which is one of the main databases worldwide. In the research carried out, all combinations between the expressions "R&D", "Research & development", "Innovation", "Performance", "Subsidy", "Grants", "Public support" and "Government support" were used. The expressions were searched in the fields "Title of the Article", "Summary" and "Keywords". These expressions were chosen given their frequency in studies that relate public support to innovation and performance, with the latter being considered both at the company level and at the innovation level. The described search returned 804 results, and then inclusion/exclusion criteria were applied. That is, Articles or Review were selected, belonging to the areas of Business, Management and Accounting or Economics, Econometrics and Finance and published in English. Then, having verified that the increase in the number of published studies shows an exponential growth from 2010, all results were selected from 2010 to March 2020. With these criteria, the sample was reduced to 230 results. Of these 230 results, 56 were considered in the quantitative analysis (meta-regression). The analysis was performed using the VOSviewer and Stata software.

Keywords: *Bibliometric analysis, Innovation, Literature review, Meta-regression, Performance and Public support*

1. INTRODUCTION

Public measures applied to companies' research and development (R&D) activities can be justified by the importance of innovation and technological progress for production and for the growth and well-being of economies.

The innovation incentive system has been increasing over the last few years, in both developed and emerging economies. The efficiency of these innovation incentive systems has been widely studied within different economic and management theories, such as innovation systems, the triple helix and, more recently, business and innovation ecosystems (Jugend, Fiorini, Armellini, & Ferrari, 2020a). R&D market failures related to research externalities that provide greater social production than private production require and justify public intervention. But from regulation, especially the protection of intellectual property, to direct subsidies or tax incentives, the effectiveness of public intervention instruments has often been debated.

According to some studies, these systems have had a positive impact on the performance of companies supported in terms of investment (fixed capital), the qualification of human resources, innovation, competitiveness, and the internationalization of companies (e.g. Barajas, Huergo, & Moreno, 2016; Colombo, Grilli, & Murtinu, 2011; Vanino, Roper, & Becker, 2019). However, it is possible to identify studies where the impact of government support is not positive (eg. (Howell, 2017; Mariani & Mealli, 2018; Sohn, Kim, & Hur, 2012; Tingvall & Videnord, 2020; Xie, Huo, Qi, & Zhu, 2016). In this study, the research procedure and selection of articles is firstly presented. This procedure is based on the objective of deepening knowledge about the effect of public support for R&D and innovation on the performance of the company's innovative activity, as well as on the performance of the company. The selected articles were then analyzed through bibliometric analysis and through a meta-analysis, to understand if there are characteristics of the studies that somehow affect the results obtained.

2. RESEARCH METHOD

This study was conducted using a systematic literature review approach, which combined bibliometric analysis and meta-analysis, like studies by (Bhimani, Mention, & Barlatier, 2019; García-Quevedo, 2004; Jugend, Fiorini, Armellini, & Ferrari, 2020b). The articles included in this study were identified through a search carried out in the Scopus database, one of the main databases worldwide (Costa, Lopes, Fernandez-Limós, Amante, & Lopes, 2016; de Jesus, Antunes, Santos, & Mendonça, 2016; Jugend et al., 2020b).

Like Jugend et al (2020), several steps were followed until reaching the final sample of articles. And, our research design, summarized in Figure 1, is based on our research objectives which, together with the inclusion and exclusion criteria, allow us to arrive at a final sample of articles that can be analyzed.

Figure following on the next page

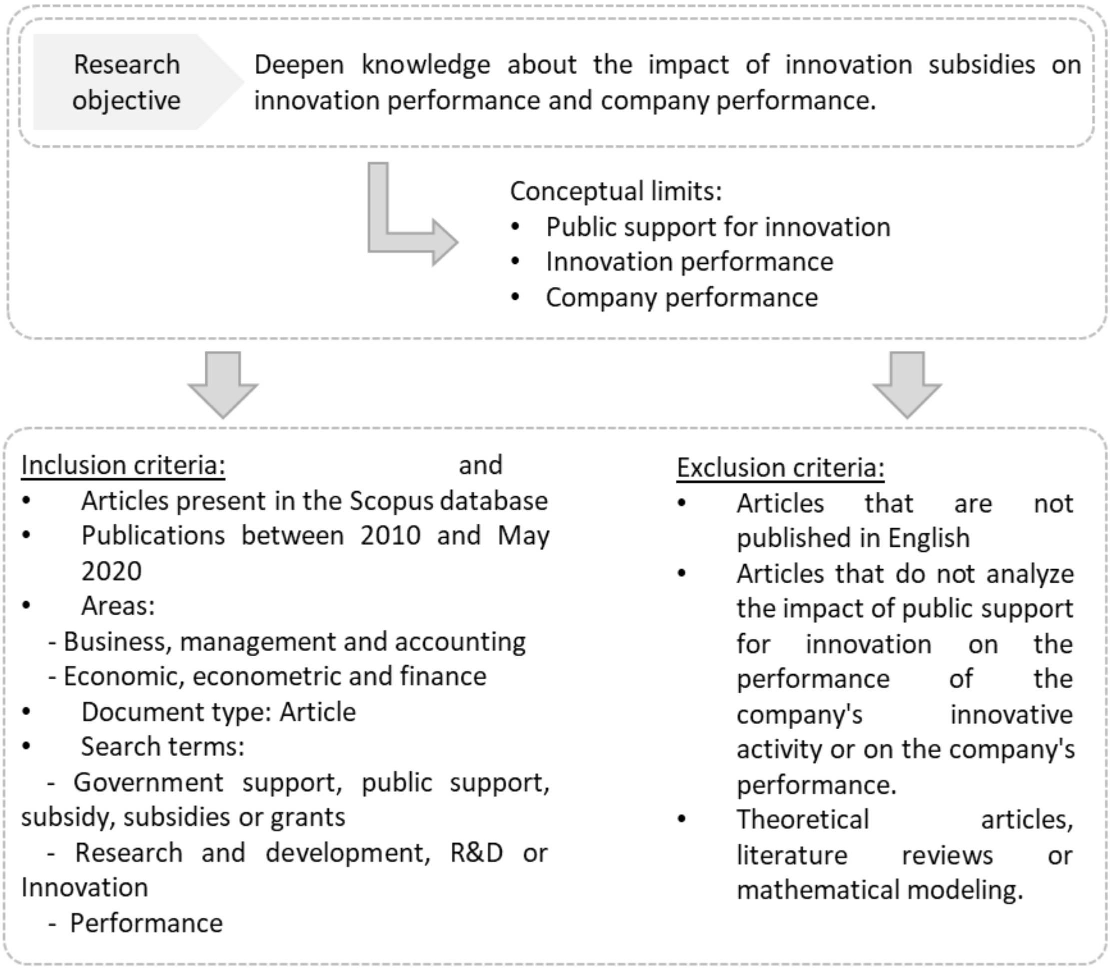

Figure 4: Article selection protocol

The article search started with the combination of the expressions "R&D", "Research and Innovation" or "Innovation" with the expressions "Public support", "Government support", "Subsidy", "Subsidies" or "Grants" and the term "Performance". These expressions were chosen given their emergence in studies that assess the effect of government support for innovation on company performance (eg. Hashi & Stojčić, 2013; Czarnitzki & Lopes-Bento, 2014; Pinho, Varum, & Antunes, 2015; Jugend et al., 2018). The referred expressions were inserted in the Scopus database in the Abstract, Title and Keywords fields. This search returned 804 results. Subsequently, it was found that from 2010 onwards the number of publications increases exponentially, thus defining the first exclusion criterion, eliminating the results prior to 2010. This exclusion criterion also allows for greater uniformity in the studies and samples analyzed. to be included in the meta-analysis. Publications that were not classified as articles and that did not belong to the areas of Business, Management & Accounting or Economics, Econometrics & Finance were also excluded. With the application of these criteria, we were left with a sample of 230 publications. Subsequently, the 230 articles obtained were analyzed, based on the objective of expanding knowledge about the impact of public support for innovation and analyzing the relationship between this support and the performance of innovation and the performance of the company. Based on this analysis, articles that were not related to the concepts, theoretical articles, literature review articles or that focused on very specific issues and therefore were not comparable with the other articles were excluded.

Based on this selection, we obtained a final sample consisting of 56 articles. The analysis of the 56 articles was carried out in two steps. First, a bibliometric approach with the objective of analyzing the evolution of publications, the countries studied, the most used methodologies and the most frequently related concepts. Second, a meta-analysis was carried out using meta-regression models, with the aim of better understanding the common characteristics of the articles analyzed and that may influence the results obtained.

3. BIBLIOMETRIC ANALYSIS

This section presents the bibliometric analysis that aims to guide the purpose of this study. In this analysis it is possible to identify current areas of research interest and potential directions. There is a growing trend of published articles with a clear emphasis on the last 5 years. This observation is the same when we analyzed the initial sample of 230 articles and remains with our final sample of 56 articles after applying the inclusion/exclusion criteria. This exponential growth in the number of publications, with a clear emphasis on the years 2016 to 2020, reflects the growing interest in better understanding where and how state support for innovation is being applied and what results come from it. This increase in the number of publications over the years has been accompanied by an increase in the number of countries targeted by these studies, as can be seen in Figure 2.

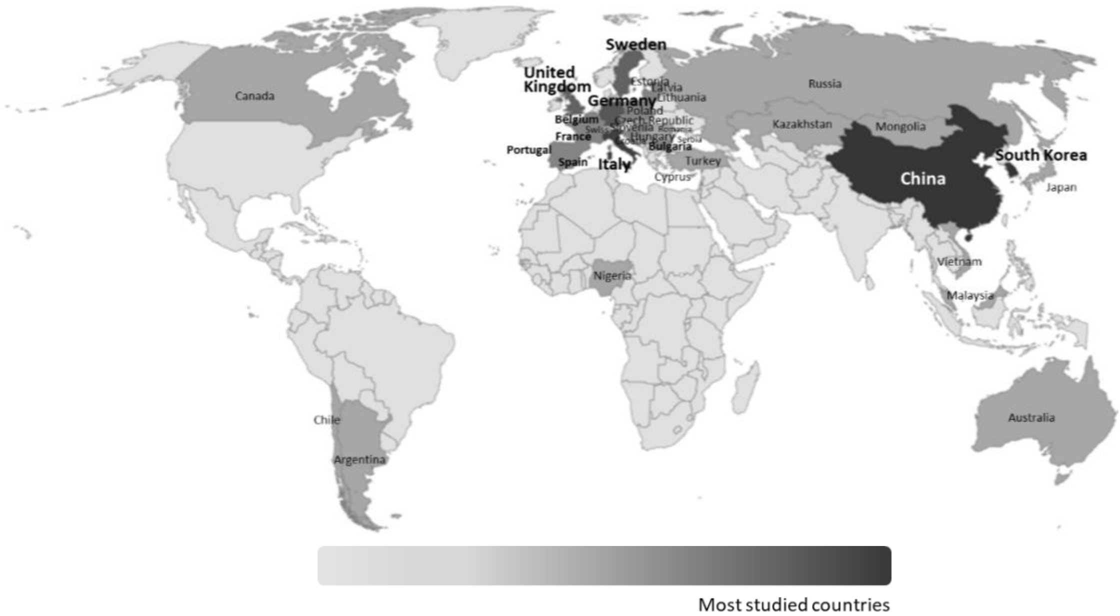

Figure 5. Geographic location of the most studied countries

In the set of 56 articles analyzed, 40 different countries were studied, of which approximately 55% are European countries. China, Italy, Germany, and South Korea are the countries studied in more articles, with a clear emphasis on China, which, being an emerging economy, represents one of the current leading economies worldwide. It is interesting to note that most studies are applied to only one country. Of the 56 articles analyzed, only 5 articles studied sets of countries. These articles have in common the fact that they focused their study on European countries and were based on the Community Innovation Survey database.

Along with this growing interest we have the number of scientific journals, which is equally vast. We identified 40 different scientific journals where the 56 articles analyzed were published. The journals with the highest number of publications are shown in Figure 3, with a clear emphasis on the Research Policy.

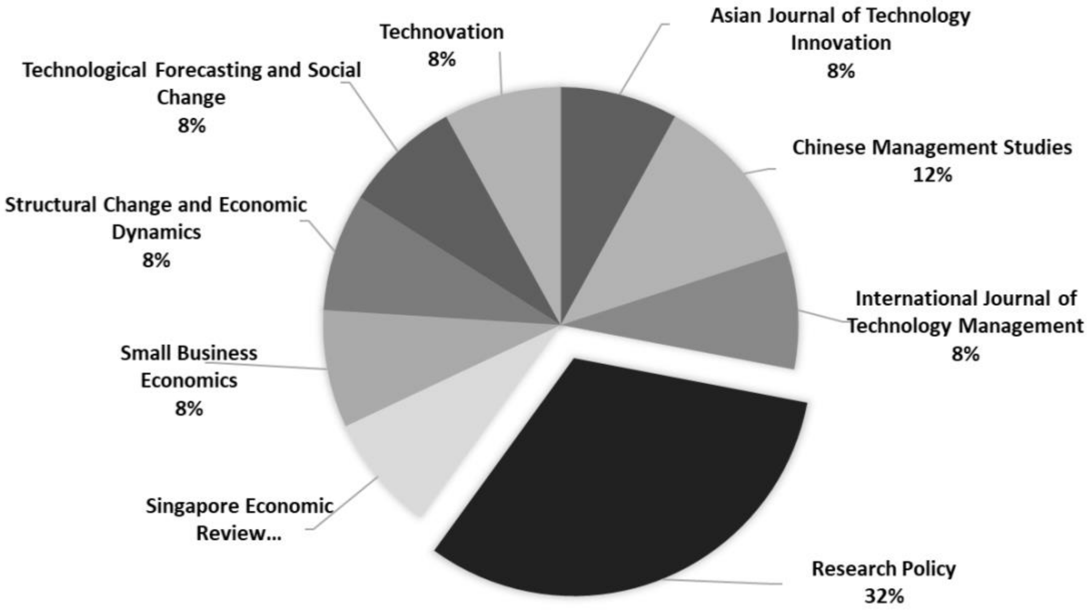

Figure 6. Scientific journals with the largest number of publications (from the sample of 56 articles)

There is also a wide variety of authors who direct their study to the relationship between public support for innovation and its effects on business activity and performance. The 56 articles analyzed have the participation of 144 different authors, including Hong J., Hottenrott H., Huergo E., Lopes-Bento C., Wang L. and Wang Y. These authors contribute topics in the Scopus database: Additionality; subsidies; Tax Incentives; Alliance Portfolios; Absorptive Capacity; Open Innovation; Eco-Innovation; Porter Hypothesis and Environmental Innovation. Some of these authors, in addition to contributing to a greater number of publications compared to our sample of 56 articles, are also the ones with the highest number of citations. Citation analysis provides an overview of the most cited articles and demonstrates that documents located next to each other are related by citation or being cited. The works that stand out are Kang KN & Park H. (2012) with 151 citations, Czarnitzki D., Hanel P. & Rosa JM (2011) with 130 citations, Hottenrott H. & Lopes-Bento C. (2014) with 85 citations, Hong J., Feng B., Wu Y. & Wang L. (2016) with 80 citations and Nishimura J. & Okamuro H. (2011) with 73 citations. Kang & Park (2012) analyzed a sample of 147 South Korean companies in the biotechnology sector.

These authors highlighted that the development of the biotechnology industry has been a national agenda, particularly in developing countries, but few studies address factors that influence the performance of innovation in countries with unfavorable environments for the development of biotechnology. The results of their study on the importance of governmental R&D funding and networking with foreign universities and research institutions as well as downstream partners. Czarnitzki, Hanel, & Rosa (2011) also analyzed the effect of public support for R&D, but in a country with a higher level of development, such as Canada. And considering that public support between 1997 and 1999 was used by more than a third of all manufacturing companies and by almost two thirds of companies in the high technology sector, they seek to understand the effect of this support on the company's performance, evaluated for number of new products, sales with new products, originality of innovation, among other aspects. Also, Czarnitzki, Hanel, & Rosa (2011) concluded that the recipients of government support performed a greater number of product innovations, as well as a greater share in the sales of new and improved products. They also achieve a higher probability regarding the introduction of market novelties both for the Canadian domestic market and for the world market. Hottenrott & Lopes-Bento (2014) tested if the whether the policy design aiming at incentivizing (international) collaboration and R&D in SMEs achieves input as well as output additionality. In their study of companies in Belgium, they concluded that the targeted public subsidies trigger R&D spending, especially so in internationally collaborating SMEs. They also concluded that the publicly induced R&D is productive as it translates into marketable product innovations and the effect of policy-induced R&D investment on sales from market novelties is highest for international collaborators as well as for SMEs. In contrast, Hong, Feng, Wu, & Wang (2016) concluded that government grants exert a negative influence on innovation efficiency of high-tech industries. On the other hand, the impact of private R&D funding is significant and positive. Okamuro & Nishimura (2015) also concluded that not every support program contributes to firm performance and firms should therefore select the program that is most aligned with their aims.
According to these authors, indirect support programs have an extensive and strong impact on output whereas direct R&D support has only a weak effect. To identify the main related concepts in the articles studied, a keyword analysis was performed.

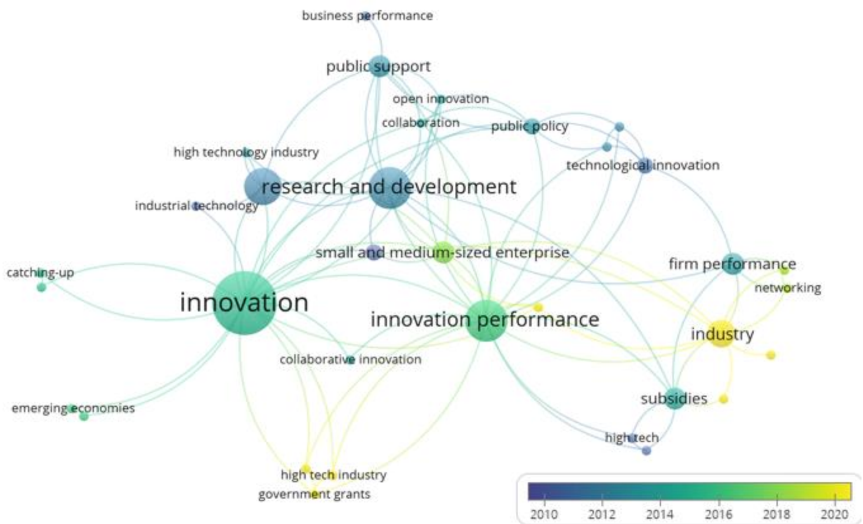

Figure 4. Keyword network over the years

As can be seen in Figure 4, at the beginning of the period under analysis the most discussed and related concepts are R&D, business performance, public support, and open innovation. Throughout this period these concepts are being complemented with the concepts of innovation, innovation performance, collaboration, high tech industry and in several articles applied to small and medium-sized companies. Finally, the articles published in 2020 also include the concept of high-tech, collaborative innovation and SME, in addition to the concept of emerging economies. In more detail, when analyzing the relationship of the most frequent concepts with other expressions, it was found that the concepts of R&D and subsidies are often used together and related to innovation and technological innovation, also with productivity and financial efficiency, small and medium-sized companies, and open innovation (J. Kang, Gwon, Kim, & Cho, 2013; Yao, Xu, Jiang, & Zhang, 2015; Žampa & Bojnec, 2017). The concept of innovation, in addition to its frequent relationship with R&D, appears several times associated with government support and once again related to small and medium-sized companies and technology and to the concept of collaboration (Greco, Grimaldi, & Cricelli, 2017; Prokop & Stejskal, 2019; Xie et al., 2016). The concept of company performance is associated with the previous concepts, but also with R&D subsidies, green process Innovation, entrepreneurship, job creation and emerging economies. Finally, the concept of innovation performance appears related to R&D subsidies or government support and related to high-tech industry, China, collaboration, and policy evaluation. Regarding the most frequently used data processing methodologies, the probit and logit models are the most used. Around 55% of the studies used these models and, in some cases, reconciled them with methodologies such as propensity score matching and difference in differences. Some authors (about 17%) opted for Tobit or Heckman (Tobit type II) models. Other authors used structural equation models to analyze the relationship between variables (about 10%) and the remaining articles used other approaches such as semi-parametric models, hierarchical regression, and negative binomial regression.

4. META-ANALYSIS

Considering the bibliometric analysis previously carried out and using the sample of selected articles, a database was built that includes these studies, their characteristics, and results. This being the first step of a meta-analysis (Ugur, Churchill & Solomon, 2017). To compare the results of existing studies, a summary statistic is needed, which is the dependent variable used in the meta-regression. In this case, from our sample of articles, 30 analyzed the impact of public support on company performance and 39 analyzed its effect on innovation performance. That is, 13 articles analyzed the effect of public support on company performance and on innovation performance. As mentioned by Neves & Sequeira (2018), defining the dependent variable to be used in a meta-regression is not an easy task and is a common problem in meta-analysis. The empirical studies used in this meta-analysis sometimes estimate elasticities and other marginal effects without it being possible, in most of them, to calculate dimension-free parameter estimates, such as elasticities due to the lack of necessary statistical information (García-Quevedo, 2004). Some studies, when analyzing innovation performance, define the dependent variable as total R&D expenditures (e.g., Cerulli & Potì, 2012; Arqué-Castells, 2013; Kim, Oh, & Lee, 2015), on the other hand, other authors use the insertion in the market for new or improved products (e.g., Kampik & Dachs, 2011; Rese, Kutschke, & Baier, 2016) and others use patent registration (e.g., Hong, Hong, Wang, Xu, & Zhao, 2015; Ur Rehman, 2016; Wei & Liu, 2015).

Regarding company performance, some authors choose to analyze sales volume (e.g., Jaklič, Burger, & Rojec, 2013; Olcay & Bulu, 2015) while other authors use asset profitability (e.g., Dai & Wang, 2019; Dvouletý & Blažková, 2019; Nguyen, Van, Bartolacci, & Tran, 2018) which makes the estimated coefficient to be interpreted in a different way. Therefore, the approach commonly used for meta-analyses in medicine and psychology is followed, which seek to analyze the effects of treatment by defining a binary outcome (1 = improved, 0 = not improved) 2, considering:

IP = 1 if there is a positive effect of public support on innovation performance and IP = 0 if there is no positive effect. FP = 1 if there is a positive effect of public support on the company's performance and FP = 0 if there is no positive effect. The purpose of a meta-analysis is to examine whether the characteristics of the studies influence the results. These characteristics are the independent variables - also often called moderating variables - in the meta-regression. The choice of variables was based on the analysis of the articles in our sample, together with the combination of approaches followed by other authors (e.g., García-Quevedo, 2004; Stanley, 2001). The variables are shown in Table 1.

OBS	=	Number of observations
NAUT	=	Number of authors
PANEL	=	1 if a study uses panel data
LAGDEP	=	1 if a study uses a lagged dependent variable
CG	=	1 if a study uses a control group

Table 2: Meta-independent variables

To perform the meta-regression and given the binary nature of the dependent variable, the estimate was performed using logit models (Greene, 2002), shown in Table 2. Table 3 presents the results of the marginal effects of the model that includes all explanatory variables. It should be noted that the econometric evidence on the relationship between public funding and company and innovation performance is ambiguous, and the literature on this relationship is fundamentally empirical and descriptive, with sometimes contradictory results (e.g., Ugur, Churchill and Solomon, 2017; Xiang and Worthington, 2017 and Neves and Sequeira, 2018). The meta-analysis performed synthesizes the results of research previously obtained on the subject. And while meta-analysis is not without its problems, it is a useful alternative in trying to determine whether a particular choice of method, design, and data affects reported results (García-Quevedo, 2004).

The logit models presented (from 1 to 6) were built sequentially, increasing the number of explanatory variables, to verify their impact on the global evaluation of the model. As can be seen, there is no change in the conclusion regarding the validation of the hypothesis regarding the global significance of the model. The same is observed in the model in table 3, referring to marginal effects. Confirming that the number of observations, the number of authors, the use or not of panel data, the use of time lag in the dependent variable and the use of a control group has no influence on the results obtained.

	(1) PERF	(2) PERF	(3) PERF	(4) PERF	(5) PERF	(6) PERF
OBS		-0.00000636	-0.00000843	-0.00000922	-0.0000126	-0.0000109
		(-0.41)	(-0.52)	(-0.56)	(-0.75)	(-0.63)
NAUT			-0.211	-0.217	-0.243	-0.322
			(-0.50)	(-0.51)	(-0.56)	(-0.69)
PANEL				0.224	0.00323	0.0944
				(0.28)	(0.00)	(0.11)
LAGDEP					0.689	0.776
					(0.88)	(0.98)
CG						-0.690
						(-0.83)
_cons	1.411***	1.455***	2.047	1.909	1.772	2.308
	(4.00)	(3.91)	(1.61)	(1.40)	(1.28)	(1.45)
N	56	56	56	56	56	56
pseudo R^2	0.000	0.003	0.008	0.010	0.025	0.039
ll	-25.24	-25.16	-25.04	-25.00	-24.61	-24.25
aic	52.48	54.33	56.08	58.00	59.23	60.49
bic	54.41	58.19	61.88	65.73	68.88	72.08
chi2	3.55e-14	0.156	0.401	0.480	1.257	1.989
p	.	0.693	0.818	0.923	0.869	0.851

Table 2. Logit models: Innovation / company performance

Dependent variable: PERF (binary variable with value 1 when the article concludes that public support for innovation led to an increase in the performance of the innovation and/or the company)

	dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
OBS	3.90e-07	1.73e-06	0.23	0.822	-3.01e-06	3.79e-06
NAUT	-.0364613	.0614779	-0.59	0.553	-.1569557	.0840331
PANEL	-.0089277	.1176953	-0.08	0.940	-.2396063	.2217509
LAGDEP	.0825568	.1098127	0.75	0.452	-.1326722	.2977858
CG	-.0886838	.1134909	-0.78	0.435	-.3111218	.1337542

Number of observations: 56

Table 3. Logit models with marginal effects: Innovation / company performance

The results show that, in general, there are no specific characteristics of the study that lead to a certain result. Thus, considering that 82% of the articles concluded that public support for innovation positively influences the performance of the innovation and/or company, the results suggest that the data analysis criteria of the data of the articles in no way interferes with the results obtained. That is, it does not seem that the choice of certain factors influences the conclusions about the impact that public support has on the performance of the innovation and/or the company.

5. CONCLUSION

The objective of this study was to increase knowledge about how public support for innovation and/or R&D affects company performance. In this sense, a search was carried out in the Scopus database, to identify the main articles published on this topic over the last 10 years. The identification and selection of articles followed the premise that these should be comparable empirical studies. Through a bibliometric analysis, we found that interest in this topic has increased considerably over the last few years, highlighting the last 5 years (2016 to 2020). According to our sample of articles, most studies focus on European countries, with Italy and Germany standing out. It was also possible to verify that of the 56 articles, only 5 chose to study more than one country, being that they were groups of European countries. Two other major highlights are South Korea and China, which, being an emerging economy, is a country that has increasingly asserted itself not only in economic terms, but also in terms of innovation. The analysis of the articles made it possible to identify the main lines of study addressed, with emphasis on subsidies to small and medium-sized companies. These subsidies seek to boost innovation and thus contribute to the performance of companies. This performance is often evaluated through sales, sales of new or improved products, profitability of assets and equity, firms' total factor productivity, revenue growth, added value per employee, among other factors. The concept of technological innovation is equally frequent, associated with R&D subsidies, and once again related to the performance of companies. In turn, innovation performance is a dimension evaluated by patent registration, R&D intensity, R&D per employee, market introduction of new products, among other factors. Once again, it is a concept often associated with government support, technological development, and collaboration. In addition, we identified two themes that go beyond the policy areas proposed by the publications mentioned: support for green innovation and support for development in the context of emerging economies. The econometric evidence on the relationship between public funding of corporate R&D and company and innovation performance is ambiguous, so we carried out a meta-analysis with the aim of synthesizing results of research previously obtained on the subject. From our sample of articles, 39 focused on company performance and about 57% of these studies concluded that government support effectively contributes positively to company performance. Of the 30 articles that focused on innovation performance, 39% confirmed the positive effect of public support. The results of the meta-analysis carried out show that there are no specific characteristics of the study that lead to a certain result. These results reinforce and complement the conclusions obtained in the literature reviews and show that it is not possible to obtain regularity in the relationship between the main characteristics of the design of the applied analyzes and the results obtained by them. The main limitations of this study are the fact that it uses a sample of studies and, therefore, studies that would be relevant may be excluded. There is also the fact that this is a final sample of 56 articles over 10 years, with the risk associated with the small size of the sample and possible errors related to the approaches followed by the authors of these studies over the years. Despite the limitations identified, it is a work in progress, which could serve to deepen the identified conclusions and advance in this field of research and reach conclusions that are useful in the design of technology policies, it seems necessary to make an effort to structural modeling that made it possible to identify the channels of impact of public R&D funding on business behavior.

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STRATEGIC THREATS AND MEASURES TO REDUCE THEIR CONSEQUENCES IN SPORTS ORGANIZATIONS

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ABSTRACT

The purpose of the paper is to analyze the impacts of the Covid 19 pandemic on the sports industry, measures to reduce their consequences, as well as to present a proposal for a strategic risk management framework for sports organizations to support sustainability while facing other negative threats. Based on the processed analysis of the assessment of the impacts of the covid 19 pandemic and measures to reduce their consequences for the sports industry, the authors of the article propose another important measure an increase in interest in prevention - paying more attention to risk management. The essence of the proposed framework of strategic risk management for sports organizations is the determination of the individual steps of the application, i.e. j. ensure the support of the management of the sports organization for risk management, create a risk culture, establish a risk management strategy and policy, responsibility for risk management, establish risk criteria, risk capacity, risk appetite, as well as use methods and techniques for analyzing the external and internal environment.

Keywords: *Risk, Strategic management, Threats, Covid 19 pandemic, Consequences, Sports organizations*

1. INTRODUCTION

The sports industry is an important economic sector in the EU, with a share in national economies and in larger European countries, it employs millions of citizens and generates billions in revenue. However, the sports industry was also affected by the Covid-19 pandemic. Currently, many authors, institutions, and organizations in individual EU states are evaluating the economic and social impacts of the Covid-19 pandemic on the sports industry. On the one hand, the consequences related to the Covid-19 pandemic, which sports organizations had to face, have not yet been resolved, on the other hand, other catastrophic threats are currently emerging, such as the war in Ukraine, or the increase in energy prices. These negative events from the past and current period point to the vulnerability of the sports industry, as well as its sustainability for the future. European sport is based heavily on small clubs and associations, which play a key role in enabling people to participate in affordable sporting activities. These small clubs and associations are the backbone of European sports (Varmus et al., 2015). These are mostly non-profit organizations, without any contingency funds, operating often in challenging conditions and relying on their dedicated volunteers and staff. The Covid-19 pandemic has caused mobility restrictions, and blockades have hurt the sports sector to the core (Dašić et al., 2020). Not only small clubs suffered but also large ones, from non-professional sports industries to the entire sports sector and all the stakeholders, such as athletes, coaches, instructors, staff of sports organizations, volunteers, referees, delegates, and businesses (especially micro and small businesses, e.g., fitness clubs, gyms, retailers, event organizers, marketing agencies, manufacturers, and renters of sporting goods) (Wiltshire et al., 2022; Edgar, 2021).

The sports industry is a fast-paced and highly competitive industry in which strategic management and strategic risk assessment of sports organizations should also be accounted for (Hoye et al., 2015). Strategic sport management can be defined as the aim of a sports organization in a pre-selected direction depending on factors influencing the external environment and maximizing the organization's resources and capabilities to gain a competitive advantage or meet the needs thereof (Bill, 2009). While in the regular business sector, the highest priority is given to customers and shareholders, in the sports sector, organizations need to satisfy a larger number of stakeholders, and the strategic management process—primary objectives—should also be consulted with the athletes, coaches, parents (for youth organizations), and/or sponsors (Varmus et al., 2018). Strategic management in sports organizations has a higher level of public accountability. To achieve successful strategic management in sports, it is necessary to use enough resources in combination with analysis, passion, bravery, adaptability, and creativity. Delarestaq et al., (2017) identified three main benefit levels of applying elements of strategic management in sports - individual (enhancing managerial abilities and skills, increasing job satisfaction), organizational (enhancing innovation process management, improving risk management), and social (creating value for the customer, sustainability of job positions, building the position of sports in the community). (Adamik, 2021)

2. RESEARCH METHODOLOGY

The paper's aim is to analyze the impacts of the Covid-19 pandemic on the sports industry, measures to reduce their consequences, as well as to present a proposal for a strategic risk management framework for sports organizations to support sustainability while facing other negative threats. The methodological basis of the paper was the assumption that the turbulent changes in the sports industry caused by the Covid-19 pandemic can be a source of risks and crises for unprepared sports organizations. It can be assumed from the above that, despite the unpredictability of some situations in the sports sector, it is possible to withstand the impact of risks or at least significantly reduce the consequences of adverse situations. The comparison of existing knowledge and approaches to risk management confirms the high topicality of the issue addressed. The experience derived from the application of risk management in organizations shows the benefits of managers mastering risk assessment methods.
The following methods were used to achieve the aim:

- analysis of relevant foreign and domestic sources, studies, surveys, authors' own experience,
- comparison of current knowledge and approaches,
- examination, and assessment of other knowledge from experts from the field and the academic area,
- assessment, and generalization of current knowledge on risk management in sports organizations,
- synthesis of proposed solutions i.e. the framework of strategic risk management for sports organizations.

3. RESULTS

To meet the objective, the following results were produced by the paper authors:

3.1. Covid 19 Pandemic Impacts on the Sports Industry and Mitigation Measures in the EU

In 2021, the European Commission (Directorate-General for Education, Youth, Sport, and Culture - DG EAC) published a report on the economic impact of the Covid-19 pandemic on the EU sports sector. Ecorys and SportsEconAustria were involved in the production of the study. The study aimed to assess the economic impact of the crisis in the sports industry and to help the sector address the socio-economic challenges arising from the pandemic.

According to the conclusions drawn, the sports sector was significantly affected by the Covid-19 pandemic in all Member States of the European Union. In some countries, funding from sports and related activities to national budgets has fallen by 10%. The number of employees tied to sports activities has also declined, as have profits from admission fees and various membership fees. Some sports clubs were in a very difficult situation as they had low financial reserves before the crisis and relied mainly on membership fees and support from volunteers. Most EU Member States have chosen to support the sports industry in challenging times, recognizing the importance of promoting physical activity for the health of society (European commission 2022, SHARE initiative, 2022). According to the SHARE initiative, the main issues affected by the Covid-19 pandemic in the sports sector have been identified and are currently being monitored by stakeholders (European commission 2022, SHARE initiative, 2022):

- Loss of revenue: organizations could not provide their services to citizens. They have also lost a significant part of their regular income coming from different revenue streams, such as membership, licensing, participation, or subscription fees.
- Unemployment: layoffs of employees, athletes, coaches, and other workers, especially those whose wages depend on the revenue streams above.
- Cash flow difficulties: organizations had fixed costs that had to be paid regardless of revenue loss.
- The athletes have not only lost a season and thus certain financial benefits, but they have also lost their coaches and their ability to train and compete, which was reflected in their income. For some, this meant losing the opportunity to gain certain status and secure funding from private (sponsors) and public sources (at local, regional, and national levels).
- Athletes were not receiving financial support (e.g., scholarships, internships) due to a decline in income for sports organizations.
- Things went quickly south for freelancers who were unable to provide services (e.g., trainers) due to restrictions; however, they received some state aid to maintain their businesses.
- Organizations lost a significant part of their unpaid workforce, i.e., volunteers who could not move around due to Covid-19 mobility restrictions.
- Industries that were directly or indirectly related to sport found that many current business models were failing and had to change their business strategies in both the short and long term. This has affected many jobs and businesses.

In 2021, a questionnaire survey of tennis clubs in Slovakia was conducted by the Slovak Tennis Association (STZ) to determine the impact of Covid-19 restrictions on the management of tennis clubs. The results were compared with data for 2019 and 2020. The results show that 126 out of 150 clubs (84%), which harm the economy, have reduced their income (revenue) by a total of €1,705,385 year-on-year (2020-2019). At the same time, due to the restrictions, the clubs reduced their costs by €339,958 and received €24,081 in compensation from the state (a drop in revenues by only 1.4%). The main restrictions affected by the Covid-19 pandemic in sports clubs in Slovakia have been identified as follows (Greguška, et al., 2021; Hrbek, Gábriš, 2020):

- The closure of sports grounds has denied young people and the public access to active hobby activities, with an impact on the mental and healthy development of athletes.
- Lower interest in sports on the part of children and parents persisted even after the restrictions can be partially lifted.
- Measures negatively affected the motivation of children to engage in the training process.

- Some clubs had a large shortfall in income and were paying monthly utility costs even with the halls closed, leaving some in existential problems.
- In addition to the loss of revenue for clubs, the restrictions also had a major impact on the loss of income for coaches (CSR).
- State aid for non-profit organizations was poorly handled by the government, and aid for land rents was not provided at all.
- The cancellation of team competitions in 2020 did not allow clubs to achieve better results, which would allow them to receive aid from the Slovak Tennis Association.

With the limitations and impacts of the Covid-19 pandemic, it was important to put rapid and adequate support in place to mitigate the adverse impacts on the sports sector (Grix et al., 2020). Member States regularly discuss ways of reallocating part of the European Structural and Investment Funds to deal with the consequences of the crisis. It is essential to support and stimulate a sustainable sports sector (both public and private) in line with the European Initiatives Support to Mitigate Unemployment Risks in an Emergency (SURE), Coronavirus Response Investment Initiative (CRII), and Coronavirus Response Investment Initiative Plus (CRII+), as well as other initiatives at national and European level (SHARE initiative, 2022).
The expert group and the EU institutions mentioned above have adopted nine key recommendations for the future to prevent further losses in the sports sector. Such measures should include in particular (SHARE initiative, 2022):

1. Ensuring the eligibility of the sports sector for state support to protect jobs, employees, and freelancers from the risk of redundancy and loss of income.
2. Simplification of state aid rules - as is already the case in other sectors—to allow tax breaks for companies and organizations that support sporting activities.
3. Stimulating innovation programs (industrial modernization) for sports organizations to address current societal challenges.
4. Provision of loans to provide liquidity to sports clubs and other associations through existing EU financial instruments (e.g. European Investment Bank) or newly created instruments in response to the crisis.
5. Redirecting certain EU and national funding streams, in particular, European Structural and Investment Funds, towards activities that promote the well-being of people, including through sport and physical activity.
6. Establishment of public and private solidarity funds for mass sports clubs and associations and their employees, including external coaches and freelancers.
7. Creating new funding opportunities as innovative ways to support sport and physical activity at times when people have to stay home.
8. Helping schools and PE teachers to continue to educate pupils through digital means that are effective and safe (and stimulate innovation), i.e., through funding, guidance, examples of best practices, and online price benefits.
9. And ultimately stimulating healthy active lifestyles in the working population, both those who work at home and in the office, by introducing innovative solutions to stimulate physical activity.

The European Commission (Directorate-General for Education, Youth, Sport, and Culture - DG EAC) also presented measures to mitigate the socio-economic impact of the Covid-19 pandemic on the EU sports sector. In total, it has published 60 individual actions and initiatives of varying size, complexity, and ambition. These were measures from 22 individual EU Member States, as well as measures implemented at the EU or global level.

These have been put into seven categories (European commission, 2022):
1. New structural grants and funding methods.
2. Exemption, deferral, or postponement of duties.
3. Extension and adaptation of existing support measures.
4. Advance payment.
5. Holiday schemes.
6. Allowances for freelancers and athletes.
7. Information resources and guidelines.

3.2 Measures to Prepare for Other Strategic Threats - Emphasis on Risk Management in Sports Organizations

In addition to the constraints analysed above - the problems brought about by the Covid 19 pandemic - this situation also provides opportunities for innovation and rethinking of policies and priorities in the long-run management of sports organizations (MESRS SR, 2020; Sadler, 2019). On the basis of the Covid-19 pandemic impact assessment on the sports industry, the authors of the paper propose - as another important measure - to increase the interest in prevention, i.e., paying more attention to risk management. Effective application of risk management can facilitate the preparation for other strategic threats and negative events affecting the daily functioning and management of sports organizations (Buganova, Simickova, 2019; Lusková, Titko, 2016). The authors propose the framework of strategic risk management for sports organizations, which consists of the following steps (parts), fig. 1:

Fig. 1 The framework of strategic risk management for sports organizations (Source: own processing)

1. The primary challenge in enforcing risk management is to have sufficient support from the sports organization's leadership to enforce the right risk culture. Leadership needs to have a prevention-focused approach. Prevention applied through risk management should be part of strategic management and approaches focused on analysing failures to achieve the targets and designed to prevent their recurrence.

2. The next step is to develop a risk management strategy for sports organizations as part of the strategic management. The risk management strategy should establish the risk management roles, allocation of resources, and distribution of tools. It is an important factor in the decision-making process and greatly influences the expected development of the management of a sports organization.

3. It follows from the above that - depending on the specific situation, financial strength, and the amount of estimated potential losses - the management of the sports organization should define an adequate risk management policy that supports the chosen strategy with a positive impact on the achievement of objectives. The declared risk management policy should also include risk management principles, more oriented toward regular monitoring and evaluation of the results of the objectives, the interconnection of risk management with all key processes, communication of risks with stakeholders, and an overall emphasis on the contingency plans of a sports organization if things fall apart.

4. The next step should be to establish risk responsibilities. The list of risk management powers and duties depends on the size and specific conditions of the sports organization. In large international sports organizations, it is advisable to create the position of the Risk Manager, and with small sports clubs, the risk responsibility should be with the club management, or another person assigned for this purpose, e.g., the Club Manager.

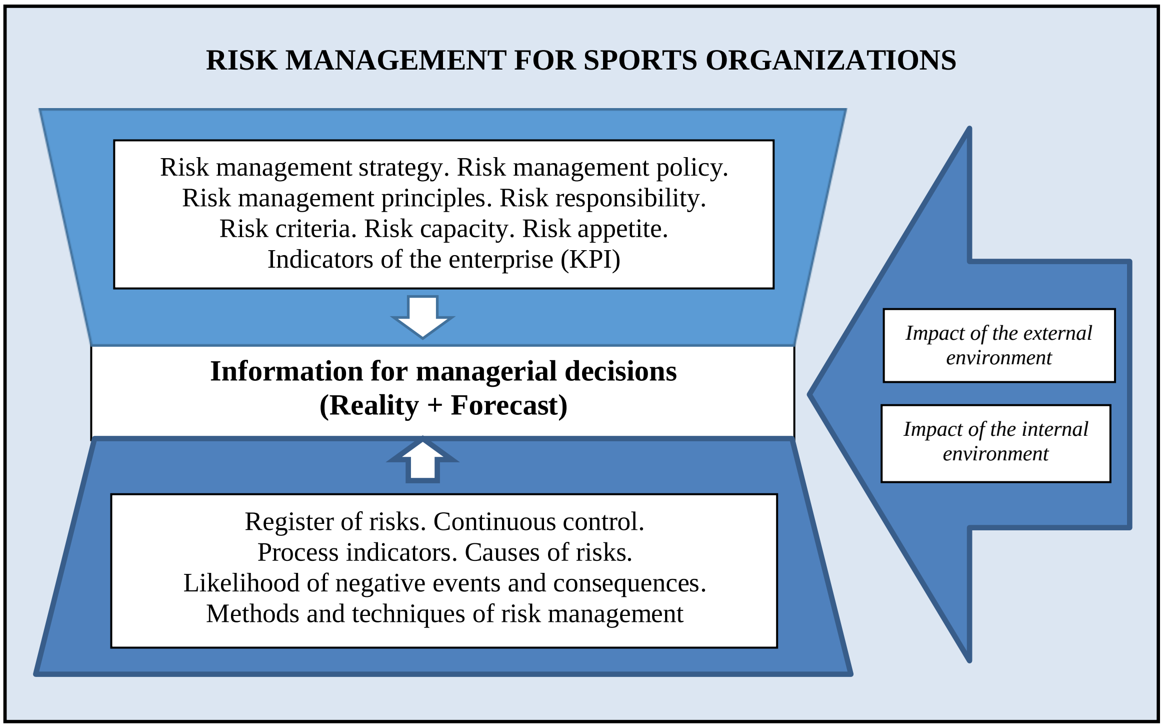

Fig. 2 A view of risk management for sports organizations (Source: own processing)

The leadership of the sports organization should design, implement, and maintain the entire risk management process as a whole and approve risk management policies, strategies, and objectives. It shall also review and discuss risk management documents at least once a year assessing the overall risk position (risk reporting) and the progress of the most severe risks of the sports organization. The person in charge of risk management should regularly update data, and indicators, identify, analyse, and assess risks, monitor their development, and raise red flags (in line with the tolerance limit established for this purpose). They shall propose measures to reduce the exposure and prepare periodic risk reports for management. They shall also seek to improve the procedures and methods used in risk management in line with the strategy of the sports organization.

The management of a sports organization should define the key risks at least once a year, considering the overall external and internal environment in which it operates. The current strategic risks of sports organizations include the following (Hudakova et al., 2022):
- Financial risks - lack of liquidity, profitability and cash flow, failure to raise funds - sponsorship, tickets, sale of players, rent of premises, increased costs of purchasing players, salaries, membership, rehabilitation, care of players, risk of closure, the bankruptcy of associations and clubs...,
- Economic risks: energy increase, property tax (stadium, training grounds, offices...), unemployment of people in the sports industry...,
- Risks arising from the management of the club, e.g., failure to secure high-performing players, wrong strategy, incompetent management...,
- Competitive risks arising from competing clubs...,
- Legislative risks: non-compliance with the Sports Act, regulations, decrees...,
- Criminal risks: damage to property, cyber attacks, damage to reputation, extortion, fraud, embezzlement...,
- Social risks: lack of interest of children/parents in the sport, insolvency of parents...,
- Stakeholder risks from the perspective of sports associations, cities, schools, media, suppliers, players' agents, partners, and the public…

5. The next step is to define the risk criteria to determine the severity of the exposure. These criteria are thresholds for assessing the significance and severity of risks. Sports organizations should define the highest level of acceptable loss the organization can suffer to survive (risk capacity) and set a level of risk that the organization is willing to take and that they can withhold (risk appetite), i.e., set tolerance limits. When defining the risk criteria, the following aspects should be considered:

- causes and consequences of risks,
- the way of defining and time frame the probability of occurrence of negative events and consequences of risks,
- determining the level (measure, importance) of risks and risk tolerance limits.

6. Within the strategic management in sports organizations, it is necessary to produce an analysis of the external and internal environment in connection with risk management. It is also essential to assess the capabilities of the sports organization in relation to the objectives and risk management strategy. The following methods and techniques should be applied to analyse the environment of sports organizations:

- STEEP analysis, Porter's 5 Forces Model - external environment analysis.
- Resource analysis, capability analysis, vulnerability analysis, identification of key indicators of the organization and processes - analysis of the internal environment.
- SWOT analysis, SPACE technique, scenario analysis, and strategic thinking method; with the help of these analyses, it is possible to summarize the results of the previous analyses and establish a forecast of the future direction and development of the environment of the sports organization

Sports organizations should set their management and operations up for prevention and effective strategic thinking with a focus on risk management. They should use the process of creative thinking about the future development of individual indicators affecting the set objectives. This process can be complemented by up-to-date information and new knowledge that influence developments in the external environment.

It is correct to apply here a simple logic that should be based on a strategic decision-making process derived from the analysis of sub-scenarios of the development of the basic factors of the organisation's environment and their incorporation into an aggregate estimate of the future development of the sports organisation. These comprise the external factors evolution scenarios, e.g., the evolution of the Covid 19 pandemic, the evolution of energy price rises, the evolution of financing, the evolution of competition, etc.

4. CONCLUSION

The field of sport is an important element of an economy in any country. The Covid-19 pandemic hit the EU and its Member States suddenly and dramatically. It has impacted every part of the sports value chain - from the athletes themselves, through sports teams, clubs, and leagues, up to the media. What is significant is that the sports industry is supported by the EU also, as well as various EU associations, to improve current policy-making processes for sport at both national and EU levels and to develop measures to save the sport. Sports organizations are currently exposed to negative threats they have to deal with, i.e., rising energy prices, etc., and they have to prepare measures to mitigate their consequences right now. This uncertainty highlights the need for prevention and the importance of risk management in sports organizations also. Hence, it is necessary to develop and enforce a strategic risk management framework (framework) in sports organizations allowing the management to learn and know the key strategic risks they are exposed to in achieving key objectives and propose actions to mitigate them. The benefit of the paper is to support the strategic management process in sports with more emphasis on risk management, due to current and future threats to sports organizations not only in Slovakia but also in other European countries. With the right approach to the effective application of risk management, sports organizations can better anticipate and prepare for strategic threats, affecting their operations and performance, and thus increase the likelihood of achieving their objectives, especially profit and sporting success.

ACKNOWLEDGEMENT: *The paper was prepared with the support of the project APVV-20-0481 - Sustainability Strategy of a sport organization in the conditions of the Slovak Republic.*

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SOCIAL ENTREPRENEURSHIP IN SLOVAKIA AS A TOOL FOR WORK INTEGRATION AND EMPLOYMENT SUPPORT

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ABSTRACT

The Slovak labour market is currently showing favourable results, but some problems in its structure still persist. The most serious problems include unemployment among graduates and young people, people over 50, with little or no education and no work experience. Furthermore, we can observe a high proportion of long-term unemployment and also huge regional disparities. The hard core is made up of people who have multiple disadvantages and cannot find employment without help from others. The solution may lie in the social economy and social entrepreneurship, which is currently developing in Slovakia and helping vulnerable and disadvantaged groups to find a place in the labour market. The adoption of the Law on Social Economy and Social Enterprises has created space for further development of the social economy sector in Slovakia. The new law has brought "order" in terminology, set up a system of support for social economy entities, and at the same time, it is also raising awareness. Regional social economy centres, which provide advice and administrative support to those interested in social entrepreneurship, are also a great asset. We positively assess the development of social enterprises in the least developed regions and the establishment of social enterprises by local governments. It is the municipalities that are the most competent in solving local problems, and municipal social enterprises respond to the demand of the local community. This paper focuses on the analysis of the current labour market situation in Slovakia with an emphasis on disadvantaged jobseekers and in relation to social entrepreneurship and its contribution to employment.

Keywords: *Labour Market, Social Economy, Social Entrepreneurship, Unemployment, Work Integration Social Enterprises*

1. INTRODUCTION

Growing social and environmental problems put pressure on the emergence of innovative business models that contribute to their solution. One possible path is the social economy and social entrepreneurship, which focuses on the fulfilment of its social, social or community mission and is willing to subordinate profit maximisation to this public goal (Korimová, G. et al., 2008; Lacko-Bartošová, M. et al., 2021; Pongrácz, E., 2021). „We consider the social economy to be a part of the economy and social life, aimed at materially sustaining and ensuring the quality of life of individuals, families and communities, through the expression of social solidarity and social responsibility" (Pongrácz, E., 2021). It creates jobs for vulnerable and disadvantaged people in the labour market as a priority, offers its services and goods to the socially disadvantaged, vulnerable people and communities and is active in the field of environmental protection. „The aim of social entrepreneurship is to create a profitable or cost-efficient economic activity responding to social and environmental needs in the framework of a private initiative serving the general interest" (Fraisse, L. et al., 2016).

Social entrepreneurship finds its application among market imperfections and available resources (Dees, 1998; Sannikova, A. et al., 2021). Based on the available data, the social economy sector provides employment to 6.3 % of the working population of the EU (CIRIEC/EESC, 2017).

2. THE CURRENT STATE OF DEVELOPMENT OF SOCIAL ENTREPRENEURSHIP IN THE SLOVAK REPUBLIC

Since the adoption of the comprehensive Act on Social Economy and Social Enterprises in 2018, the social economy sector in Slovakia has begun to develop dynamically. The law defines the social economy and its subjects, enterprise with a social impact, social enterprise and types of registered social enterprise and defines financial and non-financial support for entities of the social economy. Subjects of the social economy bring positive social effects through their activities by fulfilling the public interest or community interest. The law defines the social economy as "the sum of productive, distributive or consumer activities carried out through economic activity or non-economic activity independently of state authorities, the main goal of which is to achieve a positive social impact" (Act No. 112/2018 on social economy and social enterprises). An enterprise with a social impact can be a civic association, foundation, non-profit organization, special-purpose church facility, business company, cooperative or a natural person - an entrepreneur. They are legal forms of entities that can perform economic activity, i.e. they can do business and their main goal is to achieve a measurable positive social impact. These entities provide goods and services to vulnerable or disadvantaged groups, or employ them; they use at least 50% of the profit to achieve the main goal, and they mainly involve their employees in the company's decision-making processes. A social impact enterprise must meet at least two of these conditions. A social enterprise is a part of the social economy that continuously performs economic activity; employs disadvantaged or vulnerable people or provides services and goods for these groups; uses more than half of its profits to achieve the main goal and involves stakeholders in the management of its economic activity. A social enterprise can, after meeting the criteria established by law, apply for the status of a registered social enterprise. In terms of activity, a registered social enterprise can be an integration enterprise, a social housing enterprise or another registered social enterprise. However, it should be noted that in Slovakia we register a number of initiatives and business activities that operate by respecting the principles of the social economy or of social entrepreneurship, that bring positive social changes, but for various reasons they have not yet applied for the status of a registered social enterprise.

2.1. Work integration and employment support

According to valid legal regulations, the status of a registered social enterprise can be obtained by any entity that meets the defined criteria, regardless of its legal form or subject of activity. This can focus on creating job opportunities for disadvantaged job seekers and/or for vulnerable people (integration company), on providing socially beneficial rental housing (social housing company), can carry out its activities in the area of local development support, environmental protection or provides its products (products and/or services) to disadvantaged or vulnerable persons or communities (other registered social enterprise). A significant contribution of the Slovak legislation is that it defines the space of the social economy in a wider context, thus offering an opportunity for initiatives with social impact, not only through economic activity. The law explicitly determines the area of operation of a social enterprise in work integration and rental housing, but leaves room for its further direction in the category "other registered social enterprise" without further specification.

We can positively evaluate the expansion of the target group of the social economy by defining what is a vulnerable person, which is as follows (Act No. 112/2018 Coll. on the social economy and social enterprises, as amended):

- a social service recipient,
- a person in an unfavourable social situation,
- a child or pupil with special educational needs,
- a person for whom a measure of social legal protection of children and social guardianship is implemented,
- a person after the end of institutional care,
- a person who was placed in foster care or whose guardian was appointed by the court,
- a person dependent on the help of another person,
- a person returning to the labour market after the end of receiving maternity or parental allowance, after the end of performing personal assistance or receiving childcare allowance,
- a person receiving an old-age pension,
- a person (non-entrepreneur) with an income not exceeding three times the amount of the subsistence minimum,
- a person after release from detention (36 months from release),
- a stateless person, asylum seeker or foreigner with supplementary protection.

In Slovakia, a social enterprise, specifically a social enterprise of work integration - WISE (Work Integration Social Enterprises), was enshrined in legislation for the first time by an amendment to Act No. 5/2004 Coll. on employment services in 2008. Pursuant to this law, a social enterprise was included among the instruments of an active labor market policy. Since that time, it dealt with the employment and employability of disadvantaged job seekers, while a certain share of the income was required to be used to create new jobs or to improve working conditions. It was an important moment and a prerequisite for the further development of social entrepreneurship. Gradually, so-called general social enterprises were also created as alternative tools for the development of the territory. They are businesses that solve local problems with the participation of local government representatives. The main goal of the social responsibility of public administration is to ensure sustainable development and ultimately the quality of life of local residents. Criteria were specified for the social enterprise of labour integration (legal entity or natural person). They employed disadvantaged job seekers (defined by Act No. 5/2004 Coll. on employment services as amended) and helped them find employment on the open labour market. A condition necessary was also the reinvestment of a certain share of the income into the business. These entities had the opportunity to draw a financial contribution to support the creation and maintenance of jobs in the social enterprise within the first 12 to 24 months of the job being filled by a disadvantaged applicant. The provision of the aforementioned contributions was cancelled in 2013, and the drawing of further support from the system of the active labour market policy was not connected to the assignment of a status. This caused the situation that business entities that showed signs of social entrepreneurship were no longer interested in applying for status, and the period of 2013-2017 can be considered a period of slow development of the social economy sector (Pongrácz, 2021). The new comprehensive law no. 112/2018 Coll. has the ambition to correct these shortcomings concerning the social economy and social enterprises, which defines entities, criteria, financial and non-financial support for this area and provides the conditions for creating a favourable environment for this sector. It is important to state that a registered social enterprise can also be an entity that has the status of a protected workshop or a protected workplace, regardless of its legal form.

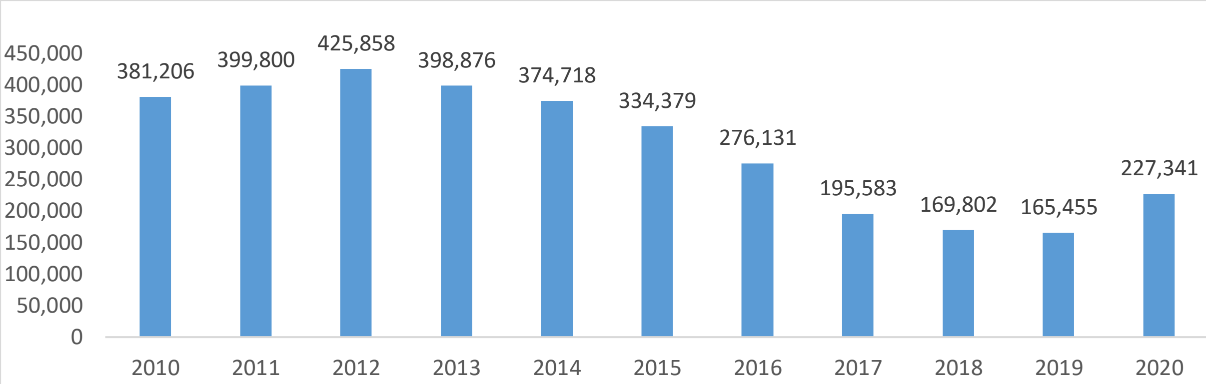
The condition is, in addition to the employment of disadvantaged or vulnerable persons (in the case of a protected workshop, this condition is met), compliance with other conditions determined by law is necessary. In Slovakia, social enterprises aimed at employing disadvantaged and vulnerable people, whose goal is to integrate them into the labor market and into society, began to be established as a priority. This situation is, on the one hand, the result of the existence of two key perspectives, bottom-up mobilization of social entrepreneurs and top-down targeted support of public policies, but at the same time on the other hand it is a reaction to the urgent problem of the regions of Slovakia, that is unemployment, especially of persons with a disadvantaged position in the labor market. An integration enterprise employs disadvantaged or vulnerable persons (this category was defined in the previous text), at least in the proportion of 30% of the total number of its employees and thus declares its positive social impact. When defining a disadvantaged person, Act No. 112/2018 Coll. on the social economy and social enterprises is based on the provisions of Act no. 5/2004 Coll. on employment services, specifying this category in more detail and supplementing it with others, which it includes among the target groups of the social economy. A disadvantaged person is considered to be a a person who:

- was not employed in the previous six months (except for employment lasting more than 40 days in a calendar year and if their income did not exceed the amount of the subsistence minimum) and has another disadvantage:
  - is younger than 26 years of age and has completed their full-time studies less than 2 years ago,
  - is older than 50 years of age,
  - is a long-term unemployed person,
  - is a person with a lower education than secondary vocational education,
  - is a single person who provides care for a dependent person or a child before the end of compulsory schooling,
  - is a member of a national or ethnic minority and needs to develop his language or professional knowledge, or gain work experience,
  - is a person with permanent residence in the least developed region,

- is a person with a disability:
  - is recognized as disabled or
  - has a long-term disability (not recognized as disabled), which can be proven by a medical opinion or a decision not to grant a disability pension (in case of a decrease in the ability to perform gainful activity by more than 20%).

3. DISADVANTAGED JOB SEEKERS IN THE SLOVAK LABOR MARKET

Since the impact of the global financial crisis in 2008, the Slovak labor market has been gradually recovering and since 2013 it has started to achieve favorable results. This trend continued until 2020, when the crisis caused by the Covid-19 pandemic slowed down the improvement of the situation and unemployment started to rise again. In 2020, we saw a sharp increase in job seekers compared to the previous year, and almost 62,000 unemployed persons were added to the records at the labor, social affairs and family offices. In the course of 2021, the situation improved slightly, the rate of registered unemployment in individual months oscillated around 7-8%, and more than 200,000 people remained without work.



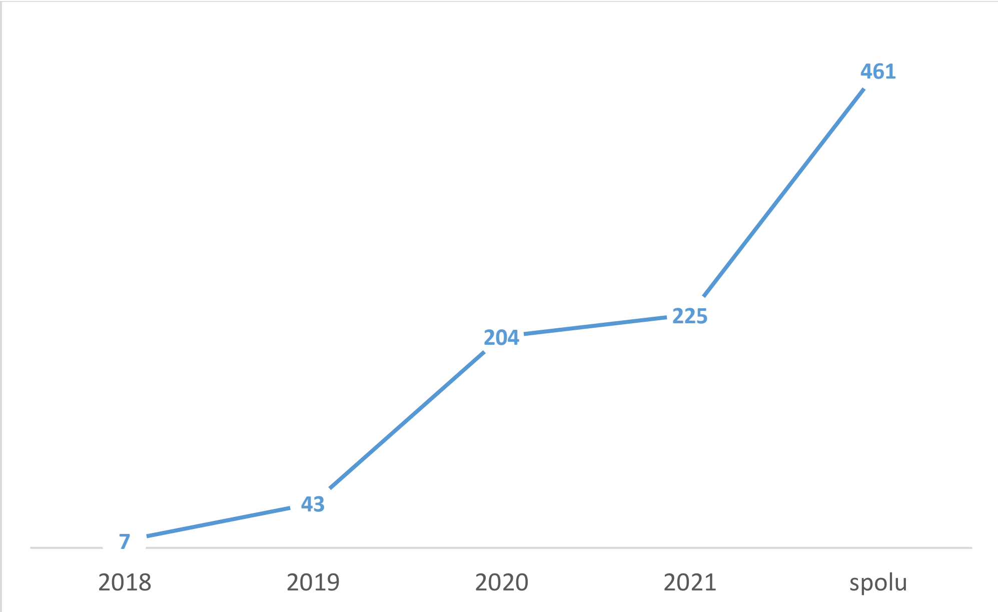
Graph 1: The number of registered job applicants in the Slovak Republic (Source: processed according to the data of the Central Office of Labour, Social Affairs and Family of the Slovak Republic - ÚPSVaR SR, 2022)

The current rate of registered unemployment (January 2022) is just under 7% and the total number of registered applicants is 204,825. The situation expressed in numbers compared to previous periods (especially in the years 2010-2015) does not look unfavorable, but the problems hidden in the structure of unemployment still persist. Among the most pressing challenges that our labor market has to face is the unemployment of graduates and young people, people over 50, people with little or no education, people without experience, as well as long-term unemployment and significant regional disparities.

	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
BA	17196	19417	21222	21780	21601	19282	16361	11732	10339	11135	17652
TT	27839	29086	30578	28682	26034	21855	15413	9824	8530	9218	16001
TN	31970	33203	36065	34579	31767	26300	20248	13199	11127	11732	17628
NR	45669	50344	54376	47795	44059	38885	28590	17949	14584	13493	20853
ZA	40180	42637	45869	44945	40783	33849	27370	19311	16557	16485	24616
BB	66844	68064	72009	66466	63789	57637	48043	34300	29473	28296	36325
PO	79635	81880	88245	83576	78897	72881	64496	46501	41610	40211	49912
KE	71873	75169	77494	71053	67788	63690	55610	42767	37582	34885	44354

Table 1: Development of the number of job applicants in the regions of Slovakia (Source: Central Office of Labour, Social Affairs and Family of the Slovak Republic - ÚPSVaR SR)

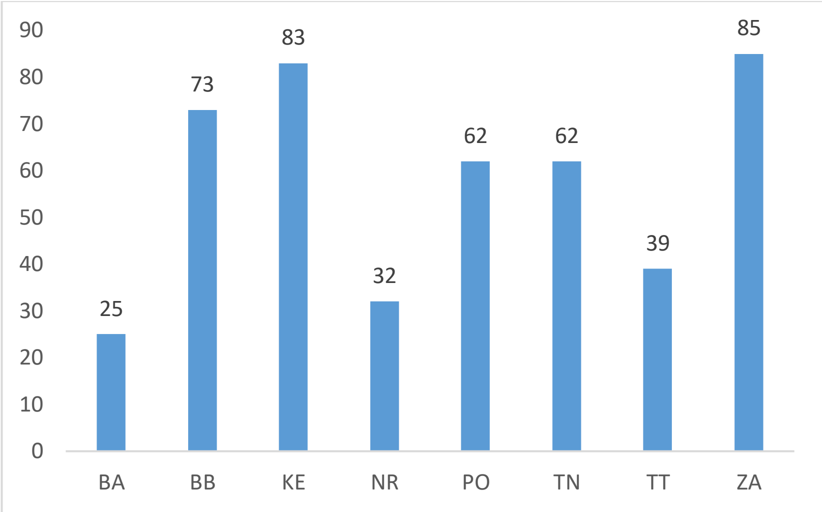
In response to the problems defined and analysed in the previous sections, and thanks to the targeted support of public policies, aimed mainly at work integration, dynamic development of social entrepreneurship is currently taking place in the Slovak work environment. Social enterprises solve market failures and create inclusive and more sustainable jobs with their innovative business model. Since the adoption of Act no. 112/2018 Coll. on the social economy and social enterprises (May 1, 2018), there have been significant changes in the area of the social economy. Gradually, a supportive environment for the birth and development of its entities began to be created, and registered social enterprises began to be added to the register of the Ministry of Labour, Social Affairs and Family of the Slovak Republic.



Graph 2: The dynamics of the development of the number of registered social enterprises (Source: processed according to statistical data of the Ministry of Labour, Social Affairs and Family of the Slovak Republic)

At the end of 2021, a total of 479 entities received the status of a registered social enterprise. In the first year of the existence of the relevant legislation, only 7 entities applied for the status, in the following year 43, and since 2020 we have observed increased interest, which is still ongoing. In 2020, 204 registered enterprises were created and in the last year 225 registered enterprises, during the monitored period 18 enterprises returned their status. Considering the regional point of view, we can state that the emergence of registered social enterprises more or less copies the development of the number of disadvantaged job seekers and long-term unemployment. They are significantly represented in the Košice Region (83), the Žilina Region (85) and the Banska Bystrica Region (73), and the least number of them are in the Bratislava Region (25), the Nitra Region (32) and the Trnava Region (39). By the end of 2021, 479 registered social enterprises were created and 18 of them returned their status, reducing the total number of entities in the register to 461.

We can consider this a positive trend in the interest of the least developed districts in this innovative business model, especially in the case of the Košice Region (56), Prešov Region (52) and Banská Bystrica Region (14), where it is often a municipal registered social enterprise. Their number in the monitored period was 108, which represents 23.43% of the total number and they are represented in all regions. It is an ideal tool for mobilising local resources to successfully tackle community challenges at the local level, with the participation of stakeholders. As of December 31, 2021, in 63 cases, we recorded the transformation of a protected workshop or protected workplace into a registered social enterprise. This was probably due to more favourable targeted support after obtaining the status of a registered social enterprise employing persons with disabilities.



Graph 3: The dynamics of the development of the number of registered social enterprises (Source: processed on the basis of the database of the Ministry of Labour, Social Affairs and Family of the Slovak Republic)

The dominant legal form of registered social enterprises is the limited liability company (their share is more than 90%), which is also one of the most common ways of doing business in Slovakia. Of the legal forms used in the third sector, civil association (4.56%) and non-profit organisation (2.39%) are represented.

4. CONCLUSION

Social economics is an emerging discipline and social enterprise is a relatively new tool for solving social problems. It can be stated that there are many initiatives in the are of social economy in Slovakia that respond to societal challenges and help disadvantaged and vulnerable people to integrate into the labour market and society (Pongrácz, e. et al., 2015). An important milestone in the development of the social economy in Slovakia was 2018, when a new comprehensive law on the social economy and social enterprises was adopted. Since this period, we have observed its dynamic development. In Slovak conditions, work integration social enterprises dominate, which address the situation of disadvantaged job seekers in particular in regions where unemployment is higher. In the more developed areas of Slovakia, the trend is different, and here the first social enterprises are beginning to appear, providing their services and goods or solving problems in the field of environmental protection. In the next period, we expect an increase in the number of work integration social enterprises where unemployment is the most pressing problem. In other regions, there is scope for the birth of social economy entities in, for example, tourism, housing (social housing) and agriculture (social farming). The key support tools for the development of the social economy include better visibility and understanding of social entrepreneurship (Polonyová, S. – Pongrácz, E., 2021), with an emphasis on strengthening social entrepreneurship education.

ACKNOWLEDGEMENT: *This paper has been supported by the research project VEGA No. 1/0851/21 The social economy a modern tool for building an inclusive society in the context of global change and the challenges of the UN 2030 Agenda for Sustainable Development.*

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SANCTIONS AND SMALL OPEN ECONOMY: THE EXAMPLE OF THE SLOVAK REPUBLIC

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ABSTRACT

Sanctions are a recurring political element of international interaction between individual states. Restrictive measures imposed against the Russian Federation are the most comprehensive sanctions in modern economic history. Most authors studying the issue of sanctions state that sanctions do not work and usually have only moderate effects. Larger, more self-sufficient countries, such as the Russian Federation, better withstand sanctions compared to smaller open economies. One of the reasons for their failure is the support of allies who compensate for the deprivations resulting from sanctions. The costs of imposing sanctions on the part of the sender's country can have a significant adverse effect. The Slovak Republic is a small open economy, whose involvement in international trade is an essential prerequisite for the growth of its economy. The European Union's sanctions against the Russian Federation thus represent fundamental challenges in matters of energy security as well as the competitiveness of the industry. There is room for the question of what the costs of the Slovak Republic's solidarity will be and whether they are aimed at achieving the desired result.

Keywords: *European Union, foreign trade, Russian Federation, sanctions, Slovakia.*

1. INTRODUCTION

Sanctions are considered a benign method of penalising a person or nation whose acts and behaviour we disagree with. Their effects can vary, but it is commonly held that they are negligible and do not result in a change in the behaviour of the affected subject. The implications of the Russian-Ukrainian war conflict escalating in February 2022 extend beyond the borders of the local conflict. Many developed countries immediately imposed restrictive measures, which are the most comprehensive sanctions in modern history. This new reality disrupts long-term international relations and has negative externalities. In the case of the European Union countries, the status of a strategic partner is being transformed into a security threat. Therefore, countries that have developed close links with the targeted country, which condition the competitiveness of their economy, may find it difficult to support the sanctions. As previously mentioned by Afesorgbor (2018), while evaluating the subject of sanctions, the focus is mostly on the target country and the potential implications that their implementation may or may not have. Our contribution aims to highlight the implications for the country supporting the implementation of sanctions in the energy sector, using the Slovak Republic as an example of a small open economy.

2. THEORY OF SANCTIONS

Sanctions are a recurring political element of state-to-state interaction." They can be viewed as a long-term substitute for armed conflict. This measure is intended to serve as a warning, an educational tool, and a negotiating tool. In sanctions terminology, the sender - the party imposing the sanctions - and the receiver - the country to which the sanctions were directed.

Sanctions can be defined broadly as the imposition of measures by the sender to impose costs on the recipient. Sanctions are defined by law and must adhere to general principles of international law. Article 39 of the UN Charter must be followed for sanctions to be enforced. It defines them as follows: the presence of a peace threat, a breach of peace or aggression, and the intent of sanctions to maintain or restore international peace and security. Several types of sanctions, such as cultural sanctions, which primarily serve a signaling function, are not covered by this legal framework, which is more appropriate for coercive sanctions. Sanctions must also respect human rights and the general principle of not worsening any humanitarian situation: they should not, for example, target products required for the population's survival and well-being (Segall, 1999). According to Schmitt (2015), the employment of sanctions can serve various purposes, primarily signalling, coercion, and punishment. Signaling is a crucial component of what sanctions are intended to accomplish. By enforcing them, the sender state communicates its dissatisfaction with the recipient and leaves the door open to the potential of additional steps. Signaling can also stigmatise states that breach internationally recognised standards. Sometimes the intended audience for a signal is the sender's own people; this might happen, for instance, when the sender wants to appease public demand without damaging relations with the receiver (Giumelli, 2011). The second potential function of sanctions is coercion. By imposing costs, the objective here is to compel the recipient government to alter its policies. Similar dynamics are observed for other forms of coercion, particularly military coercion, and there is typically a complementarity between sanctions (particularly economic coercion) and military coercion. Sanctions can serve as a form of punishment in addition to their other functions, which include signalling and coercion. Senders of sanctions may feel justified in their actions if they believe they are circumventing the ineffectiveness of international institutions, as argued by Nossal (1989). Punishment can also be viewed as a type of restriction, limiting the receiver's access to specific commodities or financial services. According to Kirshner (1997), the application of sanctions may be accompanied by several objectives for which they were adopted. The state may begin to impose sanctions to communicate its preferences, support allies, discourage others from engaging in similar activities and discourage the receiver from expanding its harmful activities.These are the fundamental types of sanctions:

- *Cultural and sports* sanctions are mostly symbolic, but they allow the international community to express disagreement with a country's stance without incurring further costs
- *Diplomatic sanctions* are directed at state officials and key individuals. They represent the delegitimization of regimes through the termination of diplomatic relations with the destination country or the coordinated dismissal of diplomatic agents. They can take various forms and have varying durations. They are regarded as a low-cost alternative to economic sanctions. Diplomatic sanctions, on the other hand, can result in the loss of valuable information, reduced communications, and a reduced ability to advance business interests in the receiver country
- *Sanctions against* individuals identify natural and legal persons who, for example, may be suspected of terrorism. This type of sanction can be implemented by freezing their assets, imposing travel bans, and so on. Their application is intended to cause financial hardship for a small group of people rather than affecting the entire country's population. When economic power is concentrated in the hands of a relatively small group of individuals with international financial interests, this type of sanction strategy is used
- *Military sanctions* are imposed on specific types of military cooperation. They could imply the interruption or complete suspension of training programmes and joint exercises, as well as the exchange of arms or dual-use items

- *Economic sanctions* are the most comprehensive group of restrictive measures. They are classified into five categories: those that distort trade, aid, finance, currency, and the target country's assets
- *Trade sanctions* are the most common form of economic intervention and are sometimes confused with synonyms. We can categorise them as import and export sanctions. The first prohibits exports to the destination country, while the second prohibits imports from the destination country. Although the two categories have significant differences, *which we will discuss below, they both aim to deprive them of the goal of trade profits*
- *Aids* are also a well-known tool for economic diplomacy to achieve policy objectives. It has traditionally been used to keep alliances together. They are regarded as a type of economic statehood practised as a positive sanction
- *Financial sanctions* can take the form of loans or investments. Their goal is to disrupt the flow of resources to the recipient.
- *Monetary sanctions* are intended to destabilise the recipient's currency. This has other economic consequences, such as rising inflation or the debt burden.
- The least common type of economic sanctions is the *freezing of the target country's or individuals' assets*. It can be physical assets, securities, or a bank account. These assets can be prevented from being accessed by the target. Some authors refer to this type of sanction as targeted "smart".

Differentiation of economic sanctions is required due to the unique properties of various coercive instruments. Their characteristics reveal which types of sanctions are the most effective policy instrument for achieving the objective targeted by their imposition. Based on Kirsher's (1997) approach, there are some of the main features of economic sanctions. Time lags between the imposition and the impact of the sanctions on the targeted country are a defining characteristic of its different forms. Monetary penalties are faster than trade restrictions, and they can be categorized in terms of publicity, but their effects might fade much more quickly. In contrast, trade restrictions have a lasting impact. Financial sanctions can be informal if market circumvention is limited. Asset hedging does not affect the market and is regarded as legally complex.

When deciding on a specific policy, it is critical to consider the political and economic costs associated with implementing procedures. All forms of state intervention are intended to achieve a political goal. In many cases, the political benefits of achieving the desired result outweigh the costs of using such coercion. As a result, their success can only be expressed in terms of costs and benefits in comparison to other alternatives. Several scholars also investigate the effects that sanctions have on the nations that have imposed them. In a nutshell, we may classify their positions into one of the following four categories:

1. the sender generates a net profit after the imposition of sanctions,
2. the imposition of sanctions has a little positive effect on the sender,
3. the imposition of sanctions has a little negative effect on the sender,
4. Significant adverse effect on the sender

The increasing use of sanctions in the international arena has sparked debate in both scientific and political circles, with the main question being whether sanctions work or not. Further discussions on this topic have evolved, such as the effectiveness of multilateral sanctions versus unilateral sanctions, their accuracy of application, and their unintended and potentially counterproductive effects (Andreas, 2005).

According to Harvard economist Rogoff (2015), sanctions do not work and have never worked; they usually have minor effects, despite being an important means of demonstrating moral determination. The empirical evaluations of the effectiveness of economic sanctions differ. They can be seen in the sanctioned country's macroeconomic indicators, such as rising inflation, rising unemployment, or the depreciation of the domestic currency against foreign currency. At the same time, they can be detrimental to the sanctioning country. Economic growth prospects are particularly bleak for countries with strong economic ties. As a result, it is not surprising that trade restrictions appear to be ineffective in many cases. Morgan and Schwebach (1995) discovered that only "smart" sanctions are effective. On the contrary, Lam's (1990) research shows that only harsh measures have an impact on the promotion of political interests. Furthermore, the process of proposing sanctions is primarily motivated by the interests of the sanctioning countries. According to game theory models, the success of sanctions is dependent on conflict expectations and the level of commitment between entities.

The consequences of sanctions can be measured in terms of both their economic and political impact; they are deemed successful if they have resulted in the desired change. Hufbauer et al (2007) studied numerous sanctions and determined that at least one-third of them were partially effective. However, this estimate is likely inflated. If the objective of sanctions is more ambitious, such as a fundamental shift in the state's foreign policy, the success rate of sanctions drops. Kaempfer and Lowenberg (1988) stressed the importance of the size of the target country. They are founded on the notion that larger, more self-sufficient nations are better able to endure sanctions than smaller, more vulnerable ones. One explanation for the failure of economic pressure is that sanctions can prompt allies of the target nation to act as "black knights." Their assistance can substantially compensate for the deprivation caused by sanctions. They contend that such compensation could be evident in the most egregious ideological conflicts, in which the great powers faced smaller nations.

3. SANCTIONS IMPOSED BY THE EUROPEAN UNION ON THE RUSSIAN FEDERATION

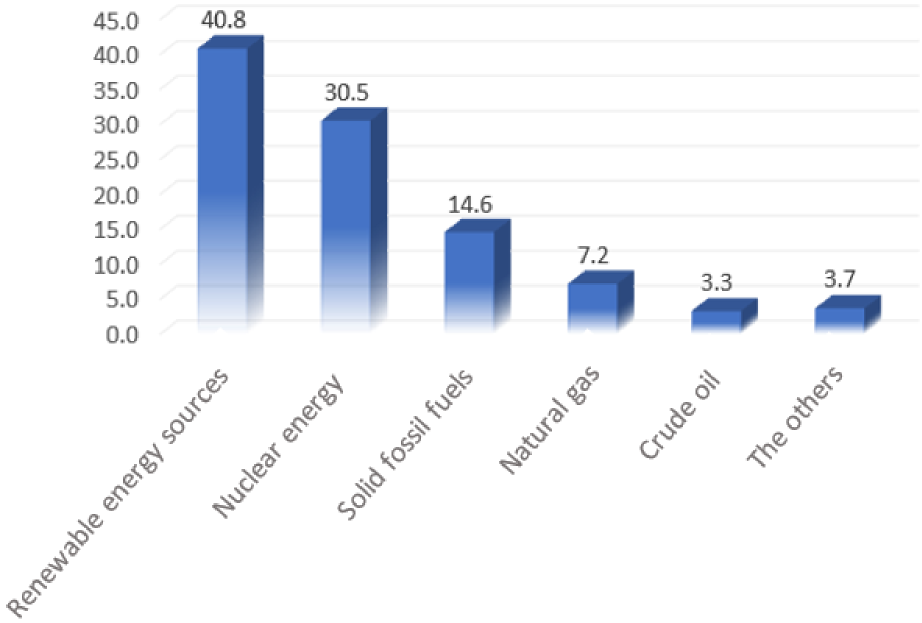
The 2014 Crimean crisis became a dynamic acceleration in the European Union (EU) and Russian Federation's bilateral relations (RF). Prior to the annexation of Crimea, sanctions were deemed politically impossible, particularly considering the economic interests and cultural ties of some member states. Beginning in March 2014, the European Union began to gradually implement restrictive measures against the Russian Federation, the validity of which was regularly revised. While the 2014 sanctions have become a new economic reality for the Russian Federation, to which it has adapted, the new sanctions packages being enforced by EU members beginning in February 2022 demonstrate a greater degree of determination. They pertain to the restriction of access to capital and financial markets, the prohibition of transactions with the Russian Central Bank (RCB), and the removal of seven banks from the SWIFT system. The West has also slapped individual sanctions on several important Kremlin-affiliated individuals. Concurrently, limitations were placed on business contacts with portions of the Donetsk and Luhansk regions. Simultaneously, the EU agreed on a restriction on Russian carriers' access to EU airports and banned the broadcasting operations of Russian media (European Council, 2022). The fourth package of sanctions results in the suspension of the RF's WTO obligations, specifically the most-favored-nation clause. In the fifth package, the EU prohibited the purchase, import, and transfer of coal and other solid fossil fuels originating in or exported from Russia. It also forbade allowing Russian-flagged vessels access to EU ports and all Russian and Belarussian Road transport businesses from transporting products within the EU, including in transit. Other export bans targeted jet fuel and other products, including quantum computers and advanced semiconductors, advanced electronics, software, sensitive machinery, and transportation equipment, and new import bans targeted lumber, cement, fertilisers, shellfish, and alcoholic beverages. Concurrently, it was also limited to the participation of Russian companies in public procurement in EU member states, the exclusion of any financial assistance to Russian public authorities, the extension of the ban on deposits to crypto wallets, the extension of the ban on the sale of banknotes and transferable securities, etc. In addition, a total transaction restriction is placed on four major Russian banks with a combined 23 percent market share in the Russian banking industry. After being severed from the SWIFT system, these banks will be subject to a freeze on their assets, isolating them from all EU markets. In the sixth package of sanctions, the EU also imposed a restriction on the import of most of the Russian oil beginning the next year. Temporary exemptions from the embargo will be granted to the Czech Republic, Slovakia, and Hungary, who are dependent on supply via the Druzba pipeline. Simultaneously, the European Union would prohibit three Russian banks from the SWIFT international payment system, including the largest Sberbank. Three Russian television stations that broadcast Kremlin-sponsored war propaganda will be banned from airing in the European Union.

4. EU-RUSSIA ENERGY COOPERATION AND DEPENDENCY

Energy cooperation is particularly important in the EU-RF trade relationship. For decades, the RF has been a strategic partner in the European Union's energy sector, supplying natural gas, oil, and its products, coal, and nuclear fuel. Energy trade has long been a pillar of EU-RF relations. Some authors refer to the emergence of East-West energy networks as "hidden integration" (Högselius, 2013). According to Tichy (2019), energy and energy securities are key topics for the EU in both domestic (liberalisation and connection of energy infrastructure) and foreign policy. Similarly, energy plays an important role in both domestic (it is a decisive determinant of economic growth) and foreign policy for the Russian Federation, one of the major energy producers with a strong reliance on the sale and export of energy raw materials. Bushuev (2003), Aalto (2012), Oxenstierna and Tynkkynen (2014), and Godzimirski (2016) all emphasise the close relationship between energy and security policy as a global policy. An infrastructure for the realisation of sustainable supplies was established, and mechanisms and technical regulations for the carrying out of business operations were agreed upon.

European and Russian companies have long-term experience working together on joint projects. The Russian Federation is the EU's primary supplier of oil, natural gas, and solid fossil fuels. For some member countries, the RF is also a uranium supplier and a key partner in the field of nuclear energy. The RF's share of EU natural gas imports in 2020 was 38.11%. Norway (18.61%), Algeria (7.24%), and Qatar (4.09%) were also significant suppliers. The Russian Federation accounted for up to 45.61% of EU imports of solid fossil fuels, followed by the United States (13.81%), Australia (12.24%), and Poland (9.41%). In 2020, the Russian Federation accounted for 22.85% of EU oil imports. The EU also imports oil from the United States (7.04%), Norway (6.40%), and Saudi Arabia (5.93%) to a lesser extent. The RF's share of EU imports varies; some states rely on it more than 90% of the time (e.g. Finland, Lithuania, Slovakia). Some Member States diversify their resources more, reducing their reliance on RF (eg Spain, Portugal, Sweden). By 2030, the EU intends to replace its reliance on Russian fuels with alternative energy sources. Following Russia's invasion of Ukraine, it developed *REPowerEU*, a plan for diversifying gas supplies as well as other fossil fuels, intending to assist the EU in becoming independent of Russian gas and other fossil fuels by 2030. The plan calls for the rapid adoption of renewable gases in heating and electricity generation, to reduce demand for Russian gas by two-thirds by the end of 2022.Data from Eurostat show that the EU's energy dependence on the import of mineral raw materials was 57.5% in 2020, with Malta (97%), Cyprus (93%), Luxembourg (92%), Greece (81%), and Belgium (78%) having the highest dependence.

On the other side, the EU nations with the lowest reliance on energy imports include Estonia (10%), Romania (28%), Sweden (33%), Bulgaria (37%), and the Czech Republic (38%) (2022a; Eurostat) Graph 1 depicts the share of each primary energy type in the EU in 2020. The EU generates the remaining 42.5% of energy on its own.



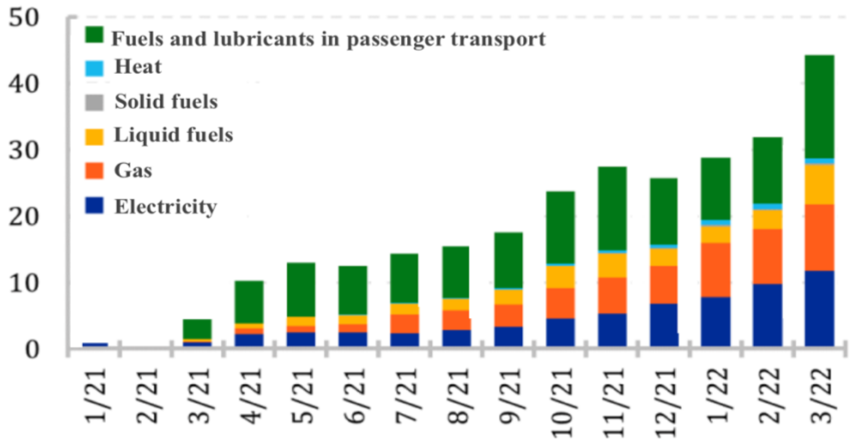
Graph 1 Primary energy production in the EU in 2020 (in %)
(Source: Author's own processing according to Eurostat, 2022b.)

In the EU, renewable energy sources accounted for about 41% of the total energy produced in 2020. A little over 30% of energy is generated by nuclear power, 15% by solid fossil fuels, 7% by natural gas, and 3% by oil.

5. CONSEQUENCES FOR SLOVAKIA OF THE IMPOSITION OF SANCTIONS IN THE ENERGY SECTOR

A small but previously one of the most open economies in the world is the Slovak Republic. Because of this, it is extremely vulnerable to changes in global markets. Sustainable economic growth in Slovakia requires participation in international trade. Exports made up 85.4% of Slovak GDP in 2020. (World Bank, 2022). The conflict between Russia and Ukraine has increased uncertainty, which has a negative impact on global value chains, consumption, upcoming investments, but most importantly energy prices.

As a result of the global economy's recovery from the coronavirus pandemic, commodity prices began to climb as early as 2021. The war in Ukraine and related sanctions have led to a further limitation of energy supply. Graph 2 shows that the rate of increase in consumer prices has significantly accelerated after March 2022. According to the National Bank of Slovakia, the new historical maximum of 7.5% was already attained in April 2022. Energy prices, which account for around half of the price growth, are a major factor in inflation's rapid growth.



Graph 2 Structure of energy price growth (p.b.)
(Source: The National Bank of Slovakia, 2022)

The rise in energy input costs is mirrored in the final selling price. This affects energy-intensive enterprises. Since these businesses contribute significantly to Slovakia's exports, this effect of rising energy costs will have a massive impact on their competitiveness and, consequently, Slovakia's total export performance. This provides the conditions for a reduction in production, a halt in investments, and possible layoffs. Energy consumers have limited short-term possibilities for reducing usage, which undoubtedly contributes to concerns about the affordability of energy. The harmful impact of price shocks on individuals and businesses has compelled governments to take action. The forms of measures can be split into two primary categories: those targeted at bolstering income and those aimed at lowering prices. Supports for income are transfers to people and enterprises (subsidies, guaranteed loans, vouchers, and others). Price support is intended to lower energy prices (price ceilings, reduction of consumption taxes on electricity and network fees, reduction or exemption from consumption tax, reduction of VAT, etc.). Targeted measures can be supplied to certain groups (such as vulnerable households or businesses). The second alternative measures apply to all consumers that are not targeted. According to recent IMF and OECD studies, it is critical to shift away from policies that directly seek to limit price increases and toward policies that dampen their impact through targeted income support. The goal is to ensure that the assistance provided is equitable and effective. OECD data on government support measures show that as of May 30, 2022, 284 short-term measures were in place to lessen the effects of rising energy prices (data collection was based on a sample of OECD and partner countries, covering a total of 42 countries). From October 2021 to December 2022, all of the measures will cost the government a total of $246 billion. The fiscal costs of assistance measures continue to rise. By the end of 2022, it is anticipated that the fiscal costs of actions implemented in response to energy price rises beginning in the summer of 2021 will exceed 1.5 percent of GDP in some EU member states. The majority of these expenditures are attributable to steps to impose price restrictions and provide subsidies, which support efforts to limit demand. 34% of the overall value of support supplied through policies covered by the OECD database (73% of which were targeted) is accounted for by income support measures. In contrast, price support measures were predominantly untargeted (94%). One of the issues raised by economists is the fact that while the justifications for helping lower-income people avoid energy poverty are strong, those for helping businesses are less certain. The justification for ongoing support is relatively narrow given how persistent the present rise in energy costs is. The majority of big, energy-intensive businesses have access to operating capital and are able to withstand a brief cost shock.

Small and medium-sized businesses, however, are more likely to require assistance because of their restricted liquidity. SMEs account for 99.9% of all enterprises in Slovak Republic and make up 55% of total added value in the Slovak economy. In addition, the Slovak Republic has the highest proportion of small and medium-sized enterprises in the EU in relation to population. There is currently no plan in place for energy-intensive businesses in the Slovak Republic. To keep them alive, though, the government will be required to take this step. It would be optimal if the aid came in the form of short-term cash flow assistance that was contingent on the recipient's implementation of measures to improve their energy efficiency.

6. CONCLUSION

We can infer the following from the presented research, which was concerned with the effects on a nation supporting the imposition of sanctions in the energy sector, using the example of a small open economy—the Slovak Republic. Although sanctions are regarded as nonviolent kind of restrictions against a specific person or nation, they can have a variety of negative impacts. Following the military conflict between Russia and Ukraine in 2022, mutual relations between the EU and the Russian Federation entered a new era of confrontation. In response to military operations on Ukrainian territory, the most comprehensive sanctions against the Russian Federation were imposed, which were approved in six counter-sanction packages. The high level of the energy dependence of most EU member states limits their economies' competitiveness. The research revealed the EU economies' eminent interdependence with the Russian Federation; thus, when assessing the potential costs of sanctions on the sender, the scenario of negative impact on the sender must be considered. The European Union should take a pragmatic approach that is in line with national interests, while also making every effort to support peace talks between the Russian Federation and Ukraine. Slovakia's reliance on energy raw materials imported from the Russian Federation, as well as the subsequent ongoing Russian-Ukrainian war conflict, harms global value chains, consumption, and, most importantly, energy prices. Many energy-intensive Slovak businesses will adversely impact Slovakia's export performance by losing competitiveness. A situation like this will have a significant economic and social impact, including on SMEs and individual households, which could lead to poverty. Therefore, the Slovak government must establish support packages to offer temporary liquidity assistance for SMEs and households at risk of poverty, while simultaneously maintaining export production, investment activity support, and unemployment benefits.

ACKNOWLEDGEMENT: *This paper is a part of a research project from the Ministry of Education, Family and Sports of the Slovak Republic. VEGA No. 1/0039/20 The Importance of the Eurasian Economic Union for Shaping of EU Trade Strategies (with Implications for Slovakia).*

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DIGITAL EUROPE – CURRENT STATE OF THE ELECTRONIC ADMINISTRATIVE SERVICES IN THE MUNICIPALITIES IN BULGARIA

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ABSTRACT

In a global context, the digital transformation is already underway. Along with the reported progress among the EU countries, there are also countries that are permanently lagging behind in terms of digital transformation. Local administrations are closest to the people in terms of providing services and implementing public policies. While in other countries at the level of public administration there are practices of analyzing large databases of information, in Bulgaria there are still problems with the implementation of electronic administrative services. Already in 2002, the Strategy for e-Government was adopted, then the Concept for e-Government in Bulgaria 2010-2015, but in 2019 the first 56 administrations were joined to the Unified Portal, and in the last two years (2020-2021) their number has grown 7 times and currently there are 483 administrations providing services in the Unified Portal for access to Electronic Administrative Services (EAS). At the moment, a comprehensive analysis of the strategic aspects of the electronic administrative service in the municipalities has not been carried out in the country. Through content analysis, critical analysis of documents, induction and deduction, the study analyzes the degree of implementation of strategic planning documents in the field of e-Government at the European and national level. Good practices in the European Union, in the field of Electronic Administrative Services, have been identified and opportunities for their implementation at the local level have been proposed. As a result of the research, the challenges to the digitization of administrative services are outlined and their current state in Bulgarian municipalities is mapped.

Keywords: *Digital Europe; Electronic Administrative Services of the Manicipalities; E-Government; Digital Transformation.*

1. INTRODUCTION

The intensive development of ICT technologies in modern society and the transition to an increasingly greater degree of digitization of processes in all spheres of the socio-economic environment play an essential role in the Industry 4.0 era. In this context, the integration of intelligent, networked and autonomous digital and physical technologies creates new opportunities for innovation in business activities, human connectivity, service delivery, etc.

Digital transformation is not limited to digitalization of the economy and business, but is perceived in a broad sense as affecting all spheres of social activity, shaping concepts such as Economy 4.0 and Society 4.0 (Małkowska, et al., 2021). According to the fundamental understanding, they require radical changes in the ways people operate at all levels by implementing digital technologies to achieve higher added value. A number of authors examine current issues related to the study of the impact of digital transformation on society and the economy (Fitzgerald, et al., 2013) (Kane, et al., 2019) (Westerman, et al., 2014). Due to the extreme complexity and variety of possible aspects for analysis in this regard, it is difficult to define all the challenges and give clear directions for future development. At the same time, the study of these issues is extremely important and necessary for the development of national and European policies in the field of promoting digital transformation and competitiveness. Digitization in different sectors can also be seen as a set of multiple iterations leading to organizational, functional and institutional changes (Larsson & Teigland, 2019). This process is lengthy and requires considerable effort and investment. However, the integration of ICT into the organization's operations leads to long-term cost reductions and improved design of products and services to best meet needs (Algan, et al., 2016). Specific features can be highlighted in the digitalization process in the public sector, on which national and European policies have a direct impact. Due to the need for public institutions to respond adequately to the needs of citizens, it is extremely important that they, like the business sector, look for opportunities to improve productivity, increase collaboration, improve process efficiency and focus on innovation (Matt, et al., 2015). For this purpose, it is important to build the necessary connections already at the management level and to move to the so-called connected public sector, where the services offered are supported by the organization's internal integration, innovation and consolidation processes (Ruud, 2017). In the context of the relevance and importance of the concept of digital transformation, especially after Covid-19, at EU level digitization is a leading priority. It is believed that it will significantly help to solve existing problems and upgrade achievements in all sectors of socio-economic life.

In this regard, already in 2010, with the adoption of the **Europe 2020 Strategy** (European Commission, 2020) digitization was given key importance. Along with the formulated three mutually reinforcing priorities (smart, sustainable and inclusive growth) and five flagship targets (employment for 75% of the population aged 20-64; investment in research and development in the amount of 3% of EU GDP; achieving the 20/20/20 climate/energy targets; share of early school leavers below 10%; share of the young generation with completed higher education of at least 40%; reduction of the number of people at risk of poverty by 20 million), seven leading initiatives have been defined, one of which is the Program in the field of digital technologies for Europe. **The Digital Technology Agenda for Europe -** (European Commission, 2010) aims to deliver sustainable economic and social benefits from a Digital Single Market based on high- and ultra-high-speed internet and interoperable applications. Today, e-Government services are widespread in Europe, but there are still differences between Member States and the level of their use by citizens is low. To improve the situation, targeted actions should be taken to avoid unnecessary technical requirements — for example, applications that only work in a specific technical environment or with specific devices, streamlining administrative processes, facilitating information exchange, developing and deploying cross-border public online services and others. The importance of digital technologies also lies in the **EU's Cohesion Policy for the period 2014-2020**, for which 14 billion euros have been allocated from the European Regional Development Fund, supplemented by national public and private co-financing.

Support from the Cohesion Policy is aimed at several important areas: (European Commission, 2020) digitization of European industry; improving broadband connectivity and access; creating a digital society and economy; investing in the development of innovative digital technologies. During the new planning period 2021-2027, the EU continues to sustainably upgrade and further develop its policies in the field of digitization. Several important strategic documents have been adopted and have already entered into legal force. In 2021, the **“Digital Europe Program”** was established with a horizon of 2021-2027 and a financial resource of EUR 7.588 billion (European Commission, 2021). Its overall objectives are to support and accelerate the digital transformation of the European economy, industry and society, to deliver its benefits to citizens, public administrations and businesses, to help improve Europe's competitiveness in the global digital economy, while contributing to overcoming the digital divide and strengthens the strategic autonomy of the Union. The program has five interrelated specific objectives: High performance computing technologies; AI; Cyber Security and Trust; Profound digital skills; Implementing and making the most of digital capacity and interoperability.

With a horizon until 2030 is the so-called **Digital compass** (European Commission, 2021), where the EU's digital goals are divided into four main areas:

- A digitally literate population and highly skilled digital professionals - by 2030, at least 80% of all adults should have basic digital skills and there should be 20 million ICT professionals in the EU, with a trend towards leveling off of women and men;
- Secure and productive sustainable digital infrastructures - by 2030 all households in the EU should have gigabit connectivity and all populated areas should be covered by 5G; production of advanced and sustainable semiconductors in Europe should reach 20% of world production; 10,000 climate-neutral high-security edge cluster nodes to be deployed in the EU and Europe to have its first quantum computer;
- Digital transformation of enterprises - by 2030, three out of four companies should use cloud computing, big data and artificial intelligence, over 90% of SMEs should reach at least a basic level of digital intensity, and the number of start-ups in the EU that have reached a market value of USD 1 billion (so-called "unicorns") should double;
- Digitalization of public services - by 2030, all key public services should be available online, all citizens should have access to their electronic medical records, and 80% of citizens should use electronic identification solutions (eID).

Directly linked to the digitalization process, taking into account the consequences and lessons of the COVID-19 pandemic, is the **The recovery and resilience mechanism** (Euroepan Commission, 2021). It is structured in six pillars, one of which is Digital Transformation. The overall objective of the Mechanism is to promote the economic, social and territorial cohesion of the EU, and for its achievement a significant financial resource is provided, divided into two categories: €312.5 billion earmarked for grant support and €360 billion available for lending to Member States. To ensure access to resources, countries should develop their national recovery and resilience plans, respecting certain requirements (Eutopran Commission, 2021). Regarding digitalisation, plans should clearly explain how they will contribute to achieving digital transformation or addressing the challenges arising from it. A mandatory requirement is that at least 20% of the sum of any recovery and resilience plan is targeted at digital measures. At the EU level, various analyzes are carried out, a significant volume of information is collected and processed, but **the Index for the penetration of digital technologies in the economy and society** is directly related to the present study **(DESI)** (European Commission, 2021).

It is calculated by ranking Member States according to their level of digitization and analyzing their relative progress over the past five years, taking into account their starting point. DESI investigates four key areas: human capital - digital skills; broadband connectivity; integration of digital technologies by business; digital public services. The analysis shows that during the COVID-19 pandemic, Member States are generally making progress in their digitization efforts, but still have gaps in digital skills, the digital transformation of SMEs, artificial intelligence, big data and the deployment of advanced 5G networks. Differences are observed between the achievements of individual countries in the four key areas of the study, with Finland, Denmark, the Netherlands and Sweden leading the digital economies in the EU, while Romania, Bulgaria and Greece have the lowest scores.

2. GOOD PRACTICES IN DIGITALIZATION OF ADMINISTRATIVE SERVICES AT EUROPEAN LEVEL

The dynamic development of ICT technologies in the modern world and the events surrounding the Covid-19 pandemic quickly caused an acceleration in the need to move to a more digital society. In order to be competitive in the market and adequately meet the growing demands of consumers for easy, customized and one-click service, businesses are investing more and more efforts and resources in the field of digital technology implementation. This trend cannot pass by the public sector either. Processes in the direction of e-government take place with different intensity in individual countries, but in all cases the ultimate goal is clear, namely the development of a more digital, better quality and more complex service to citizens, tailored to their needs. In the literature, there are different classifications of the stages through which the concept of Digital Government passes through цлицкtime (Komati, et al., 2022) (Charalabidis, et al., 2019). In the individual views, the number of phases in the development of the concept differ, but as a general conclusion it can be stated that only the provision of electronic services is no longer enough, the aspiration and efforts are towards personalization of the service and two-way communication, referring even to the participation of citizens in the processes of creating public policies. This is a turning point in the overall perception and functioning of Digital Government, the idea that the public sector and society are in a close relationship through life events. Individual countries, however, are at very different stages of their development in terms of electronic administrative services, despite the EU's uniform policy in this regard. It is extremely important to identify and study those mechanisms that give real results by making a thorough analysis of the possibilities for adapting them to specific specific conditions. The list of countries with rating class "Very high" in Europe according to The United Nations E-Government Survey was used as a basis for the research of good practices in electronic administrative services. This is a comprehensive report that assesses the e-government development of all 193 UN member states. The analysis is carried out based on the study of three groups of factors (Online Service Index, Telecommunication Infrastructure Index, Human Capital Index), which in their entirety form the E-Government Development Index (EGDI). It enables the empowered persons in different countries to identify their strengths and weaknesses in e-Government and to guide and model their e-Government policies and strategies (United Nations, 2020). As the clear leader, according to the latest data from 2020, Europe stands out, followed by Asia and Oceania. It is important to note that the European Commission also monitors the development of the digital economy and society among its member states using the Digital Economy and Society Index (DESI). The key areas being explored are: Human capital, Connectivity, Integration of digital technology, Digital public services, Research & Development in ICT. In the assessment part OF the development of Digital public services, according to the report for 2021, the leading three European countries are identical to those indicated in The United Nations E-Government Survey (European Commission, 2021).

It is for this reason that this analysis of good practices focuses on Denmark, Estonia and Finland as European leaders in the field of e-public services according to data from the EGDI and DESI indexes.

Denmark

Denmark's success as one of the leading countries in Europe, in terms of the digitalization of the public and private sectors, can be sought in several main directions (European Commission, 2021): the communication at the political level, the single direction in the legislation, the management of the processes and the construction of the appropriate infrastructure for the digital public administration. Looking at the first of the mentioned aspects of influence on the development of digital government, including the provision of electronic administrative services, important moments with a key influence on the process stand out. Such are, for example, the creation of the Digitalization Partnership in 2021, which aims to generate and exchange ideas between top managers and experts, both from the business sector and from the public. With their help, it is planned to unite national efforts in the direction of digitalization of society and government. The Danish government places among its priorities the need for periodic monitoring of its legislative policy regarding digitalization. In this context, an assessment of the past three years has been carried out in 2021, which shows that there is an increased focus on the application of new digital capabilities in the early stages of political decision-making. As an example of good practice adopted by the Danish government, the mapping of the ICT systems of the central state institutions, which began in 2018, clearly stands out. This approach provides an opportunity to review challenges and lay the groundwork for future actions to improve government ICT governance. In terms of building and developing digital infrastructure, Denmark is consolidating its leadership during the Covid-19 pandemic. Every Danish citizen, for example, can access all public and private service platforms with just one NemID digital key, which is defined as part of the success for the high digitalization of services in the country. By itself, however, creating such unified access is not enough. The relationship of trust built over time between a digitally oriented society and a visionary government has its key role in the whole process (Anon., 2022).

Estonia

The process of digital transformation in Estonia started in 1991 with a political decision to make efforts in this direction (United Nations, 2020). Numerous legislative, economic, technological and social iterations followed that shaped the modern face of a well-developed digital country. Estonia's success can be traced in various directions, one of the key factors being the building of a strong public-private partnership. The successful cooperation between the government and the digital-oriented society helps to create and widely use the X-Road platform for offering electronic public services by government institutions (Tepand, et al., 2017). An important moment in the development of Estonia's digital transformation is the adoption of the e-LocGov model, which stimulates the successful systemic introduction of digital governance at the local level (Pappel, et al., 2021). The model stimulates e-Residency and paperless management, which become a symbol of the country among the international community. To improve communication between stakeholders, a Digital Testbed Framework has been created in recent years, enabling the government to facilitate innovative collaboration. For example, a business organization or an educational institution can create additional components to the public portfolio and offer or further develop previously created solutions. In the meantime, legislative changes in the direction of improving the management of the digital transformation process are not interrupted. One of the latest legislative iterations allows the sharing of the source code of government software, with the aim of freely developing and fixing identified flaws by all interested parties (European Commission, 2021).

Finland

As part of the leaders in terms of the digital transformation of society as a whole, including the provision of electronic administrative services, Finland is betting on the implementation of artificial intelligence technologies and other new technologies to improve public services, as well as streamlining government support functions. Again, there is an increased public-private partnership, accompanied by cross-sector cooperation and a rapidly adapting government. Accelerating development and delivering better services happens by creating ecosystems around people's life events and business lifecycles. State structures are also working hard to build client-oriented cross-sectoral service models for people and companies arriving in Finland. Due to the low level of corruption in the Finnish government sector, a high level of trust is achieved by citizens and businesses to provide services in a reliable, impartial and timely manner (Anon., 2022). As part of the development of the state apparatus in the digital transformation in 2020, groups for information cooperation, strategic management goals, information security and operational architecture are being created, looking for team solutions. Last but not least, building the right digital public administration infrastructure has its key role in Finland's success. As an example of effective work in this direction, the improvement of the HILMA notification service in 2021, with the aim of increasing the transparency of public procurement procedures, can be cited. With the new functionalities, it is possible to request and receive offers entirely electronically.

3. MAPPING THE CURRENT STATE OF DIGITIZATION OF ADMINISTRATIVE SERVICES IN MUNICIPALITIES IN BULGARIA

Administrative services are subject to strict regulation, and in recent years a United Administrative Register has been created (Ministry of e-Governance, 2019), through which detailed and unified information is provided about the services offered, deadlines, document forms, legal framework, etc., with individual administrations having their own registers with lists of the administrative services offered, as well as access to summarized information. Although this process is now regulated, there are still municipalities that do not refer their users to this register, and detailed information about the services on the sites is missing. One step closer towards the digitization of processes in administrations is the created Unified model for applying, paying and providing electronic services[1] (Ministry of e-Governance, 2019) for all state administrations, which aims not only to provide information, but also to manage the electronic content of all administrative units and to provide a comprehensive service entirely in an online environment. Although administrative e-services[2] are provided by a specific administration, the process can proceed in two different ways: 1. entirely online - submit, pay and receive or 2. partially online process, as here the application can only be submitted online, and everything else can be done at the counter or submitted and paid online, but to receive the service you have to go in person in the municipality, as this generally depends on the nature of the services provided. Whatever way of implementation is chosen, AES has indisputable advantages for citizens and for the administrations themselves, speeding up the turnover of processes and increasing the quality of the services offered. Local administrations are the closest to people from the point of view of providing services and implementing public policies, but at the moment in the country no comprehensive analysis of the strategic aspects of electronic administrative services in municipalities has been carried out. Statistics exist in UP, but they are summary and do not allow for depth of analysis. Therefore, in the period May-August 2022, a two-phase study of administrative electronic services was conducted in 265 municipalities in the Republic of Bulgaria.

[1] The Unified Model for Requesting, Paying and Providing Electronic Services will be abbreviated in the text as United Portal or UP

[2] Administrative e-services will be abbreviated in the text as AES.

The first phase of the research, which is the subject of this publication, is a desktop survey with a focus on the electronic administrative services offered by each municipality in UP and their registration on the official websites of the municipalities, and in the second phase, a questionnaire survey was conducted to identify the barriers to the digitalization of administrative service. Through content analysis, critical analysis of documents, spatial analysis of data, induction and deduction, the development analyzes the process of digitalization of administrative services in municipalities, and as a result maps their current state in various relationships.

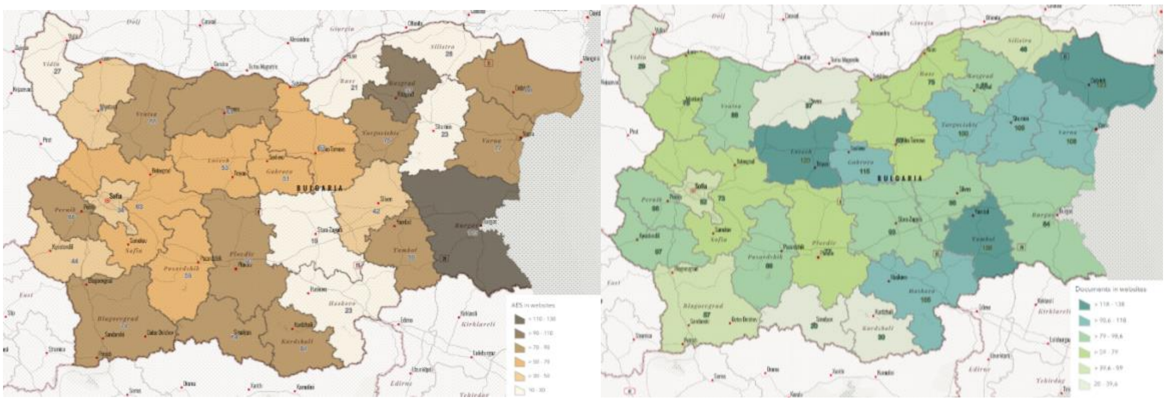

Figure 1: AES in the websites Preprints of documents in the websites of the municipalities in Bulgaria by districts
(Source: Own calculations in ArcGIS online)

During the spatial analysis of the proposed AES by the municipalities, several worrying facts were found;

1. Nearly a third (30%) of the municipal websites lack a named list of the AES offered by the municipality, and nearly half of them (47%) have less than 30 announced electronic services. Although mandatory announcement of AES on the website of the municipality is laid down in the legislative framework, it is striking that among the lagging municipalities are 25% of *large regional cities*, such as Ruse (0 AES), Pazardzhik (5 AES), Silistra (8 AES), Pernik (10 AES), Veliko Tarnovo (15 AES), Stara Zagora (17 AES) and Kyustendil (23 AES), and the *relatively small municipalities* - Valchedrum (203 AES), Pleven (186 AES), Kamenovo (184 AES), Radomir (184 AES) and Sozopol (184 AES)are in leading positions in terms of the number of announced AES. This can be taken as an indicator that small municipalities, which have fewer users of services, more easily perceive digitalization, and on the other hand, large municipalities, due to the complexity of the processes in their administration, still encounter difficulties in adapting to these conditions. But also, the lack of declared AES in so many sites (30%) can be interpreted as reluctance, uncertainty, lack of competence, risk of duplication of processes, etc. barriers to digitalization of the process. The identification of these barriers is the subject of the second phase of the study. Although sometimes there is a reference to UP as a link on the municipality's websites, the reference is not always to the specific services of the municipality, but to general information about all municipalities, and when they are mentioned by name, they are often only a few of the AES offered, without criteria for the set limit. That is why the lack or limited name information about the AES offered on the websites of the municipalities is an indicator of the weak motivation of the municipalities to provide such services and a lack of transparency of the digitization process.

2. For a clearer visualization in figure 1, the data is grouped and averaged on the basis of district, and it is evident that in 6 of the districts there is a critically low transparency of the offered AES, and in 1 of them (Burgas district) the highest average was achieved as a result of 123 AES registered on the websites of the municipalities in the district. It is noteworthy that the size of the territory (the Burgas region has a larger area than the Sofia region, but it is the fourth in terms of population) does not affect the list of the proposed AES by municipality. However, center-periphery dependence is noticeable, as often the most distant areas from the capital (Vidin, Ruse, Silistra, Shumen, Stara Zagora, Haskovo) have extremely weak initiative to implement AES.
3. In addition to the presence of AES, the administrative services that the municipalities offer on the websites and the possibilities for partial digitization of the process, by downloading preprint documents, filling them in advance and submitting them to the administration site, were also investigated. In figure 1. it is noticeable that the municipalities that do not indicate AES on the websites still provide preprint documents, which makes it easier to get the service. In contrast to purely electronic services, with preprint documents only the beginning of the process is passed, but the submission and payment itself remains in person in the municipality. It is important to note that some municipalities provide an additional option for electronic submission of preprint documents, using e-mail for this purpose using a clerical system for registering and controlling information, but receiving and paying for the service remain unchanged. In addition, the regions that are leading in the provision of AES (Burgas, Razgrad) have limited the number of preprint documents on their sites, while regions in which there are problems with the transition to UP and the announcement of contactless service on the site (Dobrich, Lovech , Yambol) prefer to provide preliminary documents for their users. Only the Vidin region, as the least populated, strengthens its position for the lowest degree of digitization of processes. From this it can be concluded that there is an inverse relationship between moving to perform the service entirely in an electronic environment and maintaining information about preprint documents on the sites, since this information is already available in UP and can be easily accessed.

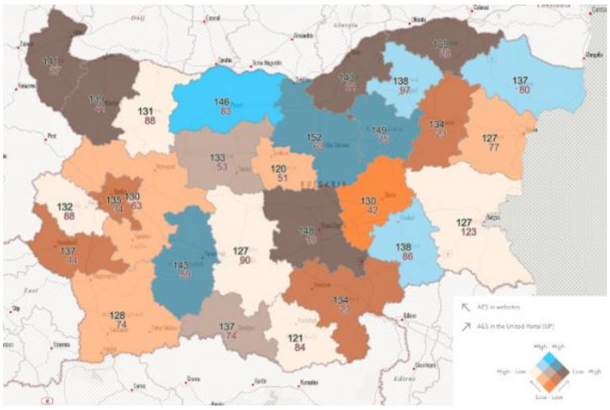

Figure 2: Correlation between AES in the United Portal and AES in the websites of the municipalities in Bulgaria by districts
(Source: Own calculations in ArcGIS online)

4. The spatial analysis establishes that all municipalities in Bulgaria have registered AES in the PU. Among them, however, 22% submitted less than 120 services, and above this limit there is no great variation in the values. Therefore, it is important to examine the relationship between AES registered on the municipalities' website (shown as averaged value in red) and announced in UP (shown as averaged value in black) using a quantile with a grid size of 3x3.

It is noticeable in Figure 2 that the worst performance by low-low areas is in the region Sliven, where with an average of 130 AES announced in UP, only 42 appear on the site, as well as in the low-high connection in 5 regions (Vidin, Montana, Ruse, Silistra, Stara Zagora), where AES announced in UP are many times more than these , specified on the sites. This is an indicator that joining the UP is undesirable, faces internal barriers and limitations, and is ineffective at this stage. From this we can conclude that the field adheres to a low degree of digitalization of processes. The best high-high performance is in the Pleven district, where the highest values of the registered AES are in the site and in UP, followed by high-low, where districts such as (Vratsa, Burgas, Kardjali, Plovdiv, Pernik) fall due to the proximity of their high results. In these areas (43% of all) digitization is a transparent and open process and brings many benefits, but not all develop simultaneously and evenly and still the majority of municipal administrations lag behind in their digitization.

4. CONCLUSION

The digital transformation of administrative processes in municipalities is a slow and complex process that requires special attention, since it is municipalities that are in the closest contact with citizens and are the conductor of global policies. As a result of the research, a snapshot was created and the dependencies of the municipalities on the degree of transparency of their electronic processes are presented. Spatial analysis and mapping of the current state reached will support public administrations in the process of measuring, informing and increasing their motivation and commitment to digital changes, and on the other hand, it gives them the opportunity to visualize potential risks, a basis for strategic analysis and long-term decision-making.

ACKNOWLEDGEMENT: *The publication is financed under the scientific research project 6-2022 Strategic aspects of electronic administrative services in municipalities by Tsenov Academy of Economics – Svishtov, the Institute for Scientific Research through a competition under the Ordinance on the terms and conditions for the assessment and planning, distribution and spending of funds from the state budget for financing the inherent public higher schools scientific or artistic activity.*

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EDUCATION FOR SUSTAINABILITY IN UNIVERSITIES: PERSPECTIVES AND EXPECTATIONS OF STUDENTS

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ABSTRACT

The principles of sustainable development are becoming extremely important for universities because these institutions can act as agents in promoting these principles within the entire society. They play a fundamental role in the adoption of global environmental challenges, such as their education, research, and community involvement, and can produce long-lasting environmental effects and social change. Students are one of the largest groups of stakeholders in universities and could have a significant impact on sustainability. Today, the concept of sustainability and the teaching process related to sustainability are very important to students. Many studies describe the level of knowledge and selected behaviors of students regarding ecology, but there is little research on the points of view and expectations of students regarding the process of sustainability education in universities. The aim of the paper is to describe students' perspectives and expectations toward environmental and social issues, in particular, emphasizing why students are getting serious about sustainability and what expectations they have according to sustainability education at the universities. The methods of analysis and synthesis were applied to obtain theoretical background on this issue. In addition, a survey was conducted among students of the University of Economics of Bratislava, Slovakia. The research involved 143 students, including 94 women and 49 men aged 20 to 29 years. Students are concerned about climate change and want this to be reflected in their education. About 69 % of the students agree with the statement that climate change and protecting the environment are the most important challenges facing societies around the world. In addition, 84 % of them agree that sustainable development is something universities should actively incorporate and support. Academic institutions must equip young people even more with knowledge, skills, attributes, and values to create a more just and sustainable future for all.

Keywords: *environmental sustainability, environmental sustainability, student expectations, student perspectives, university*

1. INTRODUCTION

Fundamental reorientations and transformations in terms of sustainable development require a far-reaching change of thinking and acting in individuals and society as a whole. This can only be achieved through learning; therefore, sustainable development must be understood as a learning process. Education for sustainability is expected to make people more aware and better qualified to participate in shaping future developments responsibly and to raise their awareness of the problems related to sustainable development and bring forth innovative contributions to all economic, social, environmental, and cultural issues (Barth and Rieckmann, 20015). The educational systems in the Slovak Republic currently do not prepare students and teachers with the knowledge and skills they need to be able to successfully tackle climate change and other sustainability challenges in the future.

According to Klimková (2017), despite the relatively long tradition of environmentally oriented trade unions in the countries of Central and Eastern Europe, it turns out that the concept of "Education for Sustainable Development" has not been adopted in the Slovak context. Klimková (2017) performed a content analysis of documents of selected teacher study programs, which showed:

- The competences of sustainable development are not given attention, in general.
- There are obvious fundamental gaps and shortcomings in the practical professional training of teachers in universities toward sustainability, which represents barriers to its implementation in school practice.

Instead, young people and students are calling for strong science-informed climate action now. The higher education system oversees significant resources in human and financial capital, and how they deploy it can have a real impact on the planet. Universities play a positive role in transitioning their institutions to a net zero and positive nature. Young people want to attend universities and colleges that are driving the environmental agenda forward; now the challenge is to scale up this great work from the progressive few to a standard procedure for all. The aim of the paper is to describe students' perspectives and expectations toward environmental and social issues, in particular, emphasizing why students are getting serious about sustainability and what expectations they have according to sustainability education at the universities. This article adds insights into students' attitudes toward sustainability, with a specific focus on Slovak students from the University of Economics in Bratislava in the Slovak Republic.

2. EDUCATION FOR SUSTAINABILITY

Education is not just a human right, but also an enabler and a driver for the achievement of the 17 Sustainable Development Goals (SDGs) of the United Nations, including climate action. Adequately equipping young people with tools, critical mind sets, and science-based knowledge is critical to achieving sustainability targets. Education for sustainability in higher education has gained increasing attention. A definition of Education for Sustainable Development is an interdisciplinary learning methodology that covers the integrated social, economic and environmental aspects of formal and informal curriculum' (UNESCO, 2014).

Universities are vital to progressing the SDG agenda, both as large organizations in their own right and as enablers of others. They have a fundamental role to play in all four of their functions: learning and teaching, research impact, external leadership, and internal operations. This goes beyond mapping existing SDG capabilities to embedding sustainability vertically and horizontally across diverse communities of practice. To perform their unique function as enablers of change, universities must simultaneously embrace their role as targets for and enablers of change, ensuring that they are role modeling the sort of approaches and impacts they want to engender (Steele and Rickards, 2021).

2.1. Role of Universities

Universities are committed to a mission that underpins their purpose and function in society as centers of new knowledge, understanding, skills and experience, through research, learning and teaching, leadership, outreach, and service to society (Figure 1).

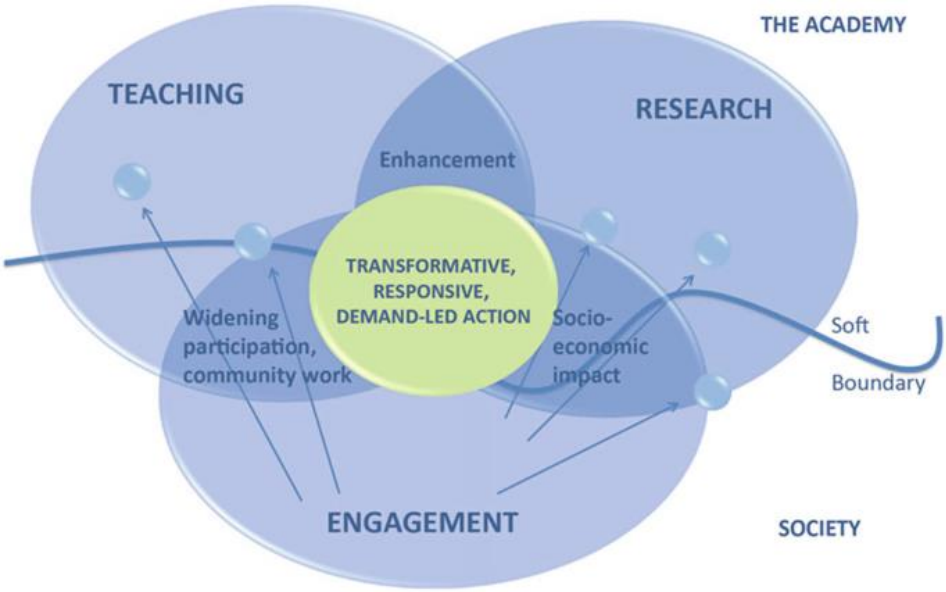


Figure 1: The role of the university in society
(Source: Steele and Rickards, 2020).

The role of universities in a sustainable society is substantial. Higher education institutions have the power to redesign the future. Universities and colleges are setting a good example for their students and have the power to change mindsets, influence lifestyle choices, and instill sustainability values and green skills into leaders of tomorrow. Universities and colleges can influence staff, faculty, students, and the surrounding campus community. Setting progressive sustainability goals can have far-reaching impacts well beyond the walls of the institution. Universities are hubs for research and innovation that could scale up the role of higher education in the green transition (SOS, 2021).

2.2. University stakeholders

Students, alumni, staff, community groups, industry, and governments are all stakeholders in higher education. Primary stakeholders include students, teachers, and the management of the educational institute. Other stakeholders are government, professional bodies, employers, parents, non-teaching staff, and auditors.

- *Management*

Integration of sustainability, for example, by means of competences for sustainable development, requires an organizational change process in higher education institutions (Lambrechts, 2018). According to Filho et al. (2015), increasing societal awareness on sustainable development challenges, as well as the urgency required to tackle them, contrasts with limited progress in the integration of sustainable development in university curricula and in university sustainable strategy. Of course, some parts of truly walking the sustainability talk will be easier than others. Although introducing recycling on campus is a relatively simple endeavor, offering more sustainable lunch options – perhaps eliminating beef or meat entirely from the menus − will likely result in complaints and discontent in some quarters. But exactly at these moments is that the university administration must take a strong stand and make the right decision. At stake are credibility and accountability.

- *Teachers and researchers*

Today's educators have a crucial responsibility in terms of sustainability education. Learners from all walks of life across the world have the opportunity to acquire the knowledge, skills, values and attitudes needed to promote sustainable development and achieve the 17 SDGs and experience sustainable development in action through a whole institution approach to education for sustainable development. University teachers and researchers must be aware that students are watching them and that they must lead by example.

- *Students*

Students are also challenging not only their professors, but also their deans and the rector. They will be scrutinizing how the top management of their university behaves in terms of sustainability. We suppose that students are truly the driving force behind this change and, therefore, we will try to find out their perspectives and expectations.

3. PERSPECTIVES AND EXPECTATIONS OF STUDENTS

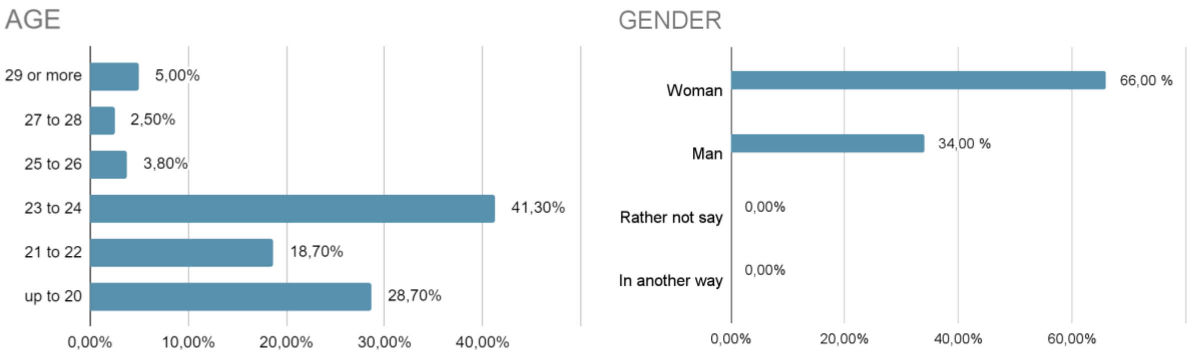
Generally, it is stated in the literature that students have a very low understanding of sustainability (Chaplin, 2014) or reduce sustainability issues to environmental issues, thus lacking a systemic perspective (Perera and Hewege, 2016). Regarding student participation in sustainability, it is clear that values (Whitley et al., 2018) and attitude shaping (Zsóka et al., 2013) are important for sustainability behaviors. However, a value-action gap is perceived: While students believe sustainable living is important, they are hesitant to take personal action, mostly due to the displacement of responsibility to other people or organizations (Chaplin, 2014) and a reluctance to think about lifestyle changes in favor of sustainability (Eagle et al., 2015). Lambrechts et al. (2018) identify different segments in the student population. The results of the segmentation study reveal that there is no universal student's perspective on sustainability. For example, the student perspective in business management study programs is often linked to a focus on the bottom line and self-serving characteristics, instead of the triple bottom line, commonly used in CSR (corporate social responsibility) settings (Lambrechts et al., 2018). Globally, less than 3% of people go to university, but 80% of leaders have a higher education degree. However, most universities are not yet ensuring that all their graduates are equipped with the knowledge and competencies needed to be leaders for a sustainable and just future. Meanwhile, as students have always been at the heart of social change, we are witnessing an increasing number of student-led sustainability initiatives. However, most of these do not reach further than their own institutions, while students who want to develop such projects, on the other hand, do not always know how to get started (SOS, 2020). Students care about sustainability and education, but there is little research to support this that is recognized as representative enough. One of them was made by the organization Students organizing for sustainability international. More than 100 organizations participated and received just under 7000 responses from students in higher education around the world with the following findings:

- 92% of the students agree that sustainable development is something all universities and colleges should actively incorporate and promote,
- 40% of the students report low or no coverage of the concept of sustainable development in their course curriculum.
- 90% of the respondents say they are willing to accept a salary sacrifice to work in a company with a good environmental and social record and
- When asked to identify the word that best describes their feelings about climate change and their future, 75% say that they are concerned.

Beyond the higher education sector, in 2020, European Union leaders agreed to increase Europe's emission reduction target to 55% by 2030. This is only one of the European Green Deal initiatives set by the European Commission with the overarching aim of making Europe climate neutral by 2050. It is clear that such an ambitious goal puts Europe on the right track to lead the world's green transition. As a result, many jobs will be created in the sector with an increasing demand for students to be educated on sustainability and combating climate change.

4. METHODOLOGY

The article aims to describe students' perspectives and expectations toward environmental and social issues, in particular, emphasizing why students are getting serious about sustainability and what expectations they have according to sustainability education at universities. Theoretical background of the paper presents topics based on relevant literature sources. This article reviews the literature on sustainability, universities, higher education institutions, sustainable development, etc. The methods of analysis and synthesis were applied to obtain theoretical background on this issue. The data were obtained from published sources, such as books and articles, as well as the Internet. The primary search engines used in Section 1 are Scopus and Web of Science (WoS). Additionally, the search engines of the scientific publishers Emerald and Springer. Finally, Google Scholar served as the final search engine to identify relevant literature. In addition, a survey was conducted among students from the University of Economics of Bratislava, Slovakia. The research involved 143 students, including 94 women and 49 men aged 20 to 29 years (Graph 1).

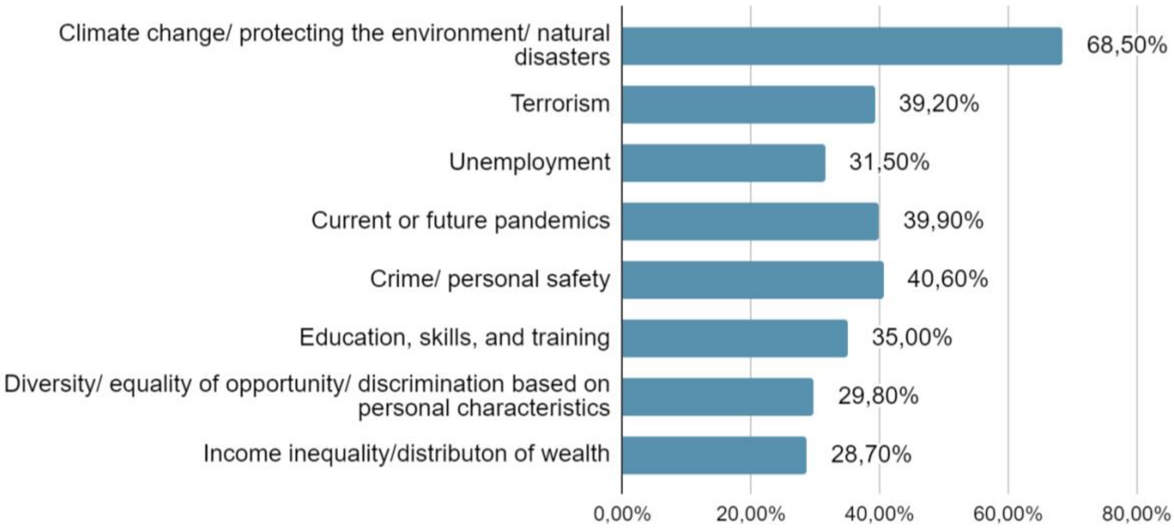


Graph 1: Demographics of the respondents
(Source: author's own graph)

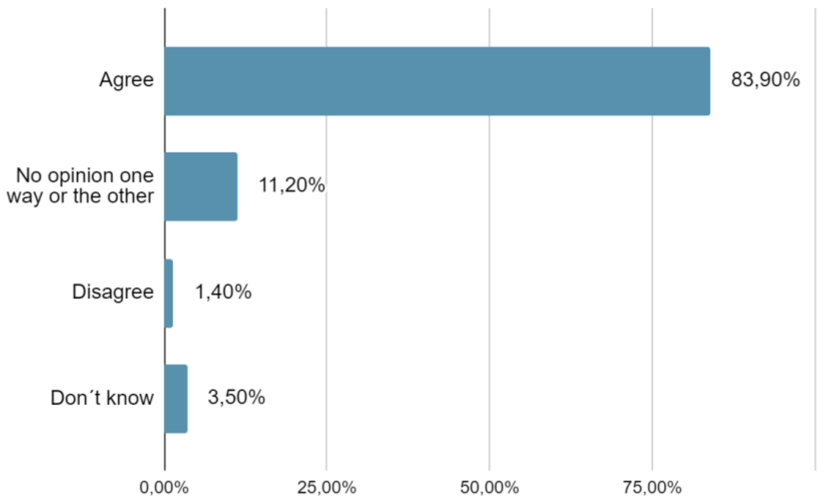
The study was conducted using an MS Forms application questionnaire to the 143 students at the end of the semester in the 2021-2022 academic year in one of the marketing courses of the master's degree at Economic University in Slovakia. Researchers used the questionnaire called 'STUDENTS, SUSTAINABILITY, AND EDUCATION.' We do research on students and sustainability, that can leverage action to transform education and direct society to a more sustainable and fair future. The survey consisted of 26 questions, but we used six for the purposes of this article.

5. RESULTS AND DISCUSSION: PERSPECTIVES AND EXPECTATIONS OF STUDENTS IN SLOVAKIA

Students are concerned about climate change and want this to be reflected in their education. About 69 % of the students agree with the statement that climate change and protecting the environment are the most important challenges facing societies around the world (Graph 2). Additionally, 84% of them agree that sustainable development is something universities should actively incorporate and support (Graph 3).

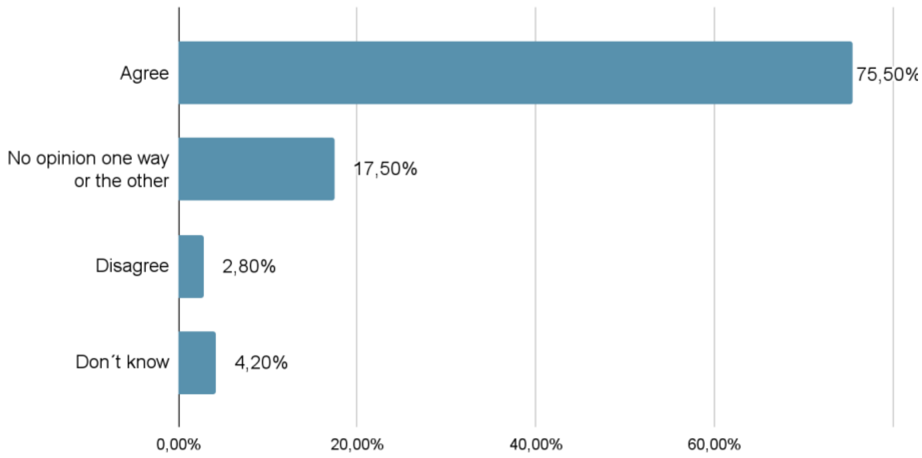


Graph 2: Thinking about the challenges facing societies around the world (including your own), which three of the following issues are personally most concerned about?
(Source: author's own graph)

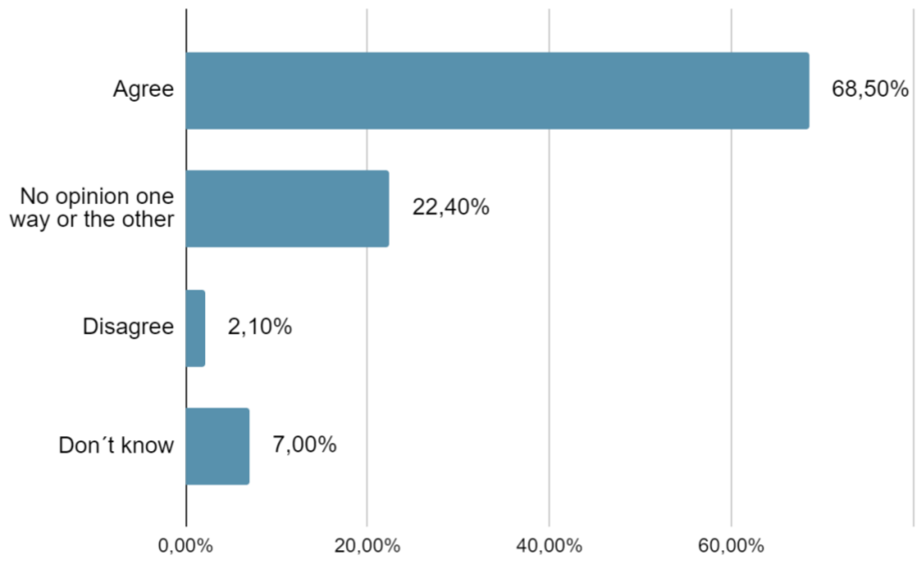


Graph 3: Sustainable development is something that all universities should do actively incorporate and promote
(Source: author's own graph)

Climate and sustainability education is not reaching the classroom enough. This demand has not yet been reflected in the number of subjects. About 76 % of the students agree with the statement that sustainable development is something I would like to learn more about (Graph 4) In addition, 68 % of them agree that sustainable development is something that all courses should be (Graph 5) .



Graph 4: Sustainable development is something I would like to learn more about.
(Source: author's own graph)



Graph 5: Sustainable development is something that all courses should be concerned with actively incorporate and promote
(Source: author's own graph)

6. DISCUSSION

Climate change is the greatest environmental challenge facing humanity. Universities play a vital role in helping to solve the climate crisis because, like other sectors, they have committed to institutional net zero goals. Beyond that, however, the sector allows climate action in other sectors that share these goals. Higher education does this through research, community engagement, student activity, and aligned advocacy. We suppose that curriculum, sustainable strategy of university, and supported sustainable student activities have the biggest influence on students.

6.1. Curriculum

Students must learn to understand the complex world in which they live and to deal with uncertainties, trade-offs, risks, and the high velocity of social (global) change. They must be able to collaborate, speak up, and act for positive change within the world (Wals, 2015; Wals & Lenglet, 2016). It is an important and serious response to the growing need to include sustainability in university curricula. The importance of integrating transdisciplinary approaches, critical thinking, and integration of theory and practice, and the importance of knowing the values and attitudes of the students must be emphasized so that instructors can intelligently direct and customize their teaching. Universities can incorporate sustainability into existing subjects or design new topics such as corporate social responsibility or the circular economy. But in our opinion, the best is to launch academic programs entirely dedicated to sustainability, such as the Master of Science in International Sustainability Management and the Master of Science in Sustainability Entrepreneurship and Innovation.

6.2. Sustainable university strategy

Universities must consider, for example, whether there is a member of the university's board of directors who is responsible for sustainability. Is sustainability part of the institution's master plan and its official mission? Are you providing a sustainability report monitoring progress and clearly stating where you want to go and what you want to achieve in the future? Universities can be committed to a sustainable strategy with the aim of reducing carbon emissions. This can include, for example, solar panels, energy-efficient LED lighting, a new building energy management system, major transformer upgrade, and installation of ground source heat pumps. Broader sustainability initiatives include electric vehicle charging stations, bike sharing, establishing a bee hive on campus, recycling, biodiversity survey, planting additional trees, and agreed an ethical investment strategy.

6.3. Supported sustainable activities

It is important to lead students and youth groups on their campuses and communities toward a more sustainable and just future. Students can also organize local and international conferences, webinars, workshops, events, cinema, SWAP (books or clothes), simulation games, and other initiatives that provide platforms for learning, creating, and sharing solutions to the challenges of the 21st century. They can be part of some sustainability like OIKOS (non-profit organization for sustainability in economics and management).

7. CONCLUSION

Students have high expectations of sustainability in their education, and the education system currently does not meet sustainability needs. UNESCO states that education is an essential element of the global response to climate change. It helps people understand and address the impact of global warming, increases 'climate literacy' among young people, encourages changes in their attitudes and behavior, and helps them adapt to trends related to climate change.' Our research shows that there is a very strong student demand that education be repurposed in this way. 84 % of the respondents agree that sustainable development should be universally taught and promoted by colleges/universities. 76 % agreed that they would like to learn more about sustainable development and 68 % agreed that it should be actively incorporated and promoted by all courses. Students are truly the driving force behind this change, and once you start going green, the great thing is that it is impossible to go backward, as students will continuously challenge their universities to go 'even greener'. Similarly, students will demand that their campus and student societies engage in sustainable behavior and will recognize if they feel like they are being supported and encouraged by their institutions in relation to sustainability.

ACKNOWLEDGEMENT: *VEGA no. 1/0398/22 - The current status and perspectives of the development of the market of healthy, environmentally friendly, and carbon-neutral products in Slovakia and the European Union.*

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FACTORS AFFECTING BEHAVIOR OF SLOVAK CONSUMER IN RELATION TO THE FULFILLMENT OF SELECTED GOALS OF THE 2030 AGENDA

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ABSTRACT

Economic development, the growth of society's wealth and social differences have had a negative impact on the environment. On a global scale, the number of environmental offences as well as environmental crimes is increasing. The repercussions are visible in the alarming signals of a changing climate. In order to reverse the negative trend and in the effort of a sustainable future, several activities are being developed, including the 2030 Agenda for sustainable development. In addition to the fact that the Slovak Republic has to deal with the remnants of the previous establishment in the form of environmental burdens, it must currently prevent the emergence of new territorial contaminations, prevent new environmental damages and further environmental degradation. The aim of this paper is to draw attention to the selected problems related to environmental protection. The historical and logical approach and the genetic-historical analysis were used in the preparation of this contribution. The contribution discusses the factors negatively affecting the behavior of the Slovak consumer towards the environment. Determinants of a socioeconomic nature can significantly influence the fulfillment of some of the goals of global priorities for achieving sustainable development. The specifics mentioned in this paper, related to society's broken relationship with the environment, affect not only Slovakia, but also other postsocialist countries. In order to minimize the impact of the identified factors, which affects the consumer's approach to the environment, the cooperation of all economic entities, foremost of the state and state institutions, is necessary. The positive effects will be reflected in the quality of life of all members of society and at the same time will significantly contribute to the fulfillment of some of the goals of the 2030 Agenda.

Keywords: *2030 Agenda, consumer, environment, sustainability*

1. INTRODUCTION

In order to understand today's problems in contemporary Slovakia, it is necessary to mention the historical contexts that have shaped people's attitudes and behavior towards the environment. During the last several decades, the economy, consumer behavior and waste management have been influenced by different political institutions and have passed through different economic systems. These political and economic changes have left traces both on the structure of the economy, on the condition of the land and on the relationship of people to the environment. The 2030 Agenda for Sustainable Development offers a big challenge for Slovakia. After the collapse of the Austro-Hungarian monarchy in 1918, the majority of the population living in the territory of today's Slovakia made a living from agriculture. P. Sirůček et al. (2007) states that in the population census of 1921, the ratio between the population working in industry and the population working in agriculture was 17:61%, and the agrarian nature of the country remained until the end of the Second World War. In the 1920s, land reforms were carried out, the aim of which was to support the economy of the newly formed Czechoslovak Republic, to create more efficient use of land and make an effort to reduce the cost of agricultural production. Land owners could retain a maximum of 150 hectares of agricultural land, or 250 hectares of all their land, but the rest had to be sold to the state at prices valid before the First World War. There was also the cancellation of the so-called fideikomis - the inheritance of a set of assets by a certain person (usually the eldest son), who, however, could not dispose of such assets arbitrarily in order to preserve the integrity of the assets for future generations. Despite these mentioned facts, land as a factor of production and the products derived from it were part of the market economy. Owners or the tenants of the land in their management decisions were guided by making efforts to preserve the quality and fertility of the soil, the restoration of forests and the like. People working in forestry, fishing and agriculture had a natural relationship with nature and the environment resulting from the necessary symbiosis. After the Second World War, however, great economic changes occurred. As in other countries under strong Soviet influence, a centrally controlled economy, managed by the Communist Party of Czechoslovakia, also began in Slovakia. The communist regime nationalized enterprises, expropriated and collectivized private property. On the pages of the Institute of the National Memory we (Ústav pamäti národa, 2022) can read that, "the communist regime punished its real and potential opponents by confiscating their property , including homes, land and agricultural property. [...] The de facto expropriation of land resulted in the establishment of unified peasant cooperatives, which the regime forced peasants to join through various means of coercion during its forcible collectivization." Quality and efficiency were of only secondary importance (Adamisin, Kotulic, Kravcakova Vozarova, 2017). Negative external effects arose - and unfortunately still arise - in the economic activity of companies (manifested primarily in emissions and waste disposal) but also in the population's approach to waste management. The consequences of this behavior from the past are still being dealt with to this day. It is not only in the necessary remediation of environmental burdens, but also in the previously learned patterns of behavior. The attitude "I will save, let others bear the costs" persists. The reason for this behavior is partly explained by the historical development (loss of relationship with the land) and the fact that Slovakia belongs to one of the less developed regions within Europe.

2. AGENDA 2030

The issue of environmental protection is closely related to the six priority areas that the Slovak Republic has set for the fulfillment of the sustainable development goals resulting from the UN Agenda for Sustainable Development by 2030. In connection with the 2030 Agenda, the Slovak Government Council for the 2030 Agenda was established, which ensures that the objectives of the Agenda are part of all public policies. The Ministry of Investments, Regional Development and Informatization of the Slovak Republic and the Ministry of Foreign and European Affairs of the Slovak Republic are responsible for Agenda 2030. Slovakia has determined to accomplish the following six priority areas, taking into account the specific situation of Slovakia:

- education for a dignified life,
- moving towards a knowledge-based and environmentally sustainable economy in the face of demographic changes and a changing global environment,
- poverty reduction and social inclusion,
- sustainable settlements, regions and landscape in the context of climate change,
- rule of law, democracy and security,
- good health.

Environmental protection directly depends on education and training, on the level of poverty and social exclusion, on regional differences and on the relationship of people to the countryside. It is closely connected with the rule of law and the enforceability of law, and the quality of the environment is directly connected to the health of the population, or workforce.

Data from Eurostat on the achievement of the 2030 Agenda targets are included in the 2022 publication "Sustainable development in the European Union - Monitoring report on progress towards the SDGs in an EU context – 2022 edition". Figure 1 shows the fulfillment of the objectives and the position of Slovakia compared to the EU average.

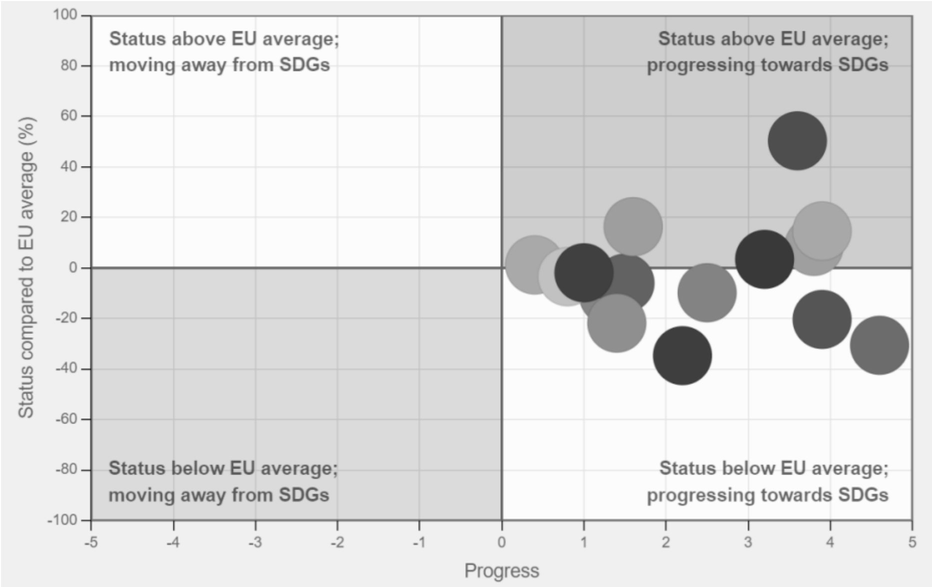

Figure 7: Meeting the goals of Agenda 2030 – Slovak Republic
(Source: Eurostat)

Out of the seventeen sustainable development goals of the 2030 Agenda, Slovakia performs best in fulfilling goal 1 (no poverty). (Achievement of this goal is 50.35% above the EU average and a progress score of 3.6.) As Eurostat states in the explanatory notes, "the [achievement] status of each SDG is the sum of all indicators of the specific goal in relation to the EU average. It is a relative measure that also depends to a certain extent on the natural conditions and historical development of each country" (Eurostat, 2022). It is therefore obvious that Slovakia is doing better on average than the European Union average. „The progress score of individual goals in the country is based on the average annual growth rate of all evaluated indicators in a specific goal over the last five years. It is an absolute measure that is not affected by the progress achieved in other countries" (Eurostat, 2022). The greatest progress in the past five years has been achieved by Slovakia in goal number 13 (climate protection), where it achieves a progress score of 4.6 (out of a possible 5). Unfortunately, the fulfillment of goal no. 13 in Slovakia still remains as this is the second worst result of the Slovak Republic among the seventeen set goals when comparing Slovakia with the EU average, reaching the level of -30.61%. (Slovakia achieves the worst results in the fulfillment of objective no. 4 quality education, where it reaches a value of -34.71 compared to the EU average). There is no deviation from the goals of sustainable development in any of the seventeen goals, Slovakia is making progress towards the goals of sustainable development in all of them. The smallest progress score (at the level of 0.4) was achieved by the Slovak Republic for goal number 2 (no hunger). Nevertheless, with regard to this goal, Slovakia remains slightly above the average compared to the EU average (fulfillment of this goal reaches a value of 1.19% above the average of EU countries). In fulfilling the objective of goal no. 12 (responsible consumption and production) Slovakia is -21.83 percent below the average of EU countries and the progress score is only 1.4. Fulfilling the goals of sustainable development no. 12 (responsible consumption and production) and 13 (climate protection) indicate the situation and tendencies in the area of the environment. So what influences the consumer to behave responsibly towards the environment?

From one point of view, a person's nature and attitude towards society and social relations are shaped by learning, culture and education (for example, social intelligence), from another point of view, from the point of view of a person's existence, we can consider it as the result of evolution or heredity (for example, egoism or so-called rational behavior concerning the consumer - maximum benefit at minimum costs).

3. EVERYTHING IS PAID FOR

Between the areas of culture and education, we can also include the **approach of people - both consumers and producers - towards the environment and nature**. In the case of Slovakia (and other post-socialist countries), we can observe a different approach between the behavior of people of different generations. People from the older generation who grew up in the period of socialism and in an environment of state paternalism, many of which live in the belief that what (from their point of view) belongs to no one belongs to everyone and that the state is responsible for solving any problems. They have lost a sense of responsibility and lack the awareness that everything has to be paid for. Decades of centrally controlled economy, in which two generations grew up, negatively affected consumer behavior. The younger generation, which has already grown up in changed socio-economic conditions, has been shaped and perceives the world around them in a different way. This generation is more aware of the problems related to environmental pollution and climate change and adapts its consumer behavior accordingly. However, we cannot generalize - even among the older generation there are people with high social intelligence, morals and responsible behavior towards their surroundings, just as there are people among the younger generations who are willing and able to consciously destroy the environment for their personal profit, or carry out activities with catastrophic environmental consequences. We will have to pay for the destroyed environment with our deteriorated health and a lower quality of life.

4. WE HAVE NO CHOICE

Unfortunately, not everything is black and white. One of the **other causes** of the neglectful behavior of people towards the environment (besides the already mentioned absence of common sense and missing elementary moral attitudes) is often a **low personal income that** does not even cover basic personal needs. In this case, we can attribute part of the responsibility for environmental damage to the state and its social policy. In 1943, the American psychologist Maslow published his Theory of Human Motivation (A Theory of Human Motivation), in which he says that "Man is a perpetually wanting animal." According to him, a real or threatened obstacle to the satisfaction of basic needs is a psychological threat, which leads to psychopathy. Maslow organized the five basic needs (sets of goals), which are related to each other, into a hierarchy.

Figure following on the next page

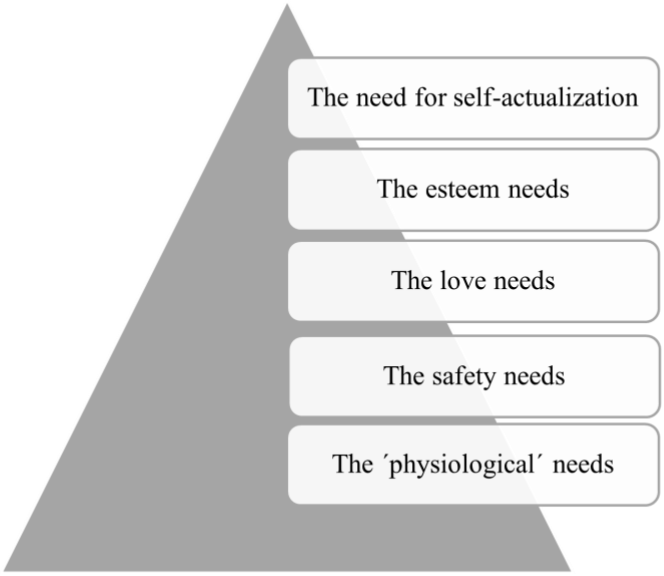

Figure 8: Maslow's predominance of needs
(Source: created by Maslow. A. H. (1943). A Theory of Human Motivation.)

When one need is satisfied, another, higher one arises. Maslow's hierarchy of needs is shown in figure number 2. In a figurative sense - only when we are able to satisfy the basic existential needs,are we then able to begin to satisfy the need for a love of nature and show respect for the environment. Low income, or we can classify poverty as another determinant, is a limiting factor for responsible consumer behavior in relation to the environment. An example can be the illegal cutting of wood or air pollution from local heating systems when heating households with solid fuels in winter. Low-income groups of the population often use outdated, worn-out or unsuitable incinerators, in which they also burn various waste, which significantly contributes to the creation of harmful emissions. Countries with a low minimum wage currently include all European post-socialist states. Similarly, we find these countries are among the countries with the lowest net disposable income per capita (in purchasing power parity) compared to the EU average, as reported by Eurostat's regional household income statistics (table no. 1).

Considering the current political and economic situation (economic impacts of the Covid-19 pandemic and economic impacts of measures in connection with the ongoing war in Ukraine), we can assume that in the near future there will not be significant positive shifts in favor of post-socialist countries. It is also necessary to mention regional differences within individual countries. The least developed districts of Slovakia (according to Act 336/2015 Coll. on the support of the least developed districts) are listed in table no. 2. On the pages of the European Employment Service (Eures) we can find a brief overview (table no. 3) of the amount of minimum wages in EU countries in January 2022. The data shows that Slovakia is among the countries with a low minimum wage (Eures, 2022). Eures states that data for countries outside the eurozone are converted to euros, and the table contains information for only 21 (out of 27) EU countries where the minimum wage is set by law. For this reason, Austria, Finland, Sweden, Denmark, Norway and Cyprus are missing from the list, where minimum earnings (or the number of monthly salaries) are regulated by collective agreements.

Country of the EU or Slovakia - Region NUTS 2	Disposable income, net (PPS), per inhabitant, in 2019
European Union – 27 countries (from 2020)	17 100
Bulgaria	9 400
Croatia	10 900 e
Czechia	14 000
Estonia	12 700
Hungary	11 800
Latvia	11 300
Lithuania	15 100
Poland	13 200
Romania	11 700
Slovenia	14 500
Slovakia:	11 400
• Bratislavský kraj (Bratislava Region)	17 500
• Západné Slovensko (Western Slovakia)	10 900
• Stredné Slovensko (Central Slovakia)	11 000
• Východné Slovensko (Eastern Slovakia)	9 800

Table 3: Income od households; Available flags: e – estimated (Source: Eurostat)

District	Date of entry into the list
Lučenec	31.12.2015
Poltár	31.12.2015
Revúca	31.12.2015
Rimavská Sobota	31.12.2015
Kežmarok	31.12.2015
Sabinov	31.12.2015
Svidník	31.12.2015
Vranov nad Topľou	31.12.2015
Gelnica	20.07.2017
Rožňava	31.12.2015
Sobrance	31.12.2015
Trebišov	31.12.2015
Bardejov	20.10.2017
Medzilaborce	20.10.2017
Košice - okolie	22.1.2018
Levoča	25.4.2018
Snina	25.4.2018
Stropkov	19.10.2018
Michalovce	19.10.2018
Stará Ľubovňa	20.1.2022

Table 4: The least developed districts of Slovakia ((Source: Act 336/2015 Coll.)

Country		Monthly salary
High	Luxembourg	2 257 €
	Ireland	1 775 €
	Netherlands	1 725 €
	Belgium	1 658 €
	Germany	1 621 €
	France	1 603 €
Medium	Spain	1 126 €
	Slovenia	1 074 €
	Portugal	823 €
	Malta	792 €
	Greece	774 €
Low	Lithuania	730 €
	Poland	655 €
	Estonia	654 €
	Czech Republic	652 €
	Slovakia	646 €
	Croatia	624 €
	Hungary	542 €
	Romania	515 €
	Latvia	500 €
	Bulgaria	332 €

Table 5: Amount of the minimum wage in EU countries in January 2022 (Source: Eures)

In fulfilling the goal of Agenda 2030, regarding responsible consumption and production, none of the post-socialist countries attains the average of the EU countries (table no. 4).

A COUNTRY WITH A LOW MINIMUM WAGE	FULFILLMENT OF GOAL NO. 13 CLIMATE PROTECTION IN % COMPARED TO THE EU AVERAGE	PROGRESS IN THE FULFILLMENT OF OBJECTIVE NO. 13 CLIMATE PROTECTION (RANGE OF VALUES FROM -5 TO +5)	FULFILLMENT OF GOAL NO. 12 RESPONSIBLE CONSUMPTION AND PRODUCTION IN % COMPARED TO THE EU AVERAGE	PROGRESS IN THE FULFILLMENT OF OBJECTIVE NO. 12 RESPONSIBLE CONSUMPTION AND PRODUCTION (RANGE OF VALUES FROM -5 TO +5)
LITHUANIA	**-20,76**	**0,4**	**-28,75**	**1,1**
POLAND	**-63,43**	**2,0**	**-30,08**	**-0,6**
ESTONIA	**-35,76**	**2,6**	**-30,09**	**2,3**
CZECH REPUBLIC	**-78,41**	**1,5**	**-17,59**	**1,2**
SLOVAKIA	**-30,61**	**4,6**	**-21,83**	**1,4**
CROATIA	**NO ASSESSMENT**	**NO ASSESSMENT**	**-17,56**	**0,0**
HUNGARY	**-33,65**	**0,4**	**-12,63**	**2,8**
ROMANIA	**NO ASSESSMENT**	**NO ASSESSMENT**	**-36,20**	**-1,0**
LATVIA	**-11,39**	**2,3**	**-16,91**	**1,6**
BULGARIA	**NO ASSESSMENT**	**NO ASSESSMENT**	**-66,75**	**-1,0**

Table 6: Status of countries with a low minimum wage in meeting goals no. 13 (climate protection) and no. 12 (responsible consumption and production) compared to the EU average. (Source: Eurostat)

In 2015, Act No. 336/2015 Coll. on the support of the least developed districts. In order to create sustainable jobs, increase the competitiveness of the regions and improve the quality of life of the residents of the affected districts, the Government of the Slovak Republic has offered such districts preferential use of European funds, the possibility of receiving a regional contribution or preferential investment incentives.

However, the Slovak National Audit Office stated in its report (2021) that "instead of active state aid to the least developed districts, passive instruments in the form of grants that did not primarily address the challenges of the labor market, employment support and the associated socio-economic growth of the region prevailed". The result of inefficient and ineffective state aid is that the differences between the individual regions of the Slovak Republic are constantly increasing. It can be assumed that this mentioned fact can have a negative impact on consumer behavior in relation to the environment and on the fulfillment of the goals of the 2030 Agenda. The situation is worsened by the population's fears about the slowdown of the economy, uncertainty about the ever-changing pandemic situation, the ongoing war in Ukraine and rising inflation. which escalates problems in less developed regions.

5. (IR)RATIONAL CONSUMER BEHAVIOR

A **third factor** that significantly affects a person's attitude to the environment is **egoistic behavior and the pursuit of utility maximization** (from the consumer's point of view, profit maximization in the case of the producer).The Market economy is based on demand and supply, where price plays a decisive role. (The results are noticeable, for example, in the trade in waste - both legal and illegal). Colonel Ing. Mário Kern, Director of the Department of Detection of Hazardous Materials and Environmental Crime of the Office of the Criminal Police of the Presidium of the Slovak Police Force, in his lecture titled *Environmental crime – a current security threat to society,* (published 2020 on Youtube), drew attention to the fact that "The state has certain mechanisms to enforce the law and in the field of the environment there are [...] two main directions. One is [...] administrative law and the other is criminal law. Historically, the absolute majority [...] of illegal actions were assessed according to administrative law, only in the last ten to fifteen years has the direction of criminal law begun to deviate very dramatically. It is related to the fact that [...] the means of administrative law are failing. [...] Institutions such as the district office, the municipal office and the Slovak Environmental Inspection have very limited possibilities to fight against those illegal actions. They are often dependent only on some formal procedures and on [...] administrative sanctions, which in many respects are absolutely insufficient, and they have neither the tools nor the capacities to be able to [...] uncover the wider context of this illegal action and adequately punish [. ..] perpetrators." According to Kern, the second problem is "enforceability of the law, the enforceability of the sanction, which is often very tragic."

6. CONCLUSION

In this article, we present three determinants of Slovak consumer behavior in connection with environmental sustainability. All of them can significantly affect the state of the environment (not only) in Slovakia, they all require more or less activity on the part of economic entities, including the state and state institutions. The first determinant - the consumer's attitude towards the environment - can be influenced in the long term by education, culture and morality in society and the formation of social responsibility. Consumer behavior here is related to morality and "common sense". The second determinant - the unthrifty behavior of low-income consumers towards the environment - can be removed primarily by effective state measures for employment growth and the development of poor regions, including macroeconomic measures to dampen the effects of forecasted inflation (caused on the one hand by enormous fiscal incentives during pandemic restrictions and on the other by supply shocks in connection with the rise in oil, electricity and gas prices). Consumer behavior depends on "having or not having a choice". The third determinant – the effort to make money at the cost of environmental damage – requires the state to make significant changes in the legislation,so that the laws have a significant sufficiently preventive and repressive effect.

Penalties for causing damage to the environment must be significantly greater than the possible benefits received by the perpetrators. Find the capacities and streamline the control system, including improving law enforcement. Consumer behavior here is influenced by egoism and the desire for money. Reducing the impact of even one of the mentioned determinants can have measurable positive effects on the quality of life of all members of society and at the same time will significantly contribute to the fulfillment of some of the goals of the 2030 Agenda.

ACKNOWLEDGEMENT: *Writing this paper was supported by projects VEGA no.* ***1/0851/21*** *called "Social Economy as a Modern Tool for Building an Inclusive Society in the Context of Global Change and the Challenges of the UN 2030 Agenda for Sustainable Development" and VEGA no.* ***1/0398/22*** *called "The current status and perspectives of the development of the market of healthy, environmentally friendly and carbon-neutral products in Slovakia and the European Union."*

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CRISIS AS OPPORTUNITY – STUDY ON EMPLOYERS IN FEDERATION OF BOSNIA AND HERZEGOVINA

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ABSTRACT

Besides health issues, the outbreak of the pandemic COVID-19 has awaken a crisis characterized by shocks on both the aggregate supply side and the aggregate demand side. As the pandemic spread, a number of sectors that were negatively affected increased, primarily due to a reduction in aggregate demand and a slowdown in the supply chain. It furthermore reduced employment, investment, and production and productivity. The crisis affected Bosnia and Herzegovina equally. The pandemic consequences affected the reduction of business activities, that directly impacted unemployment rates and put pressure on sustainability of companies. These restrictive measures lead to temporarily or even permanent shut down of businesses with many employed people confined to their homes or even loss of their jobs. This was the case in Bosnia and Herzegovina as well, where lock-down and other health-related measures implied a slowdown of the business activity, increase of unemployment and closure of businesses. However, crisis emerged form COVID-19 pandemic created opportunities for certain enterprises, which is not novelty, and new approaches in crisis management state that organizations should strive to be "antifragile" and come out of the crisis better than when they went in. This paper contains research results on the impact of the COVID-19 pandemic on the labour market in Bosnia and Herzegovina, implemented on the relevant sample of employers in Federation of BiH. Its aim is to identify industries and types of business for which crisis resulted in positive outcomes i.e. higher scope of their business activities increase of financial results etc. In this paper, authors also provide an overview of strategies that can be used for managing crisis situations and turning them into opportunity.

Keywords: *business operations, crisis management strategies, COVID-19 pandemic*

1. INTRODUCTION

COVID-19 pandemics that emerged in 2020, besides health issues, created many negative effects on different sectors, including business operations. Decision makers in all parts of the world needed to create environment in which economy and social life will continue to function. It implied imposing restrictive measures, that forced many businesses to decrease or even close their operations, while many employees were confined to work from home, or even got fired. This scenario was also in Bosnia and Herzegovina where many businesses were temporarily or even permanently closed.

Businesses that continued to function tried to find a way and flexibility to adapt their business model to new circumstances e.g. IT companies sent their employees to work from home, textile businesses started with production of protection masks, cosmetic productions businesses started with production of disinfections etc., while the greatest issues faces service businesses that require direct contact with clients i.e. hairdressers, beauticians etc. All these issues resulted in reduced incomes and its dropdown. Bosnia and Herzegovina is country with underdeveloped business environment. According to the Doing Business Index 2020, Bosnia and Herzegovina is ranked as 90th country out of 190 included countries in analysis of business environment conducted by the World Bank. This state of underdeveloped business environment in Bosnia and Herzegovina combined with COVID-19 restrictions affected that many companies gave up from planned investments, new employment and any other development plans causing at the same time many negative effects on the labour market. However, theory and practice show that every crisis and every change represents a new beginning and emerged many opportunities that turned out to be path for success of many businesses and companies. At the global level, the COVID-19 crisis has accelerated trends already underway in science, technology and innovation (STI), since these systems have responded strongly and flexibly to it. Newly funded research initiatives worth billions of dollars have been set up in record time, and research and innovation have led to the rapid development of vaccines (OECD, 2021) but also other products and services, and dramatically shifting the use of, and dependence on, digital technology. Some of the approaches in crisis management promote crisis as opportunity. Chevalier and Hirsch (1994) state that a company going through a critical period may, with its risk budget, gain a competitive advantage by lowering its costs and achieving a lower cost level compared to those of its competitors. In Chinese language there is one sign for the word „crisis“ and word „opportunity“. As in many parts in the world, in Bosnia and Herzegovina as well, COVID-19 outbreak crated opportunities for many industries and businesses that introduced new products and services, increased income and employed more people. In relation to these issues, this paper makes a significant contribution to understanding which industries and types of businesses experienced positive outcomes during COVID-19 crisis and what strategies their managers used.

2. THEORETICAL FRAMEWORK

COVID-19 pandemic and its impact on business operations caused interest of many scientific and research studies. Many studies analysed the effects of COVID-19 on reduction of jobs and job losses (Adams-Prassl et al., 2020; Béland et al. 2020; Kahn et al., 2020), business performance and outcomes (Bartik et al., 2020; Harel, 2021; Engidav, 2022.) and response of businesses on COVID-19 pandemics (Kang et al., 2020;, Gurchiek, 2020). However, there is no many studies that analysed factors that led to positive implications of crisis caused by COVID-19 at some businesses viewed in increase of volume of business operations, larger sales and income, higher financial results etc.

Wright (2021) discuss that seeing opportunities in pandemic depends of the stage of business, since, the levels of uncertainty depended on the pandemic’s impact on the location of the entrepreneur, the extent of the government’s mandated closures and the level of the business’s in-person interaction and counterintuitive, while this uncertainty was more likely to have a negative impact on “established businesses” as opposed to early stage businesses, since in general, early-stage entrepreneurs tended to see more opportunities in the pandemic, perhaps because they had more flexibility to pivot, than those who had been operating their businesses for more than 42 months. On the basis of the results of the Global Entrepreneurship Monitor research in 2020, this author states that early-stage entrepreneurs tend to be less pessimistic in their future growth projections.

Discussing from the perspective of international opportunities for entrepreneurs in and post COVID-19 pandemics, Zahra (2020) confirmed that some industries have seen significant growth, including enterprise technology services, home entertainment, hospitals, medical equipment suppliers, e-commerce retailers, courier pick-up and delivery services, cybersecurity, and sanitary product manufacturing, among many others. Nearly all of those sectors provide international opportunities for entrepreneurs while the pandemic has pushed commerce to online platforms. For many international ventures, he states, the growing use of digital technology means cheaper and greater access, better coordination, higher productivity, and lower costs while cross-border communication is now easier than ever, allowing entrepreneurs an opportunity to exploit these technologies and market needs. Assessing the practices and strategies than were used by entrepreneurs during COVID-19 pandemic to mitigate negative effects, Belitski et al. (2022) analysed several papers on these topics concluding and demonstrating how small businesses and individual entrepreneurs can adjust to new business conditions by working from home, developing new business models, and seeking social support to leverage the negative impact of the COVID-19 pandemic. Karunam (2021), discussed about the positive side-effects of COVID-19 for businesses focusing on importance of robust digital infrastructure, that helped businesses to rethink how technology can serve several needs. COVID-19 pandemic and its effects on business are, almost two years after peak of pandemic, still in focus of researchers, and IBM Institute for Business Value (2021) through series of reports examines COVID-19 and future of business indicating that another huge shift in prioritization will be in place.

3. EMPIRICAL RESERACH

3.1. Methodology

Methodology used for implementation of the research for the purposes of creation of this paper is based on primary research i.e. data collected by the Federal Employment Institute through employer surveying and data collected through focus group held with sample of managers and owners of companies that experienced positive implications in business operations during COVID-19 pandemic. Employer surveying process is legal obligation of the Federal Employment Institute, that has been implemented every year. The questionnaire consisted of questions for collection of general data about employer, number and structure of employees in the company, training of employees and redundancy assessment. The same methodology has been applied in Republika Srpska and Brčko District BiH, that allows countrywide analyses[1]. In definition of the sample were accepted marginal error of 3% and a confidence level of 95%. Based on those criteria the sample size was determined at 1.232 enterprises in Federation of BiH. Key stratification variables were are the company size (small, medium and large) and industry (fields of business activities) according to KD2010 classification in Bosnia and Herzegovina. CAPI (Computer Assisted Personal Interviewing) method has been for data collection with the help of interviewers, who were trained to implement the interview in order to ensure quality of the research the data quality. Data analysis has been conducted by using the STATA statistical program. The sample is dominated by small businesses (81.41%), which actually reflects structure of the economy. Medium-sized enterprises are represented in the sample with 13,40%, and large ones 5.19%. Sample size is presented in Table 1.[2]

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[1] Technical assistance to the project has been provided by EU funded project „Improving Labour Market Research"

[2] This research was done with the technical support of the European Union's project "Improving labour market research", which includes the evaluation of active labour market measures, and their redesign in accordance with the results of the evaluation.

Size	FBiH	Percentage
Small enterprises	1.003	81,41%
Medium sized enterprises	165	13,40%
Large enterprises	64	5,19%
Total	1.232	100,00%

Table 1. Sample size
(Source: Database of Federal Employment Institute –
EU project "Improving Labour market research")

The largest percentage of enterprises in the sample is in industry C - Manufacturing (26.14%), G - Wholesale and retail trade; repair of motor vehicles and motorcycles (24.68%), and I-Accommodation and food service activities (hotels and restaurants) – 10,71%. Total of 61.5% of surveyed employers have business operations in these three industries.

Industry/ field of business activity	FBiH	Percentage
A: Agriculture, forestry and hunting	-	0,00
B: Mining and quarrying	10	0,81
C: Manufacturing	322	26,14
D: Production and supply of electricity and gas	1	0,08
E: Water supply; wastewater disposal, waste management and remediation activities	28	2,27
F: Construction	119	9,66
G: Wholesale and retail trade; repair of motor vehicles and motorcycles	304	24,68
H: Transport and storage	74	6,01
I: Accommodation and food service activities (hotels and restaurants)	132	10,71
J: Information and communication	46	3,73
K: Financial and insurance activities	8	0,65
L: Real estate business	9	0,73
M: Professional, scientific and technical activities	104	8,44
N: Administrative and support service activities	34	2,76
O: Public administration and defense; compulsory social insurance	-	0,00
Q: Health and social work activities	-	0,00
P: Education	-	0,00
R: Art, fun and recreation	18	1,46
S: Other services	23	1,87
Total	1.232	0,00

Table 2. Sample by field of business activity of surveyed employers
(Source: Database of Federal Employment Institute –
EU project Improving labour market research)

In order to furtherly confirm factors that determine positive implications of crisis, authors organised focus group with group of employers that satisfied criteria that their companies a) achieved greater level of business operations during 2020 in COVID-19 pandemics or b) their companies achieved increase of financial results in 2020 in relation to 2019.

Focus group[3] was held in Tuzla, Bosnia and Herzegovina on December 3rd, 2021 with 7 participating employers and moderated by authors of the paper. The focus group method was used as a qualitative form of research which key source of analysis and interpretation was the interaction between participants. Focus group consisted of 7 employers – managers and/or owners of companies operating in trade (1), health and social work activities (2), information and communication technologies (1), financial and insurance activities (1), construction (1), Administrative and support service activities (1). The participants were encouraged to discuss and express their thoughts and opinions about topics, which were the basis for creation of the conclusions of the focus group using the methods of synthesis and analysis.
Having in mind annual nature of the survey differences between status in year 2020 (January) and year 2021 (January) could be assessed as impact of the COVID-19 on business operations.

3.2. Research results

The companies in the sample that were included in collection of data by Federal Employment Institute stated their estimation about the consequences of the COVID-19 pandemics on their companies 2020 in terms of financial results, volume of production and provision of services, presence on existing markets and cooperation with existing clients, plans to expand into new markets and establishing cooperation with new clients. It should be emphasized that, given that employers completed the questionnaire in late 2020 and early 2021, their responses reflect a subjective assessment of the effects on key business indicators in the context of the COVID-19 pandemic. In terms of volume of business activities, the largest percentage of employers in Federation of Bosnia and Herzegovina (41,88%) stated that in 2020 experienced decline in volume of business activities, while 31,01% expressed stagnation. However, 312 of them that is 25,32% (more than ¼) expressed growth of their business volume in production, sales and/or services (Table 3). If we look at financial results of employers in the sample, 41,80% record decline in their financial results, while 32,87% recorded stagnation. Similar as in previous indicator, 23,29% of employers experienced growth in their financial result in 2020 in relation to 2019. These data implicate that cca. ¼ of employers had positive implications on their business results and operations during the period of crisis.

	Volume of business activities (Production, Sales, Services)		Financial results	
	Number	Percentage	Number	Percentage
Decline	516	41,88%	515	41,80%
Stagnation	382	31,01%	405	32,87%
Growth	312	25,32 %	287	23,29%
No answer	22	1,79%	25	2,04%
Total	1232	100,00%	1232	100,0%

Table 3. Estimation of business volume (production, sales, services) and financial results in 2020 by companies in sample (Source: Database of Federal Employment Institute – EU project Improving labour market research)

[3] Focus group was organised with support of the European Union's project "Improving labour market research"

If we look at the type of industries in which operate companies that achieved positive implications during the COVID-19 crisis on their business operations and financial results, on the level of overall sample (319 companies), the largest amount of them operate in field of C-Manufacturing (34,48%), G-Wholesale and retail trade, repair of motor vehicles and motorcycles (23,20%) and F-Construction (10,97%), If we look at these companies and their share in industries they belong to in overall sample of 1.232 surveyed companies it can be concluded that the largest share of these companies are in the field E- Water supply; wastewater disposal, waste management and remediation activities (39,29%), J – Information and communication (39,13%) and C- Manufacturing – (34,16%). These data implicate that type of business activities had an impact on positive results during the crisis, which will be furtherly confirmed during the focus groups with employers. For example, companies that are operating in water supply industry are mostly public companies delivering the basic public service – running water for citizens and other subjects, the product and service that had to be used no matter of COVID-19 implications. Requirements for social distancing, shifting patterns of demand and other COVID-19 requirements brought changes in working and everyday life practices (such as working from home or online sales) implying the introduction of new processes, products and services, causing increase of use of digital technologies and support to growth of ICT companies during pandemics. This was the case in Bosnia and Herzegovina and Federation of Bosnia and Herzegovina as well, where research showed that out of 46 ICT companies included in the research 18 (39,13%) of them experiences increase in volume of business operations and/or financial result. This may be the reason for large share of companies with these implications, as confirmed by employers included in the focus groups, that companies in the field of trade were faced with additional costs and need for change of business model focused on e-commerce and delivery of products with extreme focus of social distance and disinfection measures. In terms of period of existence of companies at the market, most of the companies exist at the market for over than 20 years (38,56% of companies that experienced positive implications during COVID-19), while the least number are of those who exist at the market for less than 5 years (13,17%) implicating that experience, developed market connections are certainly one of the factors that affected these results during COVID-19. Out of companies that experienced growth of their business operations and/or financial result in 2020, 73,04% are small enterprises (out of which almost half of them micro enterprises), 20,38% - middle-sized enterprise and 6,58% large enterprises. Total of 174 employers, besides increase of business volume and financial results, also had new employment in 2020, and 3 companies had over than 50 new jobs in their premises in 2020.

Within the primary research conducted, employers were asked what type of activities did they implemented when COVID-19 pandemics and lock down emerged, in order to ensure continuation of their business activities at the same time implementing recommendations and instructions by government in relation to health protection. Overview of their answers is presented in Figure 1.

Figure following on the next page

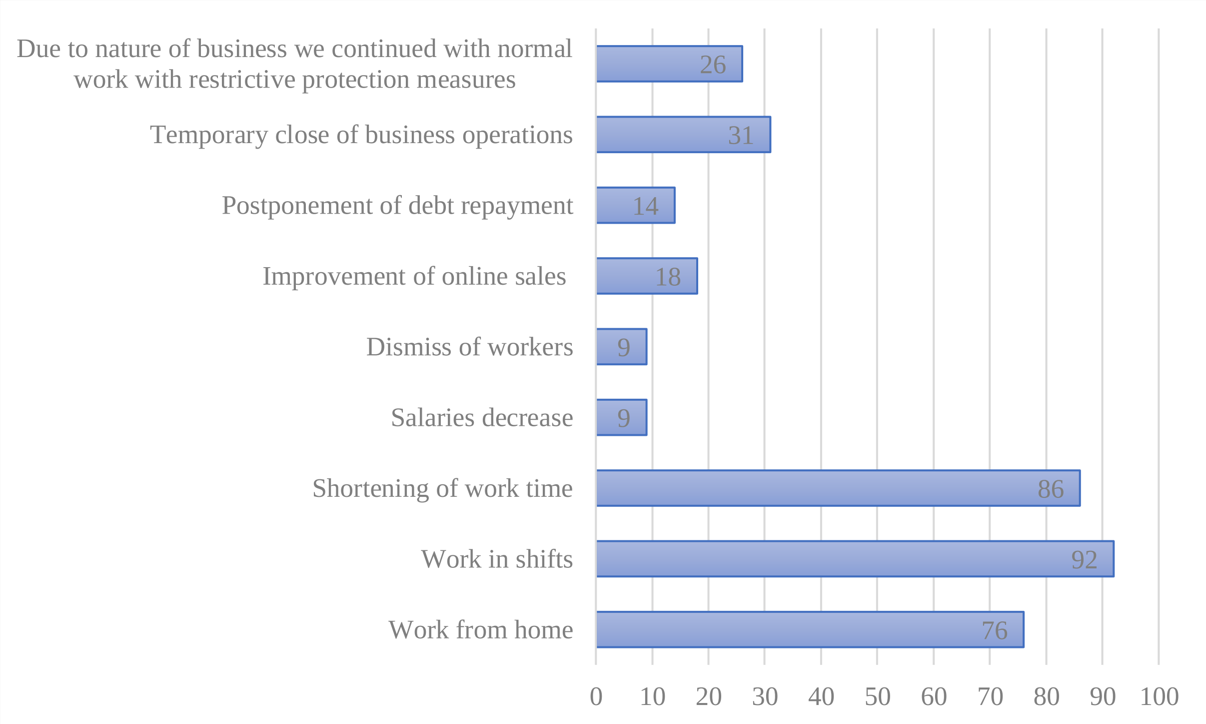

Figure 9. Activities taken by employers who experienced increase of business operations volume and financial results during COVID-19
(Source: Database of Federal Employment Institute –
EU project Improving labour market research)

As it can be seen and concluded on the basis of data from Figure 1, only small share of employers in the sample who experienced positive implications on their business operations and/or financial results taken restrictive and negative measures in terms of permanent closing the business (31) while 9 (less than 3%) decreased salaries or fired employees. All other had different and more employees satisfaction oriented measures such as: work in shifts, work form home, shortening of work time, or continuation of work with maximum implementation of restrictive measures. Eighteen companies improved their business sales as strategy to respond to COVID-19 situation, while 14 of them postponed their debt repayment as one of the banks and government incentives available during the pandemic period. As previously explained, focus group with employers whose companies achieved increase of operations of business volume and/or financial results was held in order to furtherly examine the factors that contributed to positive implications of companies during COVID-19. During the focus group employers confirmed results of the primary research and interviews with employers in terms of type of business activity and size of business. As many of companies in the sample, companies which representatives participated in the focus group as response to COVID-19 pandemics ensured all necessary preconditions for work of the company, work in premises of the company with all protection measures implemented, work from home, work in shifts, increase of online sales and delivery of products with ensuring protection measures etc. Employers participating at the focus group, expressed that management and leadership style of the key manager/management staff that is defined by flexibility, knowledge and readiness to adjust their business model to the new circumstances had a great impact on achievement of sustainability of business and positive results during COVID-19. For example, a company that trades and sells office supplies, at the first signs of the COVID-19 pandemic, procured disinfectants, protective masks, thermometers and other consumables to fight and protect against the COVID-19 infection.

Although the COVID-19 pandemic has created a very clear opportunity for companies from the pharmaceutical industry and the health sector, without an adequately applied leadership style and flexibility of the manager(s), these companies would not be able to take advantage of this opportunity and quickly respond to it, especially considering that there is a lot of consumables, tests and raw materials for medicines coming from other countries out of Europe with which foreign trade was hampered due to the COVID-19 restrictions. In addition, private health institutions took advantage of the opportunity to provide additional and increase the volume of regular medical examinations and procedures, for which adequate managerial decisions had to be made and adequate strategies applied. In this sense, employers emphasized importance of adequate human resources strategies ensuring conditions in which employees feel safe at their work place during the pandemic, putting focus on achievement of good results at their jobs, and not on “fear of unknown” that was present especially in first days of pandemic. This implied the conclusion that quality, motivated and work force that felt secure on their jobs during the pandemic was one of the key factors for ensuring sustainability and growth in pandemic.

In relation to this, employers emphasized the need for continuous professional education and the development of lifelong learning programs for the purpose of acquiring contemporary employee competencies. It is particularly emphasized that in order to develop the leadership skills of managers and communication skills of employees (which is a prerequisite for successful cooperation and improving the quality of interpersonal relations), it is necessary to design and implement special educational programs. Employers also expressed willingness to participate in creation of curriculum of education programs in formal, non formal and informal education in order to provide their experiences to new employees and ensure greater connection between labour market and education programs.

4. CONCLUSION

COVID-19 pandemic was one of the largest challenges set in front of the policy makers, economy and social life globally. Special challenge COVID-19 was for businesses, and managers that needed to look for strategies to sustain business operations and ensure further development of their businesses. Long term impact of COVID-19 will yet to be revealed, and many businesses across the world, including the ones from Bosnia and Herzegovina, needed to close their business operations since could not endure unexpected pressures and restrictions caused by pandemic. However, amongst the devastation and negative consequences of COVID-19 pandemic, there are evidence of enhanced creativity, innovation and flexibility of many businesses that were able to adapt to new circumstances, ensure sustainability of business operations and ensure growth. New products and services, new ways of doing businesses, mostly relying on digital technologies emerged forcing improved flexibility and special crisis management strategies to be implemented.

As confirmed by the research results in this paper, managers of companies needed to implement different strategies to ensure continuation of business operations as well as further growth of their businesses. These strategies included work in premises of the company with all protection measures implemented, work from home, work in shifts, increase of online sales and delivery of products with ensuring protection measures. Types of industries in which businesses operate had an impact on achievement of positive results during COVID-19. Most of the businesses that achieved increase in volume of business operations and/or financial results are operating in the field of water supply, ICT and manufacturing. Flexibility is known as characteristics of small companies, which is proved within this research, since over 70% of companies that experienced positive implications are small companies.

Employers included in the research confirmed that employees of the companies, together with management and leadership style of the key manager/management staff that is defined by flexibility, knowledge and readiness to adjust their business model to the new circumstances were the key factors for achievement of sustainability of business and positive results during COVID-19 pandemic. In this sense, ensuring quality education programs for employees with practical and real life implications within curriculum are one of the priorities for further dealing with post COVID-19 effects and development path of companies.

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CONVERGENCE AND A NEW BUSINESS MODEL OF LIFESTYLE MEDIA IN THE ERA OF DIGITAL CHALLENGES AND SUSTAINABILITY ISSUES

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ABSTRACT

Due to rapid technological advancements and media convergence, contemporary media practices are today confronted with challenges and new phenomena which redefine its social role and the way they are perceived and interpreted by contemporary users. Socially responsible journalism records a continuous decline in its reach and financial self-sustainability, and in importance as well. Therefore, it is necessary, in line with social conscience and journalist ethics, to pursue financially more sustainable and stable lifestyle journalism, as well as introduce socially responsible content connected with sustainable development. Research in this area has contributed to defining the research methodology for lifestyle journalism and its specific media public. It has offered a new business model and concept improvement for editorial structure and newsroom of lifestyle media, therefore changing the perception of media, where an important factor is communicating topics concerning sustainable development. Research for this paper was conducted using qualitative methodology, semi-structured in-depth interviews with 10 editors of printed and online lifestyle media in the Republic of Croatia. Based on the results, a new editorial organisation and topic structure in lifestyle media was proposed to pursue topics related to sustainable development within our society. Furthermore, this research has confirmed that the business model and the editorial concept of lifestyle media would be enhanced by introducing topics related to sustainable development, thereby also increasing the overall readers' interest for the respective media. Finally, this research has produced genuine scientific results which contribute to a better perception of topics connected to sustainable development of society as key determinants for its democratic development.

Keywords: *convergence, digitalisation, lifestyle journalism, new business model, sustainability*

1.INTRODUCTION

Since it occupies a significant segment of the media market and generates high revenues, lifestyle journalism is often criticised for being primarily focused on consumerism and exclusively on the consumer segment, and it has been unjustifiably considered unworthy of being associated with the term professional journalism in general. It was only after including lifestyle content (which was at the beginning of dealing with these topics in journalism only part of a single medium) into lifestyle magazines and their digital versions, that they gained loyal audience and held primacy when it comes to credibility.

Those are above all quality magazines which offer analytical, aesthetically pleasing and reliable content, which can then be used by advertisers to boost their credibility. At the same time, there are sporadic media appearing on the market which predominantly professionally deal only with socially responsible topics, but they are not financially self-sustainable and depend on state subsidies. The way socially responsible content is presented in these media is dry, difficult for consumers to understand and often uninteresting. Due to all of the above, socially responsible journalism is losing its reach, influence and importance, and the mentioned topic needs to be transferred to a segment of media which are financially self-sufficient and whose significant chunk of income is achieved through promotion and advertising, while the content is presented to the audience in an approachable and interesting way. Fürsich (2012) and Hanusch (2012) believe that the genres used and the way of addressing and processing the topics in lifestyle journalism could empower the audience, and McIntyre (2017) claims that certain forms of lifestyle journalism can mobilise social changes and attract the audience to new ways of life. According to Kristensen and From (2012), lifestyle journalism provides a starting point for understanding and analysing contemporary lifestyles and patterns of taste creation and construction of national identity, while Hartley (2000) claims that lifestyle media have a great possibility of contributing to the public sphere, precisely because they are different from the traditional ones, which sometimes burden their readers with difficult topics and with information processing methods. Taking into account the increasing consumption of lifestyle content, which is more potent for adaptation to digital media, especially social networks, and, due to its timeless content which can be processed, presented, selected and presented in different ways, we can assume its better sustainability in the future due to the fact that they are financially more powerful. Therefore, their importance and influence in modern society should not be ignored. According to McCombs (2004), the images of reality which the mass media communicate to their audience directly influence not only the audience's attitudes and opinions on a topic, but also the individual's behaviour and decisions. Therefore, it is of great importance to find a new innovative model of integration, as well as better processing and better perception of socially responsible topics in lifestyle media, which will result not only in greater consumption and better perception of socially responsible topics among the wider audience, but also a better perception of lifestyle journalism among the public, and, consequently, a better and more successful business strategy, financial result and the sustainability of the media itself. This is precisely why these paper deals with the field of lifestyle journalism from the position of those who determine and create content, and its goal is primarily to improve the position of lifestyle media as a relevant factor in the field of socially responsible topics through an adequate editorial policy and new innovative business models, while in accordance with social awareness and journalistic ethics.

2. THE RESEARCH

2.1.Research methodology

The research was conducted using qualitative methodology, semi-structured in-depth interviews with 10 editors of lifestyle magazines and web portals. The in-depth interview method allows a free flow of conversation on predetermined topics. The in-depth interview is open in its form to allow the interviewee an entirely free personal expression of attitudes, opinions, impressions, feelings, and visions on all previously defined topics. The examiner's task is to adapt to the interviewee and manage the interview based on a previously prepared guide, which contains the topics and framework questions they want to discuss with the interviewee. The method enables a deeper understanding of the way a certain group of people think about a topic. The basic premise of this qualitative approach is to collect diversity (if any exist) of views on the topic.

The main goal of this research was the following: to determine whether the concept of the editorial policy of lifestyle magazines and web portals will be improved by a new business model which implies the introduction of topics related to the sustainable development of society, and which thereby increases the overall reader interest and financial success of these media. From the main goal came 3 secondary goals: (1) to examine the attitudes and opinions of lifestyle media editors in Croatia about the present and future of lifestyle journalism in Croatia; (2) to determine whether the editors believe that the inclusion of topics on the sustainable development of society in lifestyle magazines and web portals will have an effect on the reading interest of the media users (the so-called general media audience), readers and non-readers of lifestyle media, (3) to determine the opinion of the editors on the effect of the introduction of these topics on the overall image and business prosperity of lifestyle media and, thus, on their financial results. The interviews included the following main topics: the role of the media, the current state of lifestyle journalism on the Croatian market and its role in society; the quality and perception of lifestyle journalism in Croatia; the future of lifestyle journalism in the context of topics, number of readers, reader profiles and financial perspective; interesting topics from the perspective of editors and readers, and suggestions for ways to increase the number of readers, the representation of topics related to sustainable development in lifestyle media and their potential for empowering a medium’s image and increasing the total number of readers. The first step was creating a list of potential respondents-editors from the leading print and online lifestyle media in Croatia. The recruitment of respondents began based on the created lists, and this was done through a combination of telephone and e-mail communication. During the recruitment, the interviewees were briefly explained the purpose of the research, the topic of the in-depth interview, the duration, the method of conducting the interview and the method of processing personal data. Prior to their scheduled interview, each respondent[1] received a GDPR form which clearly determined the manner of personal data processing and all the research participants’ legal rights. In accordance with the epidemiological situation (COVID-19) in the Republic of Croatia, the in-depth interviews were held via Zoom, and the average duration of each interview was 25 minutes. For the purpose of moderating the interviews, a guide was prepared which contained topics and framework questions, with the moderator following the logic of the conversation and the interviewee's freedom in answering, making sure that all conversation topics were covered. The guide was created according to the principle of a guided conversation from general to specific questions. With the consent of the respondents, the interviews were recorded in audio format, and the transcript of the audio recording of each interview, together with the notes taken during the interview, represented the basis of the analysed interview content. The research was conducted in the period from December 1st 2020 to March 1st 2021. For the purposes of this research, we used a deliberate sample of experts, in this case editors of print and online lifestyle media in the Republic of Croatia. Lifestyle media editors were chosen because of their professional experience and, consequently, a high level of knowledge about market opportunities in the segment of lifestyle journalism. It is the editors, being people who plan journalistic content, participate in the creation and oversee preparations for their publication, who are credible interlocutors on the subject of the present and the future of printed and online lifestyle media in the Republic of Croatia, as well as on the potential of topics related to the sustainable development of society within the framework of lifestyle media. During the selection process, an effort was made to choose editors employed in lifestyle magazines and web portals which possess a higher level of readership within the national framework. All respondents are female, highly educated, heterogeneous in terms of general journalistic experience and experience in lifestyle media, but also with regard to the type of media publication for which they work or write.

[1] The term "respondent" in this report is used as a generic term which includes female and male respondents, i.e. female and male editors.

A total of 10 interviews were conducted. The respondents in the research are editors in the following media: *Cosmopolitan/ Cosmopolitan.hr, Elle/ Elle.hr, Fashion.hr, Gloria/ Gloria.hr, GloriaGlam/ GloriaGlam.hr, Grazia/ Grazia.hr, Journal.hr, Mixer.hr, Sensa/ Sensa.hr, Story/ Story.hr/ Storybook.*

Gender	Respondents
Female	10
Work experience in journalism	Respondents
2-4.99 yrs	2
10-14.99 yrs	3
15-19.99 yrs	1
20 yrs. and over	4
Work experience in lifestyle media	Respondents
2-4.99 yrs	2
10-14.99 yrs	4
15-19.99 yrs	2
20 yrs and over	2
Education	Respondents
Bachelor’s Degree	1
Master’s Degree	9
Type of issued medium	Respondents
Print only	1
Print and digital	6
Digital only	3

Table 1. Sample characteristic

Table 1 shows the detailed structure of the sample with regard to the characteristics of the respondents who participated in the research. According to the figure, all respondents are female, highly educated, and most of them work for magazines and their web portals.

2.2.Research results

As for the analysis of the content of the in-depth interviews, it follows the order of topics in the moderator's guide. The conclusions from the research are in isolated cases supported by quotes from the respondents, which are presented in italics. Their names and the names of the media they work for are not mentioned along with the quoted statements due to the protection of personal data, which does not affect the results of the research, since the research is focused on content analysis.

2.2.1. The social role of lifestyle media

The respondents agree without exception that the role of the media in society is significant, and it is primarily reflected in the function of timely and credible information, articulation of problems and criticism, education and encouragement of social engagement, all in the context of its constant responsibility for its influence on society.

Informing, encouraging active participation in society and the development of pluralism. On a personal level, empowering the individual. (Respondent No. 3)
They have enormous influence even though 'ordinary' people are not even aware of it. (Respondent No. 8)

To be socially responsible and initiators of positive changes in society. (Respondent No. 2)
To provide society with a mirror (a view of oneself), but also a view through one's own window (the bigger picture). Make society aware, subtly encourage positive changes, understanding, empathy. (Respondent No. 1)
Timely, informed, quality and factual reporting on events in society in order to create a correct perception of the state of the moment in time in which we live. Likewise, what we should change and in what way. (Respondent No. 10)
The role of lifestyle journalism is not understood much differently in relation to the understanding of the social role of the media as such. The difference is that in addition to informing, educating and encouraging social engagement, the function of entertainment, aesthetics, comfort and relaxation of the reader is somewhat more emphasised. The role of specifically printed lifestyle magazines and lifestyle web portals is comprehended in the same way, without any differences, just like lifestyle journalism as a whole.
What Peterson is trying to say in his books - a decent and 'so stylish' GPS for a better, more beautiful, more exciting, fairer, wiser and more meaningful life. Or how to realise the potential of happiness, satisfaction, peace, success and health to the maximum, doing good for yourself, but also for the community. (Respondent No. 2)
To show the beauty of everyday life. To convey stories about lifestyle, which may not be so represented in the mass media, to convey the stories of authors, creators, experts in their field of activity, designers, creators in general. To provide media support for all of them, but also to inform, educate, relax and entertain the reading public. To be their guide through everyday life. (Respondent No. 6)
Informing and educating through the prism of light topics, as well as escaping from serious topics. The balance of these two spectra would be ideal in terms of content, and accordingly the medium would achieve its purpose.
The purpose is to retain social responsibility, education, 'upbringing', familiarisation with a wide spectrum of pop culture, building female self-confidence, being a messenger of positive changes. To be there for your readers, day in and day out. To make them smile, comfort them, offer moments to remember in their everyday life. (Respondent No. 4)

2.2.2. The presence of topics related to the sustainable development of society

The presence of topics related to the sustainable development of society in printed lifestyle magazines and lifestyle web portals is seen as modest with a recent tendency to increase. All respondents believe that topics related to the sustainable development of society should be more represented in lifestyle magazines and lifestyle web portals. In addition to considering such topics as important for the entire society, they note that topics related to sustainable development are trending, that is, they are being talked about more and more in the public space. Topics related to sustainable development are described as the present and the future, and they expect lifestyle journalism to adapt to that trend. There are no significant differences in the respondents' beliefs in this context when it comes to printed lifestyle magazines and lifestyle web portals.

Constantly educating and sensitising the audience to the current situation is the only way to survive. This is an important topic and a big trend. (Respondent No. 5)
It is important to be aware of what awaits us in the near future if we do not change, it is important to influence the collective consciousness and encourage positive changes. (Respondent No. 7)
Greater representation of topics related to sustainable development would improve the quality of printed lifestyle magazines and trigger a number of important issues. (Respondent No. 1)

Because these topics will be increasingly important and should be included in the standard repertoire in time. It would improve the quality and attract new readers of the lifestyle web portal. (Respondent No. 6)
People, i.e. the readership, are becoming more and more aware of the importance of sustainable development for the world we leave to new generations. This awareness was timely noticed by many lifestyle media, which began to promote topics related to sustainable development more intensively. There is no doubt that their motivation is also of a financial nature - because sustainability is currently a very hot topic. Many brands are now sustainable and want to advertise their positive side in lifestyle media. (Respondent No. 2)
All the respondents agree that the inclusion of topics related to sustainable development in print lifestyle magazines would have a positive impact on their image and that these topics have wider social significance. The same applies to lifestyle web portals.
I believe that it would strengthen the brand as relevant in the market. (Respondent No. 3)
These are certainly important topics worth devoting pages to. I see it, first and foremost, as a very important part of educating readers, raising awareness of a problem, using the media for positive influence and initiating positive change. (Respondent No. 7)
It would affect the interest of current readers, and I believe it will, the more we insist on the discourse of sustainability, as individuals and as a society. (Respondent No. 9)
I believe that it would enhance the interest of those who normally follow us. It is much more difficult to win over a reader who will come back again and read such topics, but also, it is a big thing that that same reader comes back and supports us. (Respondent No. 1)
There are no specific differences of opinion when it comes to the expected effects on printed lifestyle magazines or lifestyle web portals. Some believe that the inclusion of topics related to sustainable development in lifestyle magazines would not stimulate the interest of current non-readers to start reading lifestyle media, while others think that such an effect is possible, but they are not entirely sure of such an outcome. Respondents who believe that the inclusion of topics related to the sustainable development of society would not change anything regarding the interest of current non-readers, state the following arguments: the structure of current lifestyle media readers is not the same as of those who are interested in such topics, so it is unrealistic to expect an absolute increase in the number of readers.
I don't expect such an impact on non-readers, but for the existing readers it would create a sense of added value compared to what they get now. (Respondent No. 10)
I believe that it would strengthen the position of the brand as relevant and in line with the needs of readers and society in general, but I am not sure about expanding the circle of readers. (Respondent No. 2)
Perhaps it could be expected to expand the circle of readers if they were dealt with systematically and thoroughly in terms of content. Of course, I expect grouping according to specific topics. (Respondent No. 7)
Maybe it would have a minimal effect, but on a narrow circle of people who are interested in such things, although I don't see it as a massive turn in readership. (Respondent No. 2)
If they were handled in a smart and interesting way, I believe it would generate more readers. It would probably have a positive impact on readership because they would cover topics which are vitally important to everyone and things which are important for a better quality of life. (Respondent No. 1)
I believe that it would generate interest, especially among current non-readers who stick to sustainability and integrate sustainable practices into their everyday life. (Respondent No. 4)

The respondents have no doubts that lifestyle journalism can become an important factor in the communication of topics related to the sustainable development of society. They are aware that sustainability is trendy, socially desirable, but at the same time an important life concept that will become even more important over time. They also believe that the existing topics covered by the lifestyle media can be covered in the so-called sustainable clothing.

The audience becomes sensitised and educated over time. If it is done in a smart, interesting way and for long enough, this idea is slowly inscribed into our way of thinking and living. (Respondent No. 4)

Through its friendly, accessible and direct way of reporting, through which it normally conveys some light everyday topics of public interest, lifestyle journalism can also bring topics of greater social importance to the audience in a much easier, clearer and ultimately friendlier manner. Likewise, it is able to communicate positive practices and examples of sustainable development of society in a simple and, let's say, humane, everyday and more reasonable way. (Respondent No. 3)

Sustainability is one of the most popular terms in modern communication, and the principle of sustainability extends through all aspects of our activities, and lifestyle media, especially those which are trusted to have the strength, style, and reach to present and encourage sustainability in fashion, the beauty industry, nutrition, decoration at home - in an interesting way. (Respondent No. 6)

The sustainable development of society is the only correct lifestyle which leads us towards a more normal future, and every medium, including lifestyle, should actively talk about issues important to humanity through its topics and point to the pressing problems of today. Quality lifestyle media covers a wide range of topics, and almost every industry today is easy to associate with an (un)sustainable lifestyle. (Respondent No. 8)

The term 'lifestyle' is closely related to all social issues, therefore it is primary to deal with them. Although, for example, political topics do not seem to have too many links with any lifestyle portal, readers of lifestyle portals are active members of society and therefore crucial for the functioning of any body or state. Politics is not one-dimensional, and neither are lifestyle topics which symbiotically enable and initiate conversation about issues which concern everyone. (Respondent No. 2)

The more we write about the issue of sustainable development, the more people it will reach. (Respondent No. 7)

2.2.3. The potential of including topics related to the sustainable development of society

The prevailing opinion is that a more significant inclusion of topics related to the sustainable development of society would represent an improvement in the concept of the editorial policy of lifestyle media and that this would ultimately increase the overall interest in the topics of sustainable development. The respondents cite the following arguments in support of this: (1) broader social significance of topics related to the sustainable development of society; (2) more and more companies, potential advertisers, regardless of their motives, are turning to sustainable business; media users perceive such topics as high-quality and authentic; (3) more and more readers and non-readers will privately live the concept of sustainability in their daily lives; (4) general perception of the concept of sustainable development is that it is trendy and cool. Among the respondents who believe that the inclusion of topics related to the sustainable development of society would represent an improvement of the concept of editorial policy of lifestyle media and that this would ultimately increase the overall interest in reading lifestyle media, only one person thinks that this would require a complete change in the concept of its editorial policy.

Yes, it is necessary to change the concept of editorial policy. The ratio of quality and quantity is most often neglected following the policy of the click-bait format. The audience should be offered content that will be tailored according to the mission and vision of the medium in which it was published, but at the same time it must speak about the important narrative of society. (Respondent No. 5)

All others are proponents of adapting the existing concept of editorial policy.
Editorial strategy should not be changed, but each media brand should clearly know the profile of its audience, and then adapt the topics, the style of writing and native content accordingly. Depending on the topic they have dealt with so far, but I think that this adjustment should not be a big problem compared to what is being done now. (Respondent No. 2)
It is not necessary to change the concept of editorial policy, nor to introduce some drastic changes and 180-degree turns in content - everything is in balance. It is best to introduce more serious, more responsible topics gradually and create a healthy balance between light and more specific, responsible content, which will not be exaggerated, offensive or unexpected as in occurring overnight. (Respondent No. 10)
Editorial processing of topics related to sustainable development would include their clear communication, attractive visuals, presentation of experiences of real people, stories from the local community, told in a tame way, not too expertly. The emphasis is definitely on real, authentic stories with which readers could connect. According to them, these sustainable topics should be integrated into the existing topics covered by the lifestyle media.
Sustainability has entered every pore of society, from gastronomy, fashion, design, beauty, so that it is currently running through almost every text, whether we do it intentionally or not. People have started to be more sensitive on social networks about this topic, and certainly no lifestyle media can afford not to pay attention to which and what kind of brands it includes and what it says about the topics. And a message which is not in a sustainable direction resonates very loudly in the cancel culture. And it will only get louder. (Respondent No. 3)

There is no doubt among the respondents that a more significant inclusion of topics related to sustainable development would have a positive effect on the image of lifestyle journalism as its additional content value and as creating an impression of thematic seriousness that lifestyle media currently does not enjoy. Such an approach would also be considered a departure from negative news, PR content, inauthenticity and fake news which media readers (the so-called general media audience) encounter. A portion of the respondents think that there is a certain potential for expanding the number of lifestyle media readers, although they are not entirely sure whether the exclusive inclusion of topics related to sustainable development would immediately produce such an effect. Another group of respondents believe that it is not realistic to expect a significant increase in the number of lifestyle media readers, or they cannot assess the effects at all.

I am not sure if it would increase the reader's interest in a certain medium, but it would certainly give the medium additional value, a positive image and an impression of quality and seriousness. (Respondent No. 1)
Sustainable development is a topic which interests more and more people, and media which represents them and naturally fits it into its content can only get positive feedback from its readership. (Respondent No. 7)

They propose a number of related changes, such as raising the quality of topic processing, simultaneous specific presence on the digital platform, enhancing marketing activities and PR activities of media (brands), a more analytical and research-oriented approach to content creation, designing additional benefits for readers and expanding the thematic spectrum to include sustainable development topics. Also, they predict that the future will bring ever better financial results for media houses. They don't think that it will come by itself, but that the quality of the content will play a significant role along with smart marketing strategies. The respondents also have no doubts that lifestyle journalism can become an important factor in communicating topics related to the sustainable development of society. They are aware that sustainability is trendy, socially desirable, but at the same time an important life concept that will become even more important over time. The prevailing opinion is that a more significant inclusion of topics related to the sustainable development of society would represent an improvement in the concept of the editorial policy of lifestyle media and that this would increase the overall interest in the topics of sustainable development. Respondents cited the following arguments in support of this: broader social significance of topics related to the sustainable development of society; more and more companies, potential advertisers, regardless of their motives, are turning to sustainable business; media users perceive such topics as high-quality and authentic; more and more readers and non-readers will privately live the concept of sustainability in their daily lives; general perception of the concept of sustainable development is that is it trendy and cool.
Editorial processing of topics related to sustainable development would include clear communication of topics, attractive visuals, presentation of experiences of real people, stories from the local community told in a tame way, and by no means too expertly. The emphasis is on real, authentic stories which readers could connect with. According to them, these sustainable topics should be integrated into the existing topics covered by the lifestyle media.

2.3. A new business model

Based on the conducted research, a new business model of editorial organisation and structure of lifestyle media for dealing with topics related to the sustainable development of society is proposed and should follow those 10 principles:

1. Topics related to sustainable development should become not only a regular topic, but a section of every lifestyle magazine and their online versions, taking into account the genre and specific niche of each magazine.
2. Topics which have so far been represented very little or almost not at all should definitely be included in the selection of content of a magazine or web portal.
3. The new content should be integrated into the regular content of each individual media, to follow the visual and content identity and metalanguage of that specific media so that, first of all, loyal readers perceive it as something non-imposing and presented in a way that is understandable and suitable for them.
4. Topics related to sustainable development should be rotated in different positions like all other topics and be presented in an accessible way.
5. The selection, production and presentation of these topics, along with the associated photography and text, should be adapted according to the so-called book of standards of each magazine or website if it has one, and if not, then the line of presentation of other content should be followed.
6. Journalists should have enough time and resources to produce these more demanding topics and try to include as many actors of sustainable development as possible in their articles.
7. They should involve well-known and public figures for promotion and spreading the word about socially responsible topics and socially responsible business, first of all that particular media, and then also its partners.

8. The media itself should conduct socially responsible business (a good example is the French Elle, which at the end of November 2021 announced that it would no longer publish topics or cooperate with companies who promote the use of fur in the fashion industry)[2].
9. There should be additional training for journalists and editors regarding trends and topics of sustainable development of society.
10. They should encourage a 360-degree approach, where the media uses all its channels to promote the topics of sustainable development of society (the magazine as the basic medium, and after that: web sites, social networks and other digital channels, conferences, fairs, merchandising, events and projects, inclusion of ambassadors – famous persons and public figures, friends of the magazine, whose influence is used to speak out about the topics of social development of society; podcasts, video productions, blogs, newsletters and e-mails).

3. CONCLUSION

The editors point out that changes in lifestyle journalism on the Croatian market are necessary and that, although in their infancy, they have already begun. They expect that our market will follow world trends with its further development. They consider the role of lifestyle media as important in the function of informing, educating, encouraging social engagement and affirming entertainment, aesthetics and a kind of escape for readers from all the negativity of life. They believe that in lifestyle journalism it is necessary to significantly strengthen the function of informing, educating and encouraging social engagement. Within this framework, topics related to the sustainable development of society are considered as content which will have an increasingly significant space in the editorial policies of lifestyle media. All the presented changes would improve the perception of lifestyle media and increase the overall reader interest in these media, under the assumption of one imperative - quality that must be inviolable at all levels - from selection, production to presentation of information, regardless of which platform in the '360 degrees' system this is about. In addition, it requires absolute understanding between editors, journalists and the support of media owners. Such a model should definitely be interesting to them, because the new innovative business model will not only reduce the drop in circulation and increase the number of magazine readers and website visitors, but also potentially attract new advertisers and have a positive impact on the long-term business and financial future of the media. In addition, sustainable business is becoming a strategic part of every serious company, including the media, which in the newly created situation, by balancing between carefully selected, produced and presented content, in the long term foresees not only a challenge, but definitely also a great opportunity for growth and development.

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CONTINUOUS TRAINING AND DEVELOPMENT OF COMPETENCES TO LEARN TO READ AND WRITE IN THE 1ST CYCLE

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ABSTRACT
This study aims to analyse the effects of a continuous training course in Portuguese, in the pedagogical practice of teachers, regarding the development of reading and writing skills of their students in the first and second years of the 1st cycle of basic education, in the metropolitan area of Porto. In recent years, due to the contextual evolution of education, as a result of the COVID 19 pandemic, teachers felt the need to attend training actions, in order to improve the quality of the teaching and learning process. In particular, they were interested in developing new professional skills, in the digital area, aiming at promoting school success, in a time of school metamorphosis. Furthermore, the transversality of the mother tongue to all curricular subjects is highlighted. In this study, a qualitative methodology was chosen, taking into account a starting point and an arrival point. The data collection instrument was the structured interview, centered on the comparative analysis between the perceptions of practices, in pre-training and post-training. For data processing, the WebQDA software was used. The textual corpus was divided into two categories and the subcategories were listed a priori and a posteriori of the units of meaning. The results point to the fact that the attendance of a continuous training course in Portuguese allowed teachers to become more reflective through critical analysis of classroom practices. By perfecting teaching strategies in their classes, the teachers boosted the development of reading and writing skills in their 1st cycle of basic education students and, transversally, in all subjects. However, it is necessary to continue to strengthen the use of digital technologies and the metacognition of teachers, combining external and internal training, among peers, through collaborative work and sharing of good practices in the community.
Keywords: *Continuous training; Education; reading and writing strategies; transversality, 1º cycle of basic education*

1. INTRODUCTION

In Portugal, with the transition, in March 2020, from face-to-face teaching to remote teaching, teachers faced one of the most striking educational challenges ever, which implied immediate continuous training, in order to ensure the continuity of teaching and learning for all students, using the Internet and digital platforms (Vale et al. 2021). This continuous training was carried out at a formal level, with actions focused on the transition to remote learning (Marshall et al., 2020), provided by accredited training centers and the Ministry of Education.

At the same time, teachers undertook internal training, through intense collaborative work, developed among peers, in educational communities, which allowed the necessary adaptation to online teaching during COVID-19 school closure (König et al., 2020). In a few weeks, Portuguese schools reopened for all levels of education, alternating remote and mixed teaching, according to the evolution of the pandemic crisis and the periods of confinement (UNESCO, 2020). In Portuguese schools, with regard to the first two years of the first cycle of Basic Education, the focus of the present study, it was necessary to reinforce reading and writing strategies and activities.The improvement of these essential learning skills is not easy with children between six and the seven years, in the context of remote teaching. Therefore, the involvement of the family and the school was decisive, in order to overcome the constraints of a non-presential teaching, which can leave the most vulnerable children unprotected and deepen social inequalities (Martín and Rogero, 2020). In times of change, it is necessary to take into account linguistic transversality, as mastery of the mother tongue is fundamental for the school career and academic success of students (Sá and Lima, 2015). In this context, it is important to value the continuous training of Basic Education teachers, covering all subjects and curricular domains.

2. ESSENTIAL AND TRANSVERSAL LEARNING IN BASIC EDUCATION: READING AND WRITING

In Portugal, Essential Learning for Basic Education is regulated by Order No. 6944-A/2018, as a curriculum guiding document. The purpose is to develop the skills defined in the Profile of Students Leaving Compulsory Schooling, as established by Order no. 6478/2017. In the Portuguese subject, Essential Learning explains what students must develop throughout the first cycle of Basic Education, presenting skills with progressively demanding levels, in the areas of orality, reading, literary education, writing and grammar. Students in the first and second years of the 1st cycle of basic education must improve (Order no. 6944-A/2018, p. 4): “the reading competence with a view to a progressively safer mastery of text comprehension”, taking into account “literary education through an affective and aesthetic relationship with literature and with oral and written literary texts”; and also the “writing competence, which includes knowing how to write short texts for the progressive appropriation of the graphic, orthographic and compositional dimensions of writing.” For all domains of the Portuguese subject, in the first and second years of the 1st cycle of Basic Education, the progressive development of linguistic awareness is also indicated as essential learning. Thus, in the first and second years, it is intended that students become fluent readers, that is, acquire the competence to read and understand written texts, including literary texts. As for writing, students must know and apply basic techniques, according to the communicative objectives. Given the transversality of the domain of the mother tongue, the development of linguistic competences must be assumed as a collective project. As stated by Sá and Lima (2015, p. 7), “a good mastery of the Portuguese language is essential for good performance in other curricular areas”. Hence the importance of initiation to reading and writing and the strategies to be used by teachers in the classroom, in the first years of schooling.

3. READING AND WRITING STRATEGIES: THEORY AND PRACTICE

In Education, it is essential to apply strategies that place the student at the center of teaching and learning (Gover and Peterbauer, 2019). This is even more pressing in a pandemic situation, given inequalities in access to online education, which can harm the development of students (Mundy and Hares, 2020), namely in terms of essential learning of reading and writing. The theory and practice of teaching and learning to read focus on two methods. The first, called the synthetic or phonic method, uses the sound of the name of the letter with the vowel, forming the syllable and then the word.

As for the second, the analytical or global method, assumed greater importance in Portugal in the 30s of the 20th century, crossing Education with Psychology. In this method, the teaching of reading begins with the “whole”, and then analyses the constituent parts (Mortatti, 2019; Viana, 2007). It is also worth mentioning the mixed method, which combines both methods. According to Silva and Barreto (2021, p. 88): “It is possible to conclude that the phonological route is more developed and used by children at the beginning of learning to read, presenting itself as an essential path in this process. For proficient readers, both routes are used.”

In turn, writing combines the graphic, the letter and the word, then moving on to writing small texts, with communicative intention (Lavelle, 2007; MacArthur et al., 2016). In this understanding, the importance of contextualizing social practices of reading and writing is highlighted, such as reading a brief story, writing a message or a dialogue, learning, from a very early age, textual genres and their use. When selecting methods and strategies for teaching and learning reading and writing, the teacher must take into account the heterogeneity of the students and their previous knowledge, acquired in the family environment. In the event that difficulties are detected, an “early and preventive intervention (…) is essential, preventing delays from conditioning cognitive development and learning” (Ribeiro et al., 2017, p. vii). In order to enhance the Essential Learning of Basic Education (Order No. 6944-A/2018), the teacher must vary strategies, using computer platforms and resources available on the Internet. In the time of the COVID 19 pandemic, teachers and students, in remote and/or mixed education, have become more likely to search online for texts, literary works/ebooks, plays, films and animation, and to listen to documentaries, short stories, music and interviews on Youtube and TikTok.

4. CONTINUOUS TRAINING IN TIMES OF CHANGE

The role of the teacher in the classroom is lifelong learning, based on the construction of knowledge and know-how, and on scientific and pedagogical updating, from initial training (Nóvoa, 2019a; 2019b). In Portugal, the Training Centers of Association of Schools and other educational institutions, public and private, duly accredited, aim to provide training that contributes to the improvement of school results. Years before the outbreak of the pandemic in 2020, which forced a rapid transition to digital education, Decree-Law No. 22 of 2014 (p. 1286) already provided that: “Training using distance learning methodologies and establishment of networks through electronic platforms are considered axes to be privileged in the different training modalities”. In fact, this continuous online training was decisive, in March and April 2020, for the success of the transition from face-to-face teaching to remote teaching, through the use of digital platforms and active methodologies, with a change in the educational paradigm, given the constraints imposed by the pandemic, on a global scale (Marshall et al., 2020). However, in addition to external continuous training, there is also internal training, which many authors consider fundamental for the evolution and redefinition of teachers' performance in the digital age (Judd et al., 2022). Above all, the importance of reflection on classroom practices is highlighted, as advocated by leading authors (Hargreaves and Fullan, 2012; Schön, 1987; Zeichner, 2008).

5. METHODOLOGY

The general objective of this study is to analyse the effects of a continuous training course in the subject of Portuguese, in the pedagogical practice of teachers, regarding the development of reading and writing skills of their students in the first and second years of the 1st cycle of basic education of the Porto metropolitan area. This is an exploratory study based on a qualitative methodology. In the context of the implementation of a training course on the Portuguese language, lasting six months and a total of 50 hours, which took place in a group of

schools, it was considered a starting point and an arrival point. Data collection was carried out in person at the beginning of the training course, through a diagnostic activity, and at the end, with structured interviews. The study covers 9 participants, 7 teachers, the Principal and the Coordinator. The collected data were submitted to content analysis using the WebQDA (Web Qualitative Data Analysis) software. The categorical analysis framework was based on the literature review and emerging categories (Bardin, 2020). From the textual corpus emerged the division into two categories: “Pedagogical practice in context” and “Continuing Education”, with respective subcategories/indicators.
This methodological course followed the ethical principles regarding informed consent, protection of individuality, anonymity and destination of the data collected.

6. RESULTS & DISCUSSION

Starting the analysis and discussion, we found that our interviewees are mostly female, aged between 40 and 58 and have extensive experience in teaching in the 1st cycle.

Category	Indicators	Interviewed Teachers							Management Entities	
		T1	T2	T3	T4	T5	T6	T7	Coord.	Prin.
Pedagogical practice in context (Before Training)	Reading and writing	3	4	5	5	3	3	4	3	3
	Classroom Strategies	4	6	4	4	4	5	5	2	2
	Communicative competence	2	4	5	5	2	4	4	2	1
	Difficulties experienced	9	6	3	4	7	7	6	5	5

Table 1: *Perceptions about Pedagogical Practice in context before training*

From the data analysis, it appears that Teachers (hereinafter T) 3 and 4 stand out, in the “Reading and Writing” indicator, with 5 References (Ref.), followed by T2 and T7 (4), T1, T5 and T6, Principal (Prin.) and coordinator (Coord.), all with 3. As one of the interviewees summarizes: “In addition to increasing knowledge, reading serves to improve vocabulary and helps in textual construction, in knowledge of the world and to develop the student's critical capacity” (Ref. 2, T7). The problem to be solved, and which gave rise to the training, has to do with “few reading habits in the family” (Ref. 1, Prin.), so it is necessary to reinforce the “reading comprehension strategies” (Ref. 4, Coord.), as well as the “strategies for writing well” (Ref. 5, Coord.). Regarding the indicator “Classroom Strategies”, T2 (6 Ref.) and T 6 and 7 stand out with 5 Ref. each. Then appear T1, T3, T4 and T5 (4), Prin. and Coord. (2). The Principal emphasizes that “it is important for the teacher to captivate (…) and put into practice explicit teaching strategies of the mother tongue, because this is essential for the learning of all subjects, in any subject” (Ref. 2). In fact, at the starting point of the training, the interviewees stated that “it was a lot of handwriting training, after teaching each letter of the alphabet” (Ref. 3, T2); “I followed school textbooks a lot” (Ref. 4, T.2); “my students made many copies of sentences and text” (Ref. 5, T2); “in terms of reading, I used few strategies (Ref. 1, T5). Another teacher confesses that the strategies he used most for learning to read and write were “(...) routine tasks, such as phoneme and grapheme presentation, handwriting training, writing words beginning with the letter (…)” (Ref. 2, T3). Crossing the testimonies, we found that the teachers interviewed describe similar practices and strategies, which are not very motivating for children at the beginning of their schooling and typical of traditional non-student-centered teaching (Gover et al., 2019). Regarding the indicator “Communicative competence”, the interviewees with the highest number of references are T3 and T4 (5), followed by T2, T6 and T7 (4). With a lower number, T1 and T5 (2), Coord. (2) and Prin. (1).

Some segments of the interviewees' speeches show the perception of the importance of learning communicative competence in the mother tongue: "(…) those who read a lot and well, have a richer vocabulary" (Ref. 2, T1); "When the teacher is committed in the explicit teaching of reading and writing, students increase their communicative capacity (…) but also their autonomous training" (Ref. 1, T6); "(…) our students have very little, and very poor, vocabulary" (Ref. 1, Coord.). In fact, many students deal with difficulties in oral and written communication, due to a rudimentary vocabulary and lack of an explicit, systematic and motivating formal teaching of the mother tongue, according to the Essential and Transversal Learning of Basic Education (Order No. 6944-A/2018), as previously analysed. In the indicator "Difficulties experienced", T1 (9 Ref.) stood out, and in descending order T5 and T6 (7), T2 and T6 (6), Coord. and Prin. (5), T4 (4) and finally T3 (3). It appears that teachers point out as difficulties: "(...) the student's lack of motivation, with little support from parents (...) one of the most significant problems is the lack of literacy in Portuguese, in the domain of reading, interpretation and writing" (Ref. 1 and 3, T3). The relevance of parental support for reading and writing is particularly highlighted by the Principal: "our students arrive at school with little vocabulary and few habits of handling books, reading as a family" (Ref. 4, Prin.). Vocabulary is understood as a difficulty, as students "despite reading the words well, articulated well, with good diction, they do not always understand what they read because they do not know the meaning" (Ref. 2 and 4, T2). The analysis reveals that the interviewees, regarding the difficulties in learning to read and write, emphasize the influence of the family and social environment, the lack of knowledge of the world and the poor lexical mastery of many students (Viana, 2007).

Category	Indicators	Interviewed Teachers							Management Entities	
		T1	T2	T3	T4	T5	T6	T7	Coord.	Prin.
Pedagogical Practice and Continuous Training (After	Renewed Practice and Strategies	9	8	6	8	9	6	9	3	3
	Linguistic transversality	7	5	4	5	6	4	5	2	2
	Professional development	6	5	2	4	4	7	6	4	5
	School success	6	4	9	4	6	5	6	4	4

Table 2: Perceptions on Pedagogical Practice and Continuous Training after the training

Table 2 presents the interviewees' perceptions about the pedagogical practice after the Portuguese training. The references found through WebQDA show that the indicator with the highest number of references is "Renewed Practice and Strategies". T1, T5 and T7 (9) appear with the highest number of references, followed by T2 and T4 (8) and T3 and T6 (6). With fewer references are Coord. and Prin. (3). It appears that the numbers are similar for all teachers (between 6 and 9 Ref.), demonstrating that all interviewees perceived changes in their practices and in their teaching and learning strategies, because of the continuous training carried out. The improvements obtained can be confirmed by the "greater commitment of teachers in researching and even creating new tasks similar to those mentioned in the training" (Ref. 3, Coord). The Principal also reported significant changes in classroom practices, with diversification of strategies by teachers: "(...) positive changes in classroom practices" (Ref. 1, Prin.); "(…) more involvement and interest, from both students and teachers, and even family involvement" (Ref. 2, Prin.); "(…) teachers are committed to applying new teaching strategies" (Ref. 3, Prin.). Through these reports, the positive impact of continuing training on the practices of the teachers interviewed is visible. In addition, some of the teachers mention technologies as a teaching and learning strategy, "the use of technologies is part of innovation.

Thus, in the world we live in, it is necessary to compete with digital tools and online games" (Ref. 5, T1); "everything that involves technology arouses the interest of students" (Ref. 4, T 6). The pedagogical use of Information and Communication Technologies has been strongly boosted since March 2020, given the urgency of moving from face-to-face teaching to remote or blended teaching, due to the COVID-19 pandemic. Technologies are perceived by the study participants as teaching and learning strategies and tools that arouse students' interest, which is in line with recent educational innovations. This new teaching and learning paradigm, with renewed student-centered practices and strategies, is referenced in recent studies by several authors (Bubb and Jones, 2020; Judd et al., 2022; König et al., 2020; Marshall et al., 2020; Mundy and Hares, 2020; Vale et al., 2021). Regarding the indicator "Linguistic transversality", with the highest number of references, T1 (7) and T5 (6) stood out, followed by T 2, T4 and T7 (5) and T3 and T6 (4) and, finally, the Coord. and the Prin. (2). All interviewees reflected and are aware of the importance of the transversality of the mother tongue, which must be reinforced and taught in all subjects, so that students better understand the curricular contents. In fact, as summarized by one of the interviewees, "the teacher must always bear in mind the transversality of the language (…) that influences the performance and understanding of the contents in the other subjects" (Ref. 2, T6). In this sense, the transversality of learning and development of reading and writing skills in the mother tongue is important, in the different curricular subjects, as referenced in Portuguese legislation (Order No. 6478/2017; Order No. 6944-A/ 2018) and proven by several authors and studies (Lavelle, 2006; MacArthur et al., 2016; Mortatti, 2006; Sá and Lima, 2015). Continuing with the Professional development indicator, T6 was the participant with the most references (7). In the speech of T1 and T7, WebQDA detected 6 Ref., followed by T2 and Prin. (5), the Coord., T4 and T5 (4) and T3 with less (2). Everyone recognizes that participation in Portuguese training promoted their professional development, highlighting, since "(…) it is essential that the teacher keeps up to date in the performance of pedagogical practices, thus guaranteeing the quality of the teaching and learning process" (Ref. 2, T5). Effectively, in training one learns collaboratively, based on "(…) sharing of pedagogical practices, with the presentation of successful examples presented by the trainers" (Ref. 3, T4). The participants' perceptions are in line with theories and studies by authors who refer to the importance of updating, sharing and reflection in the community for the innovation of practices and professional development of teachers, even more in times of pandemic and educational change (Judd et al., 2022; Nóvoa, 2019a; 2019b; Hargreaves and Fullan, 2012; Vale et al., 2021). Thus, reference authors are proving to be current, who already advocated a reflective teacher, capable of analysing his or her practices and sharing this critical analysis among peers (Schön, 1987; Zeichner, 2008). The data referring to the perceptions of the interviewees after the Portuguese training, for the indicator School Success, show perception indexes between 4 and 9 references. In the speech of T 3, WebQDA detected 9 references, followed by the speeches of T1, T5 and T7 (6), T 6 (5) and with lesser numbers T2 and T4, Coord. and Prin., with 4 references each. The Principal testifies that the training had an influence "(…) on the teacher's pedagogical practice and on the student's learning, resulting in better school results, that is, in school success and in a more positive view of the public school" (Ref. 2, Prin.). In turn, the Coordinator states that the training was able to "(…) stimulate and improve the teaching activity, contributing to a higher quality in the teaching and learning of students, with improved results and more enjoyment of being at school" (Ref. 2, Coord.). Triangulating the indicators of the two categories analysed in the study, at the starting and ending points of the study, which corresponds to the completion of the training course, in the selected school grouping, it appears that there is an evolution of the participants, namely teachers, Principal and Coordinator. This awareness focused on pedagogical practices related to the development of transversal skills to learn to read and write. Thus, and with regard to the learning of students in the first and second years of the 1st cycle of basic education, the link between continuing teacher training and a culture of collaboration between peers is proven (Hargreaves and Fullan, 2012), which potentiated the use of active, face-to-face and remote teaching methodologies (UNESCO, 2020). Given the teacher's role as an agent of change, it is essential to insist on continuous training, for more scientific and pedagogical updating (Nóvoa, 2019b) and the joint development of teachers and students.

7. CONCLUSION

The COVID-19 pandemic crisis brought teachers and other educational agents a new awareness of the importance of Education. In this sense, the teachers led a process of change that resulted in a new paradigm, based on the active participation of the student in the construction of their knowledge, with the reinforcement of collaboration and educational digitalization. In Portugal, in basic education, students come to school from different family and social backgrounds and with different prior knowledge. In the Portuguese subject, the improvement of skills to learn to read and write in the first cycle, crosses all subjects. In our study, it is important to highlight this awareness of the participating teachers regarding the teaching and learning of reading and writing in the first and second year, as processes anchored in social practices built, collaboratively, between teachers, students, Coordinator and Principal. Therefore, the focus on communicative interaction and language mastery in all areas and knowledge is evident. Thus, proficiency in reading and writing is perceived as essential for the student's educational success, in a school-family relationship. After the Portuguese training course, the teachers at the school grouping under analysis, value the student as the center of learning and use pedagogical differentiation. This is confirmed by the Principal and Coordinator, as an effective strategy for active and meaningful learning of reading and writing, to achieve essential and transversal language learning, and achieve educational success. Continuing training is linked to the professional development of teachers, school culture, educational success, and the improvement of the quality of practices. As confirmed in the study carried out, this change was driven by continuous training aimed at teachers. In the specific case of the study, it allowed a rapid transition from traditional teaching to active methodologies with reinforcement of the use of technologies, namely in remote teaching, revealing more reflective and collaborative teachers. Peer supervision, sharing of good practices, contextualized and grounded reflection on pedagogical action are essential to effect this change in the classroom and in the educational community. In summary, in response to the general objective, continuous training, centered on the school, proved to be an effective strategy for the improvement of the educational practices of the teachers involved and, also, for the change and adoption of new teaching strategies for the development of students' reading and writing skills. However, in the future, it is necessary to continue to strengthen the pedagogical use of digital and the metacognition of teachers, combining external and internal training, among peers, through collaborative work and sharing of good practices in the community.

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THE ROLE OF SMART TECHNOLOGIES IN TOURISM DESTINATIONS – CHALLENGES AND BARRIERS

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ABSTRACT

Smart technology has gained considerable impetus in the urban development policies and competitiveness and sustainability strategies of tourist destinations, through innovation, digital transformation and shared knowledge, thus creating a better experience for residents and tourists. The purpose of this paper is to understand the importance and role of smart technology in tourism destination and to define the opportunities and barriers of smart technologies as an integral part of tourism destination management strategy. Based on the relevant scientific literature, the paper describes individual types of smart technologies, provides an overview of smart system components and analyzes smart system functionality from the perspective of tourist destinations stakeholders. The paper underlines the importance of smart technologies and provides a classification of modern technological solutions that are currently used in smart destination. The research confirms that management structures have the opportunities and willingness to implement smart systems which potentially could provide citizens with more-efficient services, monitor and optimize the existing infrastructure, improve cooperation among different stakeholders in a tourist destination, and encourage innovative business models in various business sectors. On the other hand, the study has identified a higher level of tourist satisfaction, with the tourism industry becoming competitive and sustainable thus contributing considerably to the wellbeing of local communities. The paper presents science-based conclusions on the role of, areas of applications of, and challenges and barriers to the use of smart technologies in tourism destinations, based on which concrete solutions and suggestions are put forward to enhance the effectiveness of managing a smart destination using modern technological solutions.

Keywords: *Information and communication technologies, Smart technologies, Smart Destination*

1. INTRODUCTION

According to the United Nations, the urban population is set to increase by almost 700 million by the year 2030, reaching a total of 5.2 billion. Mid-2021 approximately 4.5 of the 7.9 billion people worldwide lived in towns or cities.

This represents 57% of the global population. By 2030 this figure is set to reach 60%. According to UN estimations, the number of mega-cities is expected to grow to 43 by 2030, when Delhi will become the largest city in the world with a population of almost 39 million inhabitants (World Urbanization Prospects 2022). The increase in the number of people living in cities is bringing about far-reaching changes, ranging from intensive congestion and environmental imbalance to the effects that pollution or stress have on the wellbeing of city dwellers in any urban region in the world. In response to this, efforts are being made to create the efficient smart city (tourist destination). Rapid urbanization creates new challenges and issues, and the smart city concept offers opportunities to rise to these challenges, solve urban problems and provide citizens with a better living environment (Yin, Xiong, Chen, Wang, Cooper & David 2015). Today, more than ever before, it is crucial to make cities not only smart, efficient and sustainable but also ready for anything the future may bring them. The rise of smart tourist destinations can be attributed to the rapid development of information and communication technologies (ICTs) such as big data technology, Internet of Things, global positioning systems, cloud computing, 5G technologies and artificial intelligence (Zhang, Cheung & Law, 2018). ICTs play an invaluable role in creating innovative intelligence systems that could potentially provide citizens with more efficient services, supervise and optimize the existing infrastructure, enhance cooperation among different stakeholders in a tourist destination, and encourage the development of innovative business models in diverse business sectors (Srivastava, Bisht & Narayan, 2017; Mathur, 2016; De Carlo, Ferilli, d'Angela, Buscema, 2021; Samara, Magnisalis, Peristeras). The smart-city concept is focused on the development of ICT infrastructure and on permanent citizens. Developing the Smart concept in the tourism industry, however, calls for a conceptual shift in the existing approaches, away from infrastructure-oriented development towards service-oriented development (Lamsfus & Aurkene, 2013). To this end, the focus of attention should be on visitors, who are seen as temporary citizens. As a tourist country, Croatia has begun to more aware of the needs of its citizens, while providing tourists with additional services in the destination in the form of smart technologies that facilitate their stay. A significant part of Croatia's National Development Strategy by 2030 pertains to smart city development. Thanks to project co-funding by the European Union, a foundation was set for the development of the smart concept. Zagreb, Dubrovnik and Rijeka, only some of the larger cities in Croatia to exploit this opportunity, have begun to implement smart solutions to address issues arising from tourism. One important project is CEKOM – Centre of Competence for Smart Cities, aimed at developing an innovation cluster that will cooperate in research and development projects to provide innovative digital solutions for life in urban settings. It is a three-year project of national importance and also the largest development project in Croatia in the field of information and communication solutions aimed at improving quality of life (https://smart-ri.hr/sto-je-cekom/). Hence, this paper seeks to understand the importance and role of smart technologies in tourist destinations and to identify the individual components, opportunities and barriers of smart technologies. The paper has two primary aims; the first is to explain the basic concept of smart cities/tourist destinations, and the second, to determine the behavioral and smart technology usage patterns of visitors and the willingness of management structures to implement smart technologies. The paper consists of five sections. After the introduction, the second section provides an overview of the previous research on the topic of smart technology application in tourist destinations around the world. The third section explains the methodology, and the fourth section analyses and interprets the results of the study. The last section discusses the research results, provides an overall synthesis of the research, outlines some of the paper's limitations, and suggests guidelines for future research.

2. THEORETICAL BACKGROUND

The following section provides an overview of the literature of previous studies on the topic of smart destinations that use ICT, together with a classification of technological solutions based on smart technology.

2.1. The concept of a "smart" destination

There are many definitions of a smart city. Some definitions focus on ICT as the driving technology behind the concept (Bifulco, Tregua, Amitrano & D'Auria, 2016; Chichernea, 2014; Da Costa Liberato, Alén-González & de Azevedo Liberato, 2018; Jung, Tran Tuan, Quoc Tran & Park, 2020; Meola, 2020; Mohasses, 2019), while other, broader definitions include socio-economic management and multi-stakeholder aspects such as using social participation to improve quality of life, enhance urban wellbeing and achieve destination sustainability (Buhalis & Leung, 2018; Cacho et al., 2016; Khan, Woo, Nam & Chathoth, 2017; Lee, Hunter & Chung, 2020). A smart city is essentially enabled by the use of technology (ICT, in particular) to improve competitiveness and ensure a more-sustainable future by symbiotically linking networks of people, enterprises, technologies, infrastructure, consumption, energy and space (Marr, 2020). A smart city implies the use of ICT to create intelligent, connected and efficient critical components of city infrastructure and services, which includes the city administration, education, health care, public safety, real estate, transport, and municipal services; it implies a city inspired to share culture, knowledge and life, a city that motivates its citizens to improve their lives (Nam & Pardo, 2011; Bakıcı, Almirall &Wareham, 2012; Della Corte, D'Andrea, Savastano & Zamparelli, 2017). These are but a few of the many definitions of a smart city. Smart cities can also be seen as urban areas that use different types of data-gathering sensors to provide the information needed to manage assets and resources. Data can be collected in a variety of ways, from citizens and their devices, from a city's devices, and from the devices of business entities. These data are then processed and analyzed, and are used to monitor and manage traffic and transport systems, power plants, water-supply systems, law enforcement, information systems, schools, libraries, hospitals and many other institutions (UNESCO, 2020). The concept of a smart tourist destination is based on the notion of a smart city with strong emphasis on the need to converge and integrate smart city infrastructure into a visitor service design. Smart destinations are about technology helping to make destinations better places, capable of meeting the needs of citizens as well as visitors (Mandić & Garbin Praničević, 2019; Shafiee, Rajabzadeh Ghatari, Hasanzadeh & Jahanyan, 2019). Another definition is provided by Vargas-Sánchez (2016): "Smart tourism is defined as tourism supported by integrated efforts at a destination to collect and aggregate/harness data derived from physical infrastructure, social connections, government/organizational sources and human bodies/minds in combination with the use of advanced technologies to transform that data into on-site experiences and business value-propositions with a clear focus on efficiency, sustainability and experience enrichment". According to Jasrotia & Gangotia (2018), smart tourist destinations can be defined as destinations that use the available technology to jointly create value, pleasure and experiences for tourists. This means that smart tourist destinations need to constructively cooperate with local stakeholders to ensure the engagement of the community. Smart tourist destinations are beneficial to the tourism industry as they facilitate the exchange of information between tourism organizations and tourists via centralized platforms. Smart tourist destinations are thus able to gain insight into the actual needs and preferences of customers. Effective engagement between tourists and service providers is vital in delivering products that can successfully satisfy the needs of tourists. Ultimately, this would help service providers to better understand tourist needs and provide innovative and improved services (Shafiee, Rajabzadeh Ghatari, Hasanzadeh & Jahanyan, 2019; Tu & Liu, 2014).

A smart tourist destination is a tourist destination that meets the demands of modern tourists by facilitating access to tourism products and services and by helping to create personalized experiences through various innovative ICT-based tools and technologies. On the other hand, this type of tourism requires the integration of many components and factors such as well-trained human resources, effective marketing and promotion practices, high-level information and physical technology, environmental awareness and cooperation between the stakeholders (Yang, Yumeng & Ziqi, 2022).

2.2. Smart technology for smart destinations

Smart technology usage has emerged as one of the crucial aspects in improving the accessibility and flexibility of tourist destinations. By doing a Google search, travelers are able to access all information about various destinations, making it easier for them to choose the one they want. In this sense, a smart destination serves as a platform for implementing ICT such as Cloud computing, Internet of Things and Virtual or Artificial intelligence (Femenia, Neuhofer & Ivars-Baidal, 2018). By using these innovative technologies tourists can obtain personalized information and better services throughout the entire course of their trip. Some examples of sophisticated smart tools used to enhance the tourist experience are voice control and voice search through AI, assistants, robotics technology, contactless payment, virtual reality and augmented reality, and recognition technology (García-Milon, Juaneda-Ayensa, Olarte-Pascual & Pelegrín-Borondo, 2020). The range of existing smart technologies is very broad. The term may refer to either a rather general concept or to specific applications that help to enhance experiences and create added value in a concrete way (Neuhofer, Buhalis & Ladkin, 2015). Some examples are artificial intelligence, cloud computing, IoT, big data and data mining, connecting via Wi-Fi and other networks, Near Field Communication (NFC), Radio-Frequency-Identification (RFID), smartphones and other mobile connected devices, beacons, virtual and augmented reality, mobile apps, integrated payment methods, smart cards, and last generation websites and social network sites. (Domac, 2020; Skouby & Lynggaard, 2014; Ferras, Hitchen, Tarrats-Pons & Arimany-Serrat, 2020). The adoption and implementation of smart technologies in tourist destinations and visitor attractions to enrich the tourist experience and improve tourist satisfaction has become a new trend. According to Zhang, Sotiriadis & Shen (2022), accessibility and interactivity affect smart technology-enhanced experiences. Tourists' perceived value of smart technologies is significantly related to their satisfaction. Smart technology positively impacts word-of-mouth recommendations, revisit intention, and willingness to pay a price premium. Thus, tourist attractions could be made to enhance the tourist experience through the designing of better infrastructure and services that incorporate the key dimensions of smart technologies, which would also improve their competitive ability. The literature indicates that smart technology enriches tourists' experiences, satisfaction, and behavioral intention (Li, Song, Lu & Zhang, 2021). Social platforms and social media have become the top spots for tourists to exchange information regarding their travels and they have changed the way tourists share their experiences (Gretzel, 2018). VR has been described as a computer-generated environment that represents a total immersion in the digital world, whereas AR technology enables the superimposition of synthetic images over real images, providing augmented knowledge about the environment in the user's vicinity, thus making the task more pleasant and effective for users (Wei, 2019). VR and AR are increasingly being used in different areas of tourism, such as theme parks, cruises, and museums, and in marketing destinations. Mobile technology allows tourists to use smartphones and other mobile devices to interact and exchange travel experiences (Kim & Kim, 2017). Although Big Data and artificial intelligence studies are of exceptional importance in tourism, such research is also faced with serious challenges from various aspects such as data collection, data analysis, data reliability and data privacy (Lv, Shi & Gursoy, 2021).

3. RESEARCH METHODOLOGY

This study involved the tourist boards of Primorje-Gorski Kotar County in Croatia, on the one hand, and visitors (tourists) to that region, on the other hand. The tourist boards were surveyed using the mixed-method field survey technique (CAPI) or computer-assisted web interviewing (CAWI), depending on the respondents' preferences. A total of 25 tourist boards were surveyed, of which 16 using the CAPI method and 9 using the CAWI method. A total of 707 visitors – tourists and excursionists visiting one of the tourist destinations in Primorje-Gorski Kotar County at the time of the survey – participated in the study.

Visitors were surveyed using the personal interview method (CAPI). Data were collected from 3 July to 11 September 2021. This research is the result of project activity 9.2 Research on the concept of space management in the context of destination management and movement of citizens and tourists, which is part of the Living project Center of Competence for Smart Cities subproject. The Center of Competence for Smart Cities is the result of a joint application and development of six research and development projects by 20 partners based on the call "Support for the development of centers of competence". The papers by Tsaih & Hsu (2018), McLoughlin, Hanrahan & Duddy (2020), Tussyadiah & Miller (2019), Mrsic, Surla & Balkovic (2020), ETIS (2016), European Parliament (2014), were used as reference studies for the framework of this research.

4. RESEARCH RESULTS

In the study, 53.18% of the respondents were visitors to island destinations; 44.55%, visitors to coastal destinations; and 2.26%, visitors to the Gorski Kotar region. With regard to gender, 53.89% of the respondents were male, and 46.11%, female. With regard to age, most of the respondents belonged to the 35-44 age group (25.11%), followed by the 25-34 age group (20.43%) and 45-54 age group (17.02%). The least number of respondents (8.51%) were over the age of 65. Regarding educational level, most of the respondents hold undergraduate degrees (40.88%), followed by respondents with secondary school qualifications (34.94%). A slightly smaller number of respondents have college degrees (20.79%). Foreign and domestic tourists are almost equally represented in the sample. Of the respondents, 39.89% were same-day visitors and 60.11% were visitors staying in the destination for at least one overnight. Most of the respondents (68.18%) are gainfully employed. With regard to travel companions, 17.77% of the respondents visited Primorje-Gorski Kotar by themselves, while most of the other respondents were travelling with their partner/spouse (67.88%), with children under the age of 15 (12.15%) or with other persons over the age of 15 from another household (2.28%). Fully 68.88% of the respondents replied in the Croatian language, 20.37% in English, and 10.75% in German.

The following table clearly shows that the respondents generally use smart technology while on vacation, given that all variables are rated with an average score higher than 3. The respondents largely use smart technology to enhance their personal experience of the trip (4.18) and to upload trip photos (4.10). They use smart technology the least to update their blog content with trip details (3.12) and to share information on personal preferences with service suppliers in the destination (3.11). The populations that tend to use smart technologies more often are women, persons under the age of 34, tourists in coastal destinations, and students. On the other hand, male tourists, tourists over the age of 45, visitors to island destinations, and retired persons tend to use smart technologies less often.

Reasons for using smart technology	Mean scores
I use smart technology to enhance the personal experience of the trip	4.1
To upload trip photos (e.g., to FB, Instagram, Flickr)	4.1
To update social media status with trip details	3.9
To share information regarding personal preferences with service suppliers in the destination	3.1
To upload video contents (e.g., to YouTube)	3.1
To write trip reviews (e.g., on TripAdvisor)	3.3
To update blog content with trip details	3.1

Table 1. Reasons for smart technology usage by visitors (mean score based on 5-point Likert scales where 1=I never use it, and 5= I use it very often)
(Source: Authors)

The respondents' level of agreement with statements regarding smart technology usage is higher for statements regarding security and control over their personal experience, but lower for statements referring to the use of individual types of technology (in particular, AR-VR applications, NFC/RFID tags, Twitter Community, QR codes, etc.). In general, persons under the age of 35 and students are more open to smart technology usage, while persons over 55 years of age and retired persons in particular are less prone to using smart technologies during their stay in the destination.

Respondents' attitudes regarding smart technology usage	Mean scores
I tend to use smart technologies (e.g., smart phone, sensors, artificial intelligence, Big Data)	3.3
I use free Wi-Fi	3.5
I use QR codes	2.9
I use NFC / RFID tags	2.4
I use geolocation applications	3.6
I use AR-VR (augmented reality – virtual reality) applications	2.3
I find using smart technologies is very useful in creating the experience I desire	3.6
I use smart technologies only if they are useful to me (I get something back in exchange)	3.2
I tend to interact with other tourists who are taking part in the same experience as I am in the destination (e.g., the Twitter Community of my hotel)	2.7
I consider my smart phone and social media usage as being part of my unique "smart" experience	3.4
I feel that I have control over my personal experience	3.8
I am concerned with the privacy/security issues of sharing personal information and preference-related data	3.4
I think all my personal information and preference-related data should be used (collected and processed) exclusively with my consent	4.0

Table 2. Level of agreement with statements referring to visitors' smart technology usage (mean score based on 5-point Likert scale where 1=I strongly disagree, and 5= I strongly agree)
(Source: Authors)

Nine town tourist boards, 13 municipal tourist boards, two regional and one local tourist board took part in the survey. Of the 25 tourist boards, 15 operate in the coastal region, nine on the islands and one in Gorski Kotar. Thirteen tourist boards have no tourism management umbrella organization uniting several bodies at the local level whereas the remaining 12 do. Of the 25 tourist boards surveyed in Primorje-Gorski Kotar County, 14 reported having a sustainable tourism strategy, either within the framework of sustainable tourism development or within the framework of a tourism development action plan. Eleven tourist board managers do not know whether a sustainable tourism strategy has been developed for their destination. As many as 21 of the 25 tourist boards do not possess any smart technology usage strategy. The Jelenje Tourist Board is developing the project “Visit Jelenje”, and the Ičići Tourist Board and Rijeka Tourist Board are developing the project “Smart City”. The Gorski Kotar Tourist Board possesses an action plan. Three out of these four tourist boards consider that the implementation of the strategy changes the way their destinations operate. With regard to smart technology usage, most of the tourist boards use social media and platforms; 15 tourist boards use the Internet of Things, and 6 to 8, use Near Field Communication, virtual reality and cloud computing. Big Data technologies and Artificial Intelligence are used to a very limited extent by the tourist boards of Primorje-Gorski Kotar County

Types of smart technology used in the destination	**Frequency**	**%**
Social media / platforms	23	92
Internet of Things (IoT)	15	60
Near Field Communication – NFC	8	32
Virtual reality – VR	7	28
Cloud computing	6	24
Augmented reality – AR	4	16
Radio-Frequency Identification – RFID	4	16
Big data technologies	1	4
Mixed reality	1	4
Artificial intelligence – AI	1	4

Table 3. Frequency of use, by type of smart technology
(Source: Authors)

With regard to tourist destination management models, most of the tourist board representatives are of the opinion that the tourist destination should be managed by the sector of tourism associations (4.4). The statement referring to a model of management through a chosen form of public-private partnership also received a fairly high score (4.0). The representatives of island tourist boards gave a slightly higher score to management through a chosen form of public-private partnership, while coastal tourist boards gave a higher score to management through the sector of tourism associations. The least number of respondents in tourist boards consider that the tourist destination should be managed by the private sector (2.2). The statement that the existing organization should be maintained has an average score of 3.5. It should be noted that the tourist board managers consider that smart destinations should primarily focus on sustainability (environmental, economic and social), followed by accessibility (4.1), innovation (3.6) and technology (3.5).

Opinions regarding tourist destination management models and perceived primary focus of a smart destination	**Mean scores**
The tourist destination should be managed by the public sector.	3.1
The tourist destination should be managed by the private sector.	2.2

Opinions regarding tourist destination management models and perceived primary focus of a smart destination	Mean scores
The tourist destination should be managed by the sector of tourism associations.	4.4
The tourist destination should be managed through a chosen form of public-private partnership.	4.0
The tourist destination should be managed by a special non-profit organization – DMO	3.2
The tourist destination should be managed by a special entity – DMC	3.2
The tourist destination should maintain the existing organization, sphere of activity, responsibilities and funding of tourist boards across all levels.	3.5
The tourist destination should maintain the existing organization while delegating greater powers to tourist boards at lower organizational levels.	3.7
I think sustainability should be the primary focus of a smart destination.	4.2
I think accessibility (physical and digital) should be the primary focus of a smart destination.	4.1
I think innovation should be the primary focus of a smart destination.	3.6
I think technology should be the primary focus of a smart destination.	3.5

Table 4. Level of agreement with statements referring to tourist destination management models and the perceived primary focus of smart destinations (mean score based on 5-point Likert scales where 1=I strongly disagree, and 5= I strongly agree)
(Source: Authors)

5. CONCLUSION

Tourism is generating important economic and social effects for the Republic of Croatia. This makes it all the more important to ensure all the preconditions needed for tourism growth and development. Technology represents an ally in achieving the full potential of tourism development. Smart technology is changing the rules of the game in many industries and creating new opportunities in the tourism sector. This study conceptualizes smart destinations, on the one hand, and by analyzing data obtained in a survey, provides insight into technology usage and opinions regarding selected applications and social networks and sustainable tourism awareness. It was observed that technology, applications, the Internet and social networks play a vital role for visitors in the overall process of planning, making and reviewing a trip. The results present the attitudes of management structures towards smart intelligence solutions that can be used in tourist destinations in Primorje-Gorski Kotar County in Croatia. Furthermore, this study confirms the willingness of tourist boards to create and implement smart technology strategies together with a management model that will ensure the highest level of tourist satisfaction, make the destination more sustainable and more competitive, and improve cooperation among various stakeholders in the destination. Tourist destinations are becoming smart and sustainable through the appropriate and comprehensive application of sophisticated information and communication technologies (Ferras, Hitchen, Tarrats-Pons & Arimany-Serrat, 2020). In this way, a sustainable tourist destination can become an innovative tourist destination capable of enhancing the quality of life of citizens and tourists, the effectiveness of city operations and services, and the competitiveness of the destination, while meeting the needs of present and future generations. Hence, stakeholders should continue to cooperate in smart destination projects to their mutual benefit.

This study has some limitations that need to be taken into consideration when reviewing the results. As the respondents are mostly young people (younger than 45) and domestic tourists, it is not possible to determine the frequency of smart technology usage in the older population and foreign tourists on vacation. Hence, the findings cannot be generalized. The study included respondents in Primorje-Gorski Kotar County in Croatia. Considering that the survey was focused on tourist board managers and visitors, the recommendation is that business entities and residents also be included in future studies. Overcoming the limitations of the current study can be seen as a guideline for improving future research.

ACKNOWLEDGEMENT*: This paper is the result of the project activity 9.2 Research on the concept of space management in the context of destination management and movement of citizens and tourists, which is part of the Living project Center of Competence for Smart Cities subproject. The Center of Competence for Smart Cities is the result of a joint application and development of six research and development projects by 20 partners based on the call "Support for the development of centers of competence". The total value of the project is HRK 149,631,384.15, of which HRK 95,357,525.75 is co-financed by the EU. The project duration is from 01 March 2020 to 01 March 2023.*

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THE GROWTH OF LIQUEFIED NATURAL GAS TRADE

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ABSTRACT
Energy markets worldwide have been experiencing a dramatic situation for months, characterized by high energy prices that generate global inflation. Despite the new uncertainties and challenges, a growth in the trade in liquefied natural gas was recorded. In 2022, there was a repositioning in the global LNG market, since the export of U.S. LNG is predominantly directed towards Europe. The European Union set a goal for EU member states to reduce gas consumption by 15% compared to their average consumption in the last five years by spring of 2023. The paper considers features of the global LNG trade and the growth of imports of LNG in Europe as well as the factors influencing LNG trade.
Keywords: *Liquefied natural gas (LNG), Natural gas, Security of gas supply, Trade in liquefied natural gas*

1. INTRODUCTION

Recent times have been characterized by a global crisis (affected by enormous energy prices and inflation) and the COVID-19 pandemic. Many governments worldwide adopted intervention measures, targeting protection of the standards of living and support for enterprises, in order to mitigate the effect of high energy prices. However, the Ukrainian crisis has generated new uncertainties. The European Union (EU) is characterized by a complex system model encompassing many different areas. Geopolitics, climate policy and a single internal energy market are of the utmost importance for the EU's energy sector. The EU has aimed for its energy legislation to be followed by as many European countries as possible. Since the 2010s, issues pertaining to climate change and climate policy in general have become more and more important in the EU, while the geopolitical situation initiated the reconsideration of energy supply security in 2022. In the spring of 2022, energy supply security came into focus of EU policy because the European Commission presented a plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition (REPowerEU Plan, 2022). The share of Russian coal in the total EU's coal consumption was 46% in 2021, and the share of Russian oil was 27%. Out of the total import of natural gas into the EU, 43.5% was delivered from the Russian Federation, followed by Norway (23.6%), Algeria (12.6%) and the U.S. (6.6%) (European Commission document: Reducing the EU's dependence on imported fossil fuels, 2022). This means that a total of 155 billion cubic meters of natural gas was imported from the Russian Federation, or about 40% of the total gas consumption in the EU in 2021 (IEA, 2022). The Russian Federation produced 762 billion cubic meters of natural gas and exported 210 billion cubic meters of natural gas through pipelines in 2021 (IEA Energy Fact Sheet, 2022). Considering the aforementioned, the following question arises: Is it really possible to implement the REPowerEU Plan well before 2030? To fully address this question, a complex and comprehensive analysis would need to be conducted, which is outside the scope of this paper.

Since the EU treats liquefied natural gas (LNG) as "an insurance policy" in the context of gas supply security, the segment of LNG trade is considered in the continuation of this research. However, the LNG trade by itself does not solve the issue of the EU's high dependence on gas imports.

2. GLOBAL LNG TRADE

When analyzing the LNG importance for the EU, global trends should first be considered. The trend of global LNG trade growth has been present for a long time. A global LNG trend volume 2000-2020 is shown in Figure 1.

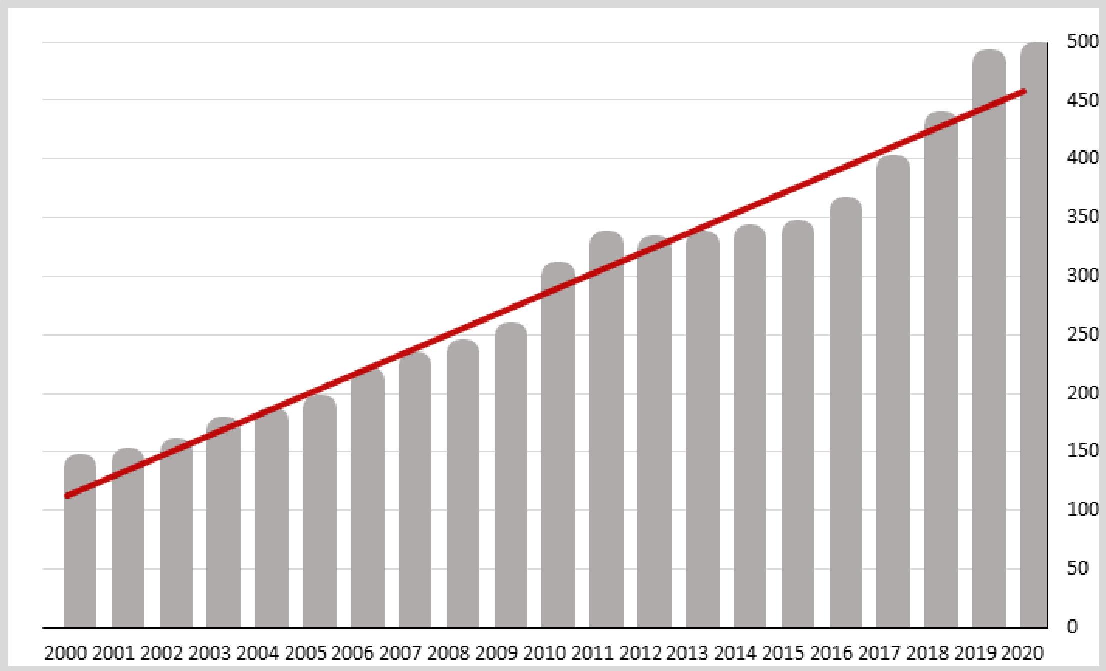

Figure 1: Global LNG trade volume 2000-2020 (in billion cubic meters)

The diagram in Figure 1 shows that the global LNG trade volume increased by 352 billion cubic meters (72%) between 2000 and 2020. The line in the diagram shows the growth trend of the global LNG trade volume over a twenty-year period. Furthermore, global LNG trade volume increased by 4,5% in 2021 compared to 2020 (IGU, 2022), reaching a historical maximum of 372.3 MT. This was achieved even with extremely high levels of LNG spot prices, which remained above the long-term contractual formulas. The global LNG carrier fleet increased by an additional 10% in 2021, in which 57 new vessels were delivered. 641 vessels were recorded in the global LNG carrier fleet in April 2022, including 45 floating storage and regasification units (FSRUs) and five floating storage units (FSUs). The U.S. gas market is the biggest in the world, and the EU's gas market is the second biggest. The global gas supply security is significantly affected by the growing production of natural gas in the U.S. and the increased export of U. S. LNG to the EU. The EU is the largest importer of natural gas, importing as much as 90% of the total amount of gas it uses. Due to the declining trend of natural gas production in the EU, the share of imports will increase in the coming years. The importance of natural gas for the EU is reflected in the fact that natural gas accounts for about 25% of total energy consumption, of which about 26% is used in the electricity generation sector (including thermal power plants), about 23% in industry, and most of the rest is used in the residential sector and service sector (mainly for heating). The annual demand for natural gas in the EU is around 400 billion cubic meters (European Commission document: Liquefied natural gas).

It seems likely that only the U.S. could significantly influence the increase of LNG imports into the EU in the next few years. The EU will perhaps consider the following important issues with Qatar (a global LNG exporter) within a complex political-economic process rather than within a common procedure of trade negotiations:

- Options for strategic repositioning in the global LNG market.
- Ensuring additional export capacities for LNG.
- The possibility of new diversification of LNG's export routes, while ensuring sufficient capacities for all routes. Note: Qatar is the leader in LNG exports, mostly in the Asian market where there are large traditional buyers (India, Japan, South Korea and China). Therefore, a "hasty redistribution" of export capacities that would threaten the acquired export primacy does not seem likely.
- Possibilities for "long-term incentive pricing" for Qatar's LNG destined for the EU market.

In addition, it should be accentuated that the global LNG market is becoming increasingly competitive with a growing number of participants and LNG trade volumes. Thus, for example, the growth of global LNG trade was estimated from 391 billion cubic meters in 2017 to 505 billion cubic meters in 2023 (European Commission document: EU-U.S. Joint Statement, 2019).

3. GROWTH OF LNG IMPORTS IN EUROPE

There is a clear political will in the U.S. for a significant growth of LNG deliveries via LNG export terminals in the direction of Europe. After the first delivery in April 2016, an increase in the amount of U. S. LNG exported to the EU was recorded, especially after the agreement between the EU and the U.S. in July 2018, with deliveries to Belgium, France, Greece, Croatia, Italy, Lithuania, Malta, the Netherlands, Poland, Portugal and Spain. The data relevant for U.S. LNG exports to Europe is shown in Table 1.

Year	2016	2017	2018	2019	2020	2021
Annual amount of LNG (in bcm)	Not significant.			14.2	18.7	22.2
U.S.-EU LNG vessels per year	n/a			154	201	246
The average EU utilization rate of LNG re-gasification capacities (data related to December of each observed year)	28%	30%	44%	62%	40%	56%

Table 1: Data relevant for the U.S. LNG exports to Europe
(Source: Authors' treatment based on data from 'EU-U.S. LNG Trade' and 'CEEP, Aug 2018')

By early 2022, the EU imported a total amount of 60 billion cubic meters of LNG from the U.S. since April 2016. The largest annual export of 22 billion cubic meters of LNG from the U.S. to the EU was recorded in 2021. The LNG exports from the U.S. continued to grow in 2022, mainly due to:

- Increased global demand for gas (mainly in the EU).
- Extremely high prices of natural gas and LNG in the gas markets worldwide.
- Increase in LNG export capacities.

More than 60% of LNG exported from the U.S. was shipped to Europe in the first quarter of 2022 (versus 37% in the last quarter of 2021). 19 billion cubic meters of LNG delivered to Europe in the first quarter of 2022 represents an increase of about 12 billion cubic meters compared to the same period in 2021 (Ravikumar, Bazilian and Webber, 2022).

In the first four months of 2022, the U.S. LNG exports to the EU and the UK more than tripled compared to 2021 (Szőke, 2022). 71% of the U.S. LNG exports went to the EU and the UK during the first five months of 2022 (EIA, 2022). Taking the aforementioned data into consideration, it seems that there is a phenomenon of "pragmatism in energetics" in the EU. In fact, the U.S. LNG comes largely from ecologically doubtful shale gas. There is no consensus on the benefits of shale gas extraction, while some point out the possible harmful effects on the environment caused by hydraulic fracturing. According to Li, Liu, Zhang and Lu (2018), „the environmental impact associated with shale gas extraction mainly include habitat division, fracturing fluid spills and leaks, local air quality, water resource, ground water aquifer, and seismicity. Among them, the pollution on ground water aquifer and lokal air quality are the biggest environmental issue caused by shale gas extraction". Therefore, the compatibility between the import of shale gas and the EU's environment policy may be questioned in the future. Taking into consideration the EU's intention to implement the REPowerEU Plan, there is potential for further growth of the EU-U.S. LNG trade in the forthcoming years. However, this implies comprehensive action including:

- Investments in projects for the construction of missing infrastructures in the EU with the aim of improving the access to LNG.
- Adoption of reciprocal measures to ensure equality in accessing gas markets in the U.S. and the EU.
- Removal of LNG licensing barriers to accelerate the LNG exports from the U.S.
- Defining a competitive and sustainable price for U.S. LNG.

Furthermore, the LNG vessels sail in directions determined by market conditions. Because a higher price often determines LNG vessel routes, numerous changes in the place of LNG delivery have been recorded. In 2022, higher LNG prices were recorded in Europe compared to Asia, unlike the previous year when it was vice versa. American exports are also encouraged by the fact that LNG prices on the domestic market are significantly lower (also taking into account the transportation costs). The price difference between the U.S. gas market and the major gas markets in Asia has encouraged exporters in the U.S. to direct their LNG supplies to Asia rather than to other markets. In addition, the EU's orientation to largely satisfy its gas needs using LNG terminals requires high operational capabilities for the implementation of many activities, including key investment ones. The EU has a significant LNG import capacity, which can meet about 43% of its total gas demand (2015) (European Commission document: Liquefied Natural Gas and gas storage will boost EU's energy security, 2016). LNG import terminals in Europe are shown in Figure 2 (including two LNG terminals under construction in Germany). Nevertheless, taking into account the REPowerEU Plan, but also the fact that some EU member states do not have access to LNG or are dependent on only one natural gas supplier, the possibilities for further capacity increase by upgrading the existing LNG terminals or building the new ones should be considered. The year 2022 is marked by dynamic activities of importance for EU energy. All relevant past predictions took into account the future energy consumption growth (Banovac, 2018), whereby considerable amounts of natural gas were calculated. However, in July 2022 the European Commission proposed the European Gas Demand Reduction Plan to reduce gas use by 15% until next spring (European Commission document: Save gas for a safe Winter, 2022). The EU energy ministers agreed to reduce gas consumption by 15% compared to the EU member states' average consumption in the last five years by spring of 2023. This target is nonbinding, but it could become binding in the event of a gas supply crisis. The planned reduction of gas consumption is important for gas supply security in the EU. However, more efficient use of the existing gas storages and improved rules for the cross-border use of storages are important factors for gas supply security as well as for solidarity between the connected EU member states in the event of a gas supply crisis.

Furthermore, the efforts for large-scale hydrogen utilization and using CCUS (Carbon capture, utilization and storage – important technologies for reducing emissions that can be applied in the energy system), biogas and renewable energy sources should be continued (Banovac and Pudić, 2021, and Pudić and Banovac, 2022).

Figure 2: LNG import terminals in Europe

4. FACTORS AFFECTING LNG TRADE

Taking into consideration a long-term perspective, the competitiveness of LNG will depend on:

- The supply and demand relationship (for instance, high demand and LNG price growth in Europe could stimulate LNG price growth in the Asian markets).
- Development of global gas and LNG markets.
- The growth of competition in LNG markets in the world.

- Liquefaction and transport costs.
- Investments in the construction of new LNG terminals and LNG vessels.
- The impact of LNG imports on gross domestic product.
- Exchange rate differences (due to exchange rate changes of the major world currencies).
- Geopolitical circumstances.

The EU's internal gas market should send the right price signals, so that investments in LNG infrastructure are encouraged where needed. This requires an in-depth analysis of market circumstances, long-term gas needs, available gas quantities on the global market and possible supply routes as well as the engagement of EU member states. The position and interests of EU member states differ. Germany, for instance, does not have an operational LNG terminal, which implies that U.S. LNG could only be imported through other countries (until the LNG terminal is put into operation in German territory). Perhaps the EU could initiate a negotiation process at a global level in order to conclude an intergovernmental agreement on the implementation of an effective mechanism to ensure a stable gas trade in the event of crises. In fact, no market, not even the gas market, can be an end in itself and should not allow the accumulation of extra profits and conduct of trade transactions without an effective external supervision and regulated state interventions (in exceptional circumstances) in order to prevent market distortion in the event of a large-scale crisis. A theoretical model of free market certainly does not support the devastating effects of global inflation fueled by the enormous prices from the "untouchable energy market", i.e., the market of very specific goods – energy that represents a necessary input in all processes and that generates global inflation with its high prices. Although traditional measures for determining energy market concentration (such as the Concentration Ratio, the Hirschman-Herfindahl Index and the Rosenbluth-Hall-Tideman Index) (Banovac, 2005) have not lost their importance, they do not include factors such as price increases due to the multiple resales of the same quantity of gas. In the Croatian case, the significance of the LNG terminal on the island of Krk in the context of the gas supply security was confirmed in its first operational year. In the second year of the terminal's operation, its capacity was increased from 2.6 to 2.9 billion cubic meters of natural gas per year. Furthermore, the Republic of Croatia is considering the establishment of a gas exchange, taking into account recent geopolitical circumstances and the gas crisis in Europe. The announced expansion of the LNG terminal on the island of Krk (to the level of 6.1 billion cubic meters of natural gas per year) could initiate the establishment of the Croatian gas exchange. With such a large-capacity LNG terminal in function, the Republic of Croatia would gain an energy hub of regional importance. This LNG terminal would be a physical gas hub with more than double capacity compared to the annual consumption of natural gas in the Republic of Croatia. In addition to the future physical hub with a capacity of 6.1 billion cubic meters of natural gas per year, an advanced trading platform could also be implemented. On 27 July 2022, the Croatian Energy Regulatory Agency initiated the procedure for the adoption of Amendments to the General Conditions of Gas Supply. This is an example of a good regulatory practice regarding the improvement of the content of relevant acts. Among other things, a correction was proposed in 'Table 3. Standard gas quality' in such a way as to reduce the prescribed minimum amount of the methane number from 75 to 70. From the content of the accompanying document intended for public consultation for the above-mentioned regulation (Croatian Energy Regulatory Agency, 2022) it follows that the prescribed minimum amount of the methane number (75) limits the diversification of supply routes towards the LNG terminal on the island of Krk, i.e. it does not allow LNG delivery from several important LNG exporters. The initiative to change the provisions of the General Conditions of Gas Supply in the part related to standard gas quality came from the users of the LNG terminal who submitted their proposals to the regulator.

The Transport System Operator and the Gas Storage System Operator stated that a minimum methane number of 70 is acceptable. Floating storage and regasification units (FSRU) play an important role in the LNG value chain. However, so far, a relatively small amount of natural gas has been imported into the EU via floating terminals. The successful implementation of the Croatian FSRU project confirmed the possibility of an efficient installation of a floating terminal (in a shorter time than it would be possible to construct a land-based LNG terminal). The capacities of floating terminals are surely very important for the EU. The share of natural gas reaching European consumers via LNG terminals could increase rapidly with the installation of new floating terminals. The ongoing expansion of the LNG import capacities in the Netherlands and France will contribute to gas supply security. Germany is carrying out activities for the rapid installation of the first two floating terminals (FSRU terminals Brunsbüttel and Wilhelmshaven). In fact, Germany is the only large gas consumer in the EU without direct access to the LNG market, which is currently a limiting factor in terms of gas supply security.

5. CONCLUSION

In the long-term, one-sided orientations in energy policy could prove to be a failure. Namely, hastily abandoning the paradigm of a well-balanced energy mix (as an essential factor in the energy supply security) implies great uncertainties and challenges. The EU has already gone through a period of neglecting the importance of natural gas in the context of energy transition implementation, so that suddenly even coal (that emits twice as much CO_2 as natural gas) became acceptable due to the influence of the recent crisis. Although the rapid growth of LNG imports in 2022 indicates the EU's focus on LNG, only a well-defined balance between the quantities of natural gas transported by gas pipelines and those delivered via LNG terminals represents a sustainable solution. LNG has become an important factor for a reliable functioning of energy systems around the world. Without a doubt, LNG can play an important role in the concept of gas supply security if priced competitively. Assuming continued growth in global LNG trade, it will quickly become clear that LNG is also important in the context of monitoring greenhouse gas emissions. The recent crisis influenced even those EU member states that acted as leaders of the green transition to accept gas-to-coal switching where possible. This could jeopardize the EU's achievements in reducing greenhouse gas emissions. Considering the recent EU's plan to reduce gas consumption by 15% compared to member states' average consumption in the last five years by spring of 2023, it will be necessary to determine the quantities of natural gas that will be transported through international gas pipelines and the quantities of LNG that will be delivered by LNG vessels. However, gas consumption in the EU is of such a large volume and significance that energy planning and the issue of gas balancing must not be ignored or influenced by the "whims" of stakeholders in the gas markets worldwide.

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THE CONTRIBUTION EFFECT OF THE IMPORTED COMPONENT IN THE FINAL PRODUCT WITHIN THE VALUE CHAIN IN FOOD AND RETAIL SECTORS IN CROATIA

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ABSTRACT

For many decades Croatian economy was faced with a huge production inefficiency. That was directly influenced on the export competitiveness. The continuous deficit of the foreign trade balance in goods represents a fundamental problem for Croatian economy. From 1997 until today, the foreign trade deficit has shifted from 31.9% to 60.8%, which indicates a significant structural problem for the overall economy. One of the reasons is the rapid process of transformation and privatization of domicile retail sector from foreign investors. The retail sector represents a driving force of the economy for the production sector. It also represents the component of imported deflation, where the influence on domestic production is very negative. Thus, the TOP 10 retailers have more than 80% of the market share and they are predominantly in foreign ownership. The competitiveness of Croatian economy is undermined because retailers are continuously putting pressure on price decrease on food suppliers. There is a huge impact from retailers on increase of imports of foreign goods, while at the same time the domicile food industry is not capable to keep pace with competitors, so the domicile industry is decreasing in its competitiveness. Not only retailers, but also domicile producers are more and more importing from abroad. Therefore, the effect of double import is present (from the producer and retailer side). Taking all into consideration, the goal of this paper is to quantify the effect of the imported component within the value chain (TOP 10 companies from food industry and TOP 10 companies from retail sector). The aim is to point out the high exposure of food and retail sectors towards imported goods which leads to continuous decrease in comparative advantages of domicile industry.

Keywords: foreign trade balance, retail, food industry, imported component, value chain

1. INTRODUCTION

Trends of imported inflation have been present for several years in Croatia. They occurred as a result of strategic economic policy of a small open economy. After the privatization and acquisitions of most Croatian companies by foreign investors, the trend of increasing imports accelerated significantly. Domicile currency: The Croatian Kuna has not proven to be an adequate instrument for export increase, neither for import limitations, due to its low volatility. Moreover, a stable exchange rate with appreciation-depreciation pressures didn't have effect on movements of exports and imports. This shows that the Croatian economy is not competitive enough and it didn't succeed to create a stable supply chain primarily from domestic sources. External trade coverage is among the worst within the EU member states with a continuous foreign trade deficit. For years, the economic policies of all governments were mainly focused on stimulation of imports of goods and did not bother to create a long-term strategy for economic development. Governments used mostly short-term measures, without a clear vision to increase the competitiveness of economy. Almost all sectors recorded deficits in foreign trade, except the tourism, which has a surplus in field of services. The tourism sector accounts for more than 20% of Croatian GDP, and it neutralizes the foreign trade deficit. However, tourism consumption is indirectly increasing imports.

From the vertical integration perspective, with the tourism demand, all participants in the value chain offer products that are mainly imported. Therefore, due to the non-competitiveness of the domicile economy, the higher tourist consumption creates higher import of goods in absolute terms. With a low competitiveness of economy which is the result of wrong economic policy followed by imported inflation, Croatia is not able to offer domestic products to consumers. In this paper, author will analyse the level of significance of the impact of the imported component on the final product. In the scope of the analysis will be two players from the value chain, the largest food production companies and the largest retail companies.

2. MACROECONIC PERSPECTIVE

The transformation of Croatian economy from socialist to a capitalist system took place in the 90s. Most Croatian companies have been privatized by a few private entrepreneurs. Similar scenario occurred in almost all post-transition countries in South-eastern and Eastern Europe. However, some neighbouring countries had better economic policies than Croatia and their strategy was mainly based on strengthening their domestic economy, what led to higher competitiveness. Those countries achieved significant progress in competitiveness due to investments in high technologies. Slovenia, the Czech Republic, Slovakia, Poland and Hungary recorded a foreign trade surplus, while in Croatia this was not the case. Economic policies of mentioned countries are focusing on their domestic production and on strengthening the vertical integration chains. In contrary, Croatia is mostly importing, while at the same time eroding domestic production and becoming more and more uncompetitive. The main focus is on tourism, even though that should only be an addition in the gross added value of the total production. There is no a clear vision in the tourism sector either. A great rental position is our only strategic component. According to the expenditure method, in the GDP, the largest share is the personal consumption with 58.4% in 2021[1], while the EU27 has average of 51.0%[2].

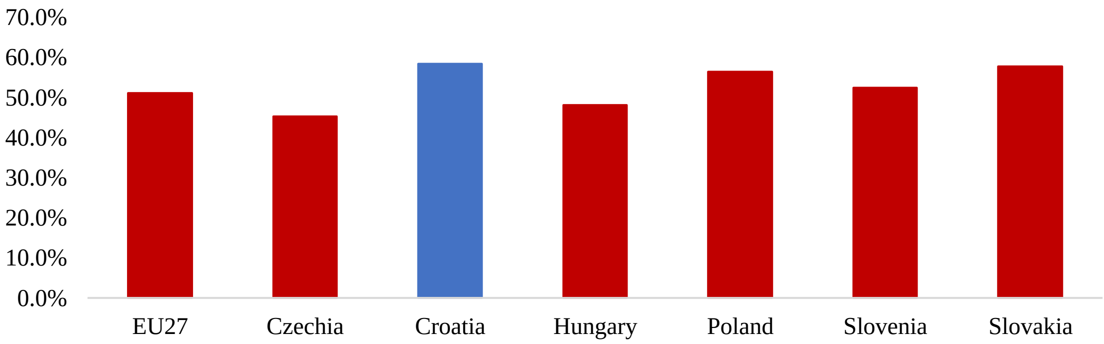

Figure 1. Share of household consumption in GDP in 2021 (constant prices)
Source: Eurostat, authors calculation

Figure 1 shows what is the share of household consumption in GDP. If comparing transition countries, that share is the highest in Croatia. The Czech Republic and Hungary stand out, because their share of household consumption is below 50.0% of GDP. Their economy is based on strong manufacturing, and they are export-oriented with a foreign trade surplus. If measuring GDP from production side, Croatia generates the most GDP from the wholesale and retail trade, transport and warehousing, accommodation, food preparation and service sectors (23.1% in 2021). After that, the processing industry, mining and extraction and other industries recorded a share of 18.7%. The processing industry accounts for 14.2% of GDP.

[1] Publication 12.1.1.2., Quarterly calculation of gross domestic product according to the expenditure method, constant prices, prices of the previous year
[2] Final consumption expenditure of households and non-profit institutions serving households [TEC00009] 25/07/2022 23:00

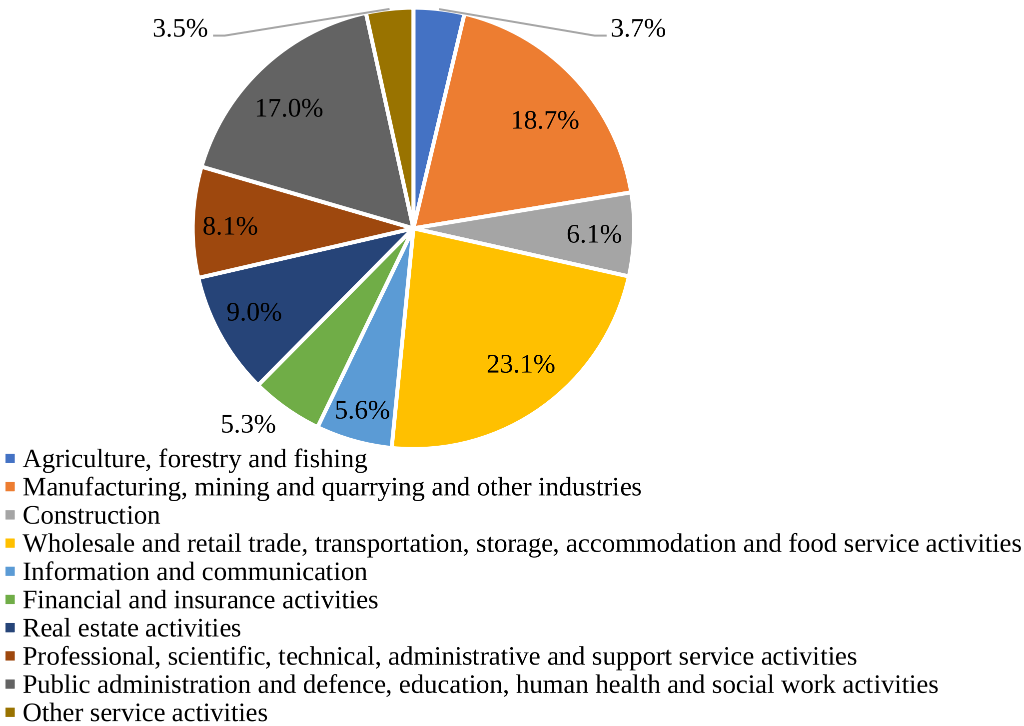

Figure 2. GDP structure in Croatia according to the production approach method in 2021 (constant prices)
Source: Croatian Bureau of Statistics 12.1.1.6. announcement, quarterly calculation of gross added value, constant prices, prices of previous year, authors calculations

It is important to emphasize that all models of retail trade in Croatia account for 23.1% of GDP, while the manufacturing industry is in the second place. However, to have a high share of retail trade in the GDP structure is very positive, but if it is based on imports, then it has a significant negative effect on the overall economy. We have this exact example in Croatia (analysis in the following chapters). Fiscal and monetary policy did not support the development of domestic production.

The strong Croatian Kuna exchange rate along with non-competitive production further damaged already weakened processing industry, which is the backbone of any economy. Used fiscal policy also dissimulated domestic production due to the high tax levies. A high profit tax and employee income tax caused long-term damage to Croatian economy. Recent data show that the external trade coverage of goods in Croatia was 58.6% for the first five months of 2022[3]. Important is to point out that the retailers put a huge pressure on other participants of value chain, so the CPI (consumer price index) did not have large oscillations. However, the inputs that came from the producer side and are expressed by the PPI (consumer price index) suffered significant losses and decrease in margin.

[33] Croatian Bureau of Statistics, foreign trade exchange Croatia (announcement 09.08.2022), Foreign trade in goods | (Croatian Bureau of Statistics)

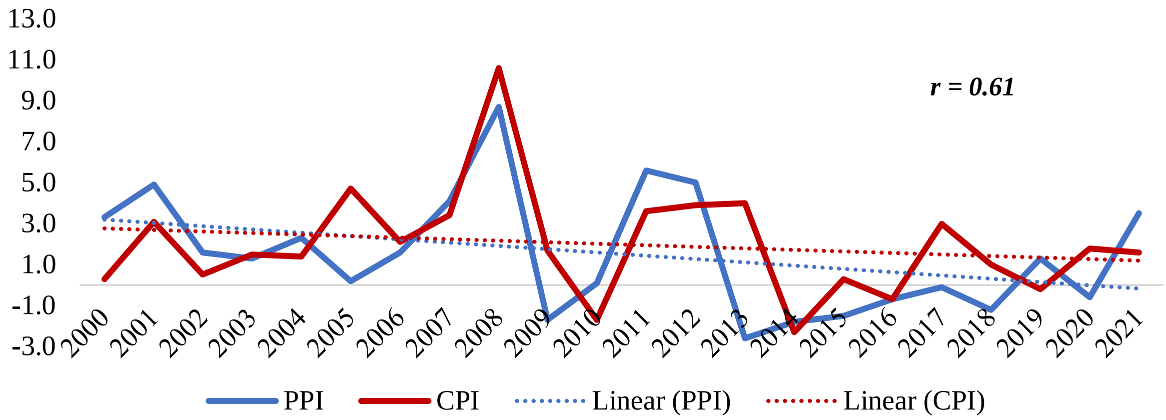

Figure 3. Movements of the consumer price index CPI in food and the producer price index PPI in food from 2000 to 2021 in %
Source: Croatian Bureau of Statistics, Table 1.3 Annual CPI and annual producer price index, authors calculation

Figure 3 shows movements of CPI and PPI in the food segment. In the period from 2013 to 2018 and 2020, the PPI curve in the food sector was in the deflation zone, with cumulative deflations from 2014 until 2021 (-1.1%). At the same time, the CPI curve in the food sector was above the PPI curve in the same observed period and it recorded a cumulative inflation of 4.5%. In the total observed period, the CPI of food sector increased by 43.6%, while the PPI in the food sector increased by 33.3%. All observed points out the significant price pressure on the food sector. Food sector deflated it prices in order to keep its production competitive.

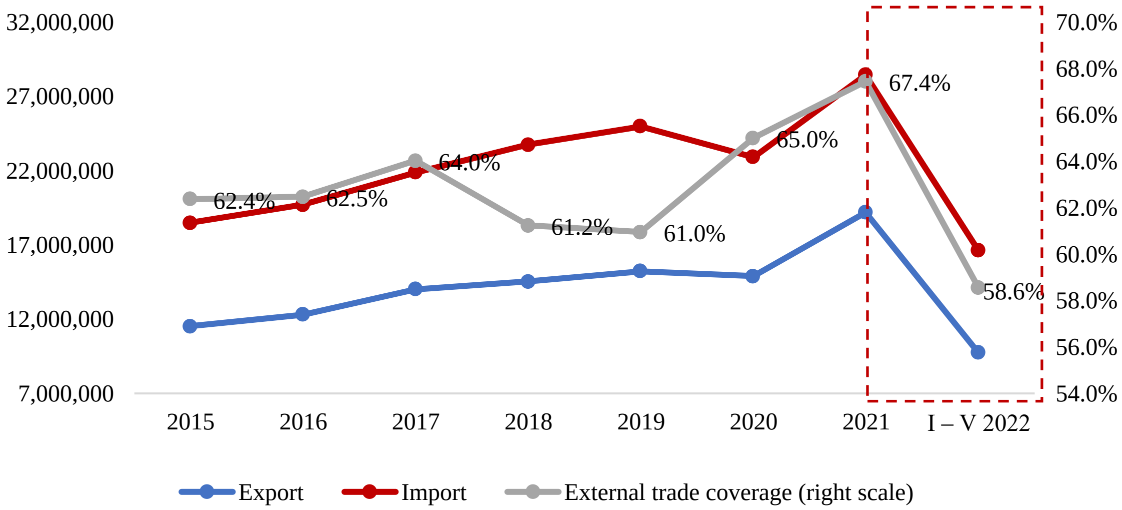

Figure 4. The movement of the foreign trade balance in Croatia in the period from 2015 - I-V 2022 in goods in 000 EUR
Source: Croatian Bureau of Statistics, authors calculation

Figure 4 shows the movements of import and export of goods. In the first five months of 2022, the external trade coverage reached the level of 58.6%, which is also the worst indicator in the observed period. The growth rate of imports in the first five months in 2022 compared to the same observed period in 2021 was 53.3%, while exports in the same observed period increased only 36.1%. All mentioned indicates the presence of structural problems and a non-competitiveness of Croatian economy, which is getting worse every year.

3. FOOD PRODUCTION SECTOR IN CROATIA

For many years, the food sector in Croatia has been faced with major challenges in terms of competitiveness and productivity. The non-competitiveness of food sector which represents the key economy sector is manifested through the continuous import of cheap products from abroad. Except that, the indirect import of the same products by retailers show the failure of domestic economy. The food sector is losing its competitiveness because of the lack of investments in high technologies and delays in technological progress. This is even more visible after Croatia joined the EU. The importance of the food sector in Croatia is also reflected in its high impact on overall inflation (measured by CPI). For example, in June 2022, the share of inflation that comes from the food sector was 31.03%. On the other hand, looking at the food industry (the processing industry) from the perspective of gross value added (GVA), the component C (NACE 2007) recorded 14.2% of the total GVA. A high share in the structure of inflation (measured by the CPI) has the biggest contribution effect in the movement of the household consumer basket. This happens because most of the products that influence on movements of CPI in food sector are inelastic. Therefore, it is better to observe movements of inflation and budget shock caused by inflationary trends from CPI perspective in food sector. The CPI model represents the highest share in creation of total inflation and influence the most on movements of real purchase power of households. Furthermore, the most important factor on the producer side is a producer price index (PPI) which presents the movements within value chain, The Figure 3 from the previous chapter points out the existence of the correlation between consumer and producer prices in food sector. The food sector employees the most, therefore its importance is at the highest level. In June 2022, in the food sector there was 229.121 employees[4], which represents a decrease of 1,1% if comparing with the 2021.

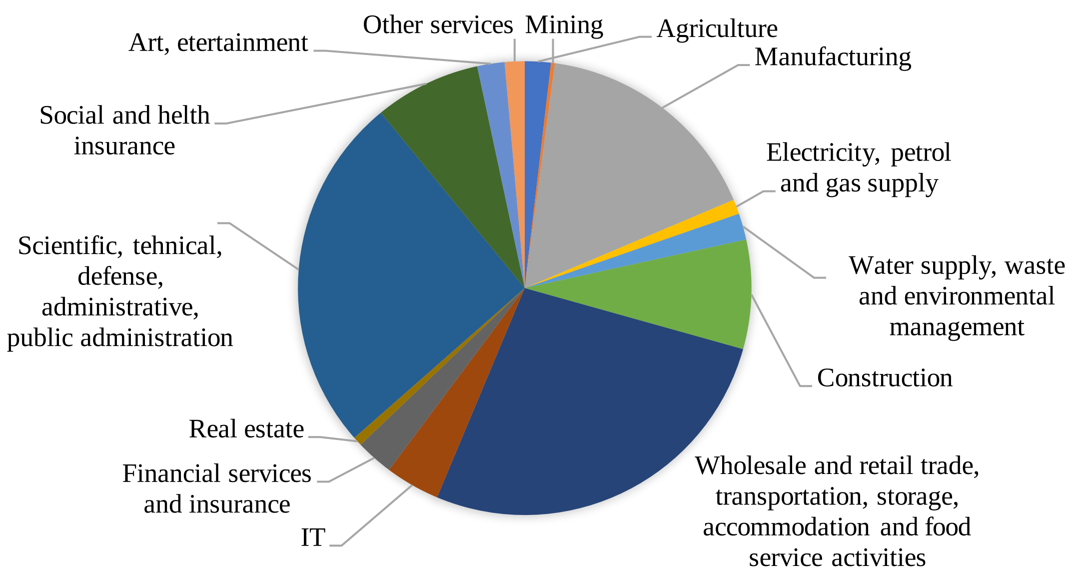

Figure 5. Structure of employees by industry in June 2022 according to the Croatian Bureau of Statistics, authors calculation
Source: Croatian Bureau of Statistics June 2022, authors calculation

From a total of 1.3387.654 employed people in Croatia, the largest share goes to employees in the processing sector, followed by trade and education.

[4] Index of movements in number of employees NACE 2007, by gender, June 2022.

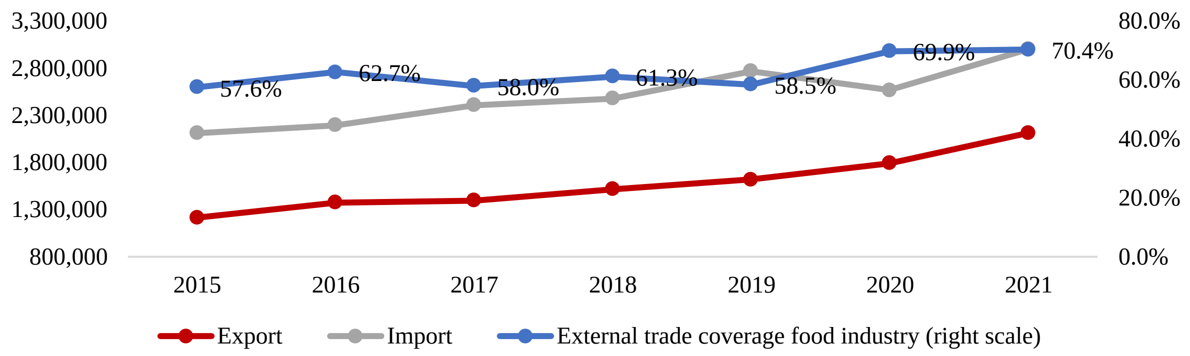

Figure 6. Movements of imports, exports and external coverage in food sector from 2015 to 2021
Source: Croatian Bureau of Statistics, authors calculation

In the first five months of 2022 the external trade coverage was 58,6%. If comparing with the same period in 2021, there was a significant deficit in external trade balance, as the external trade coverage in food sector in 2021. was 70,4%. However, in observed period the pandemic COVID 19 caused the shortages of supply and disruption of international trade. In 2019 Croatia recorded the largest foreign trade deficit among all EU members. The external trade coverage was 58,5%. Nevertheless, pandemic had some positive impacts as well. The imports decreased, and because of the limitations of international supply and trade, the pressure was more on domestic producers.

4. RETAIL TRADE IN CROATIA

According to the national classification of activities from 2007, retailers represent the second most important player for the contribution in the GDP structure. The retail sector (G47.11 and G47.19[5]) generators a revenue of around 7 BN EUR nominal. The retail sector employs more than 100,000 employees. The TOP 10 largest retailers in Croatia have more than 80% of market share. They represent a "modern trade", while other 20% represent a "traditional trade" (smaller private stores). In early 2005 began a process of high retail concentration in Croatia. After Croatia joined the EU, the concentration of TOP 10 retailers significantly increased, due to the entrance of large multinational companies. The TOP 10 retail companies in Croatia are mainly in foreign ownership. In the period from January until June 2022 the retail trade (G 47.11. and G47.19) was 41,8% of total retail[6].

Figure following on the next page

[5] NACE, G 47.11. retail trade in non-specialized stores, mainly food, beverages and tobacco, and G 47.19. Other retail trade in non-specialized stores
[6] Croatian Bureau of Statistics, announcement 29.07.2022., ISSN 1334-0557.

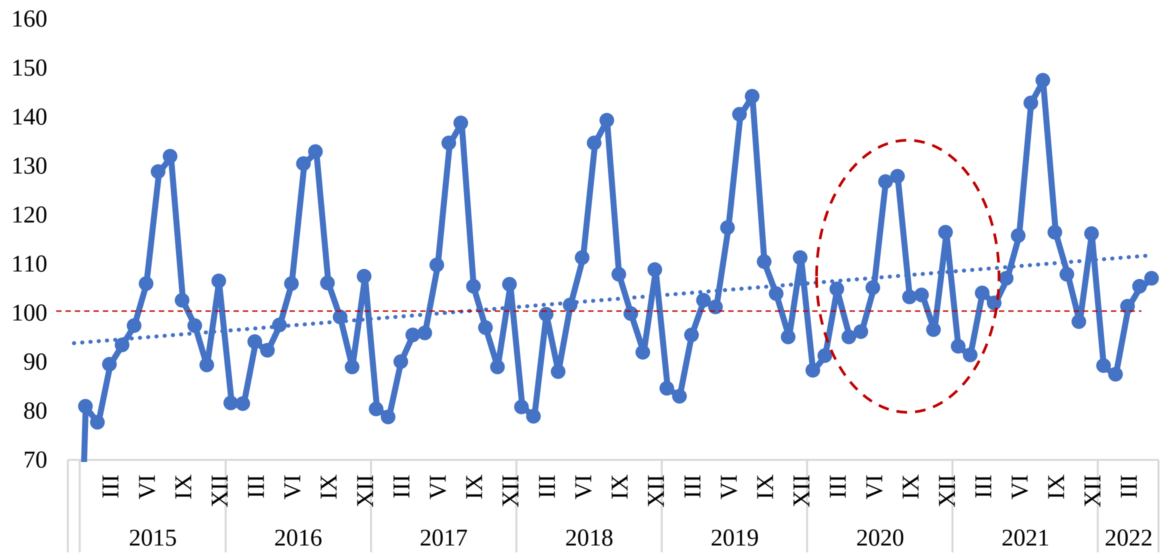

Figure 7. Movements in turnover in retail trade, retail trade (mainly food, beverages and tobacco), index (2015=100), I 2015 – VI 2022
Source: Croatian Bureau of Statistics, authors calculation

Figure 7 shows the continuous real growth in retail trade (mainly food, beverages and tobacco). The linear trend shows a positive trend in turnover. Despite the negative demographic changes and a significant outflow of domicile population, the retail turnover is still increasing. Figure 7 shows a strong Croatian seasonality effect from June until September. Therefore, the main source of turnover in retail trade comes from the foreign tourist consumption. In 2020 when the pandemic COVID19 occurred, there were no record of retail turnover growth, because of lack of foreign tourists.

To summarize, all mentioned pointed out a huge vulnerability of Croatian economy from exogenous shocks. Croatia has a high share of foreign tourism consumption in the retail trade turnover structure. Also, foreign tourist consumption represents the main generator of overall consumption growth. In 2021 there was a slight growth of consumption and recovery of tourism sector, comparing to 2020, but still the results from 2019 weren't reached. Expectations for 2022 are high, but, due to the high inflation rate, the growth of real consumption remains questionable.

5. ANALYSIS OF THE CONTRIBUTION EFFECT OF THE IMPORTED COMPONENT IN VALUE CHAIN BETWEEN FOOD AND RETAIL INDUSTRY

Due to the high import dependence of Croatian economy, the first part of the empirical analysis will be focused on finding the connection between the variables at the aggregate level: retail trade G 47.11., as a dependent variable (Y), and 3 independent variables; x1 – growth rate of foreign overnights - the best approximator of consumption trends in retail trade, x2 – growth rate of volume of industrial production in food sector. The goal is to estimate how much final consumption through retail trade is generated by domestic production and how much from imports.

The third independent variable x3 represents the growth rate of the average monthly net salary in nominal terms. When testing the multiple linear regression model, observed period is from 2001 to 2021. The original indices of turnover in retail trade are expressed in growth rates. Independent variables are the volume of industrial production in food sector, the average net salary and the foreign overnights.

Independent variables are presented as growth rates and compared to the same period of the previous year. In that way, data is harmonized, more comparable and more consistent in the econometric analysis. Furthermore, the author will use descriptive statistics to analyse TOP 10 retailers in Croatia and the TOP 10 domicile food producers in the past 5 years. Data is ranked according to the year 2021. The aim is to calculate how much imported component participates in the final product creation. Manufacturer's, retailer's and consumer's sides will be observed.

Table 1. Regression analysis of the influence of the independent variables: industrial production, net salary and foreign overnights on the movement of turnover and consumption in retail trade (dependent variable) from 2001 to 2021

Independent variable	*Coefficient*	*Std. error*	*t-statistic*	*Prob. (p)*
Foreign overnights	*0,021*	*0,045*	*0,477*	*0,640*
Net salary	*1,527*	*0,473*	*3,23*	*0,005*
Industrial production	*0,511*	*0,333*	*0,537*	*0,144*
C	*-0,789*	*1,739*	*-0,454*	*0,656*
Model diagnosis				
R2	*0,607*			
Adjusted R2	*0,534*			
Durbin-Watson	*1,326*			
Hannan-Quinn	*5,798*			
Schwarz criteria	*5,958*			
Akaike criteria	*5,759*			
Prob.(F-statistic)	*0,002*			

Source: Author's calculation
Note: E-views program package, OLS least squares method, variables converted to growth rates, number of observations: 20
$Y = \alpha x_1 + \beta x_2 + \mu x_3 - c$
*retail = 0.0214074552995*foreign overnights + 0.511331806185*industrial production + 1.52657642697*net salary - 0.788693065032*

According to the regression analysis, nominal growth of retail turnover increased, while the real growth slightly decreased. Therefore, the real growth rate of consumption is generated mostly by the growth of foreign tourist consumption. Despite the p value is quite high, foreign tourists are the key factor in generating growth in retail trade in Croatia. The coefficient of determination and the adjusted coefficient of determination are indicating a strong linear relationship between the observed variables.

Additionally, descriptive statistics will be used in analysing the TOP 10 retail companies and TOP 10 food companies from 2017 to 2021. Retail sector generates the biggest volume of food consumption. In that way those two participants are connected in value chain. TOP 10 retailers represent more than 80% of total retail market[7], with consolidated revenue of 5.7 BN EUR. At the same time, TOP 10 food companies represent 80% of total food industry.

[7] GFK research 2019

Table 2. Trends in total revenue of TOP 10 retail companies from 2017 to 2021, ranked by sales revenue from 2021, in MN EUR

Rank 2021	Company	2017	2018	2019	2020	2021	*21/17*
1.	Konzum	1.241	1.265	1.016	1.332	1.422	*14.6%*
2.	Lidl	616	687	778	804	871	*41.3%*
3.	Spar	499	600	638	659	713	*42.7%*
4.	Plodine	563	560	580	602	688	*22.3%*
5.	Kaufland	480	481	516	520	564	*17.5%*
6.	Tommy	358	379	415	419	478	*33.5%*
7.	Studenac	220	224	225	246	312	*41.7%*
8.	Metro	245	242	243	194	239	*-2.5%*
9.	KTC	196	205	216	213	225	*14.9%*
10.	NTL	138	142	144	154	149	*8.2%*
TOP 10	**Total**	**4.557**	**4.786**	**4.772**	**5.143**	**5.662**	***24.2%***

Source: Financial Agency, Fininfo, Lider TOP 1000; 2017-2021, exchange rate 1EUR=7.53450HRK, authors calculation

Despite negative demographic trends, the retail consumption recorded growth. From observed companies, the biggest growth achieved Spar 42.7%, followed by Studenac 41.7% and Lidl 41.3% in 2021 compared with 2017.

Table 3. Movements of import of TOP 10 retail companies from 2017 to 2021, in MN EUR

Rank 2021	Company	2017	2018	2019	2020	2021	*21/17*
1.	Konzum	120,6	125,3	84,9	97,4	110,8	*-8.1%*
2.	Lidl	254,8	285,5	319,2	309,9	327,3	*28.5%*
3.	Spar	71,9	90,3	90,0	93,0	116,8	*62.4%*
4.	Plodine	88,1	88,7	100,9	100,3	116,7	*32.4%*
5.	Kaufland	98,1	103,5	108,0	100,7	116,7	*18.9%*
6.	Tommy	29,1	27,7	4,0	3,5	6,0	*-79.6%*
7.	Studenac	0,0	0,0	0,0	0,0	5,3	-
8.	Metro	96,8	49,9	40,5	32,5	48,3	*-50.1%*
9.	KTC	0,8	0,9	1,1	1,5	1,2	*56.1%*
10.	NTL	21,9	22,6	22,2	22,2	19,2	*-12.3%*
TOP 10	**Total**	**782,3**	**794,2**	**770,6**	**760,9**	**868,3**	***11.0%***

Source: Financial Agency, Fininfo, Lider TOP 1000; 2017-2021, exchange rate 1EUR=7.53450HRK, authors calculation

The biggest import among retailers recorded Spar with 62.4% in 2021 compared with 2017. However, the biggest absolute import growth in 2021 achieved Lidl with 327 MN EUR, followed by Plodine, Kaufland, Spar and Konzum.

Table following on the next page

Table 4. Movements of import share in total revenue in TOP 10 retail companies from 2017 to 2021

Rank 2021	Company	2017	2018	2019	2020	2021
1.	Konzum	9.7%	9.9%	8.4%	7.3%	7.8%
2.	Lidl	41.4%	41.6%	41.0%	38.6%	37.6%
3.	Spar	14.4%	15.0%	14.1%	14.1%	16.4%
4.	Plodine	15.7%	15.8%	17.4%	16.7%	16.9%
5.	Kaufland	20.4%	21.5%	21.0%	19.4%	20.7%
6.	Tommy	8.1%	7.3%	1.0%	0.8%	1.2%
7.	Studenac	n/a	n/a	n/a	n/a	1.7%
8.	Metro	39.4%	20.6%	16.7%	16.7%	20.2%
9.	KTC	0.4%	0.4%	0.5%	0.7%	0.5%
10.	NTL	15.9%	15.8%	15.3%	14.4%	12.9%
TOP 10	**Total**	**17.2%**	**16.6%**	**16.1%**	**14.8%**	**15.3%**

Source: Financial Agency, Fininfo, Lider TOP 1000; 2017-2021, exchange rate 1EUR=7.53450HRK, authors calculation

Table 4 shows the share of imported component in total revenue. In Lidl, almost 40% of total revenue comes from import, followed by Kaufland. The import ratio is even worse if we analyse the whole process of COGS (cost of goods sold)[8]. Once the good is purchased, the retail margin is added together with other expenses, which increases the value added and which shows that better measure is the share of imported component in COGS.

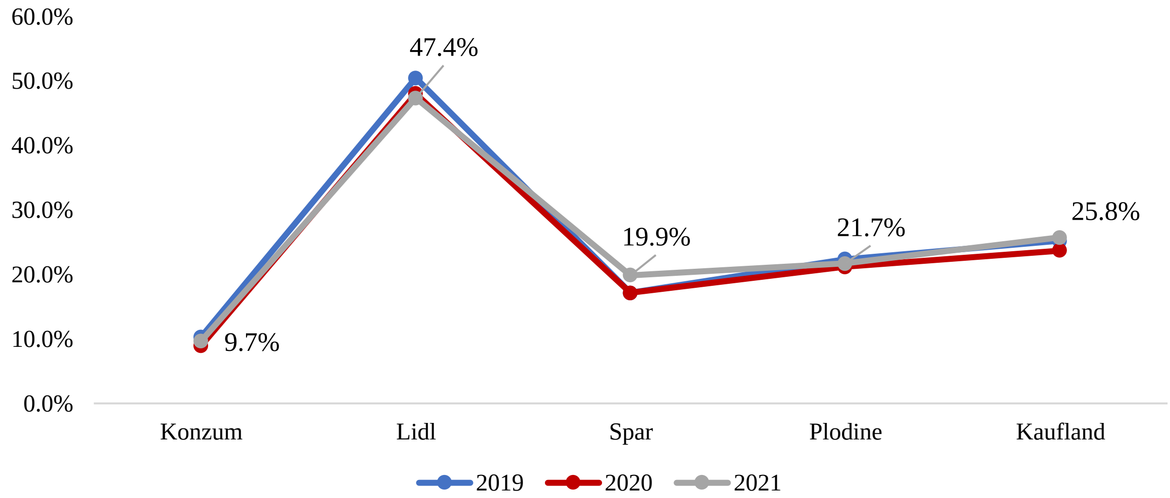

Figure 8. Movement of import share component in the purchase value of sold goods for TOP 5 retailers from 2019 to 2021
Source: Financial Agency, Fininfo 2019-2021, exchange rate 1EUR=7.53450HRK, authors calculation

Lidl imports more than 50% of its COGS, followed by Kaufland, Plodine, Spar and Konzum. Spar and Kaufland achieved the biggest import growth. However, inside the value chain this indicator is even more significant. On the one hand retailers are importing goods from abroad, but on the other hand they are purchasing goods from domestic suppliers who also have a high share of imported component in their final product. Quantifying the total value chain (including agricultural sector) the results will be even worse (imported spiral).

[8] Due to the unavailability of data for Studenac, some indicators on import shares are not comparable

Furthermore, the contribution of imported component in the creation of the final product, will be analysed for TOP 10 food companies. The food sector should represent the backbone of each economy. The lack of investment led to lower productivity and competitiveness. All mentioned led to a significant import growth of all kinds of products.

Table 5. Movements in total revenue for TOP 10 food companies from 2017 to 2021, ranked by sales revenue from 2021, MN EUR

Rank 2021	Company	2017	2018	2019	2020	2021	*21/17*
1.	Vindija	368,4	381,3	396,4	393,4	427,2	*16.0%*
2.	Podravka	289,9	273,4	285,2	290,4	303,3	*4.6%*
3.	Dukat	238,2	255,1	245,1	228,5	282,6	*18.7%*
4.	PIK Vrbovec	244,6	243,3	206,8	246,3	242,2	*-1.0%*
5.	Pivac	146,8	152,2	180,4	207,0	226,8	*54.6%*
6.	KOKA	173,1	171,9	174,7	169,5	184,2	*6.4%*
7.	PPK Karlovac	145,3	150,0	158,1	173,1	178,2	*22.7%*
8.	Zvijezda	93,0	97,6	84,5	112,7	144,4	*55.2%*
9.	Ledo	142,4	151,0	127,0	124,4	138,7	*-2.6%*
10.	Kraš	115,1	114,5	119,1	118,0	128,3	*11.6%*
TOP 10	**Total**	**1.956,9**	**1.990,2**	**1.977,4**	**2.063,4**	**2.256,2**	***15.3%***

Source: Financial Agency, Fininfo, Lider TOP 1000; 2017-2021, exchange rate 1EUR=7.53450HRK, authors calculation

Table 5 shows total revenue of TOP 10 food companies, ranked by total revenue from 2021. The TOP 10 food companies increased in 2021 by 15.3% comparing with 2017 where in the same time TOP 10 retail companies increased by 24.2%. All companies recorded revenue growth in observed period, expect meat company Pik Vrbovec and ice cream company Ledo. The biggest growth recorded meat company Pivac.

Table 6. Movements of import of TOP 10 food companies from 2017 to 2021, MN EUR

Rank 2021	Company	2017	2018	2019	2020	2021	*21/17*
1.	Vindija	47,9	47,4	49,5	50,3	60,1	*25.4%*
2.	Podravka	87,3	84,7	94,8	96,5	96,8	*10.8%*
3.	Dukat	58,7	64,5	67,3	56,9	70,1	*19.4%*
4.	PIK Vrbovec	60,4	61,3	58,5	65,3	75,1	*24.3%*
5.	Pivac	0,0	0,0	0,0	0,0	0,0	-
6.	KOKA	37,2	36,0	34,4	26,4	40,7	*9.4%*
7.	PPK Karlovac	55,3	46,3	11,4	6,9	8,5	*-84.7%*
8.	Zvijezda	33,8	30,9	22,3	25,7	29,7	*-12.3%*
9.	Ledo	63,8	63,6	55,2	50,7	58,9	*-7.8%*
10.	Kraš	25,4	21,5	27,1	30,4	32,4	*28.1%*
TOP 10	**Total**	**470,0**	**456,0**	**420,6**	**409,3**	**472,2**	***0.5%***

Source: Financial Agency, Fininfo, Lider TOP 1000; 2017-2021, exchange rate 1EUR=7.53450HRK, authors calculation
Note: no data available for Pivac company

Observing the TOP 10 food companies, the import recorded continuously growth. The biggest import growth recorded Vindija by 25.4% in 2021 comparing with 2017, followed by Pik Vrbovec with growth of 24.3% in the same period. It is important to point out that the TOP 5 food companies had a significant imported component growth through the years comparing with their total revenue growth. That indicates a huge imbalance in external trade balance.

Table 7. Movements of import share in total revenue for TOP 10 food companies from 2017 to 2021

Rank 2021	Company	2017	2018	2019	2020	2021
1.	Vindija	13.0%	12.4%	12.5%	12.8%	14.1%
2.	Podravka	30.1%	31.0%	33.2%	33.2%	31.9%
3.	Dukat	24.6%	25.3%	27.4%	24.9%	24.8%
4.	PIK Vrbovec	24.7%	25.2%	28.3%	26.5%	31.0%
5.	Pivac	0.0%	0.0%	0.0%	0.0%	0.0%
6.	KOKA	21.5%	20.9%	19.6%	15.6%	22.1%
7.	PPK Karlovac	38.1%	30.9%	7.2%	4.0%	4.7%
8.	Zvijezda	36.4%	31.7%	26.4%	22.9%	20.6%
9.	Ledo	44.9%	42.1%	43.5%	40.8%	42.5%
10.	Kraš	22.0%	18.7%	22.8%	25.7%	25.3%
TOP 10	**Total**	**24.0%**	**22.9%**	**21.3%**	**19.8%**	**20.9%**

Source: Financial Agency, Fininfo, Lider TOP 1000; 2017-2021, exchange rate 1EUR=7.53450HRK, authors calculation

The share of imported component in total revenue in food sector is very high. The share of imported component in total revenue is between 19.8% and 24.0%. The biggest share in average has ice cream company Ledo with an average of 42.7%, followed by Podravka with average of 31.9% and Pik Vrbovec with average of 27.2%.

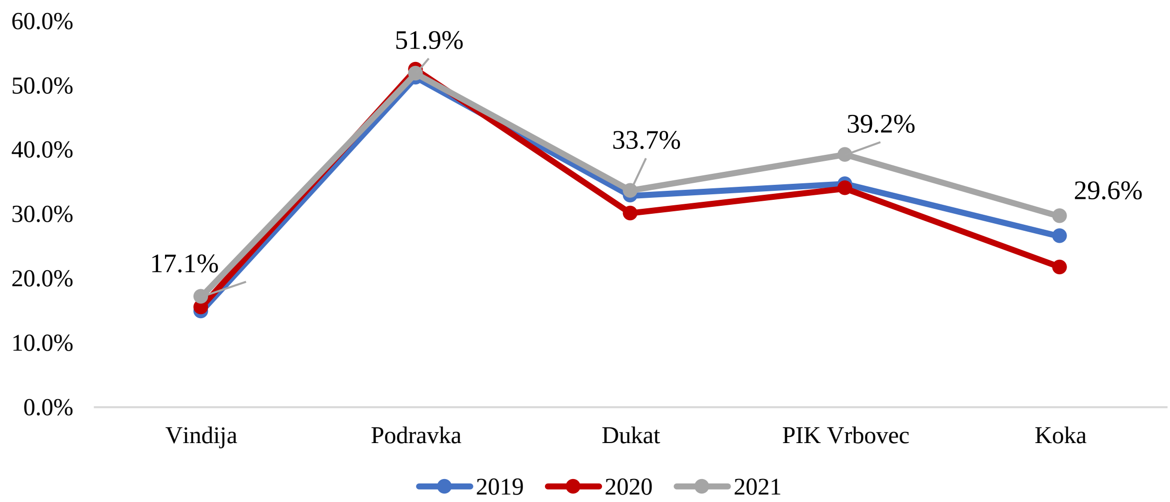

Figure 9. Movements of import share component in the purchase value of sold goods for TOP 5 food companies from 2019 to 2021
Source: Financial Agency, Fininfo 2019-2021, exchange rate 1EUR=7.53450HRK, authors calculation
Note: Because of unavailable data for Pivac company the company Koka was observed in 2021.

The ratio of contribution of imported component in their COGS is the worst in food sector. The international company Podravka is the most dependent on imports with 51.9% in COGS. After Podravka is the meat company Pik Vrbovec with share of import components in COGS by 39.2%, followed by Dukat with share of 33.7%. All mentioned companies had tendency of growing imports in the observed period which indicates strong import dependency of all participants in value chain.

6. CONCLUSION

Dependence on imports is one the biggest cause of economic instability in Croatia. Croatia has a deficit of domicile production, low level of technological progress and low productivity rate. The contribution of imported component among value chain participants is increasing through the years. External coverage in 2021 was only 58,6%. It is obvious that the government didn't use a strategic approach to stimulate the economic growth. They didn't stimulate a production sector, which is the backbone of any economy. If comparing with developed countries, Croatia has a lack of new technology investments, and it records a delay in process of transformation and convergence. The analysis of TOP 10 food production companies and TOP 10 retail companies point out that Croatia doesn't have a sufficient level of competitiveness in domicile and neither in foreign markets. Multiple linear regression model, where the retail trade represents the dependent variable showed that on macroeconomic level there is a problem in domicile production. Due to a negative demographic trends only foreign tourist consumption stimulates the retail trade growth. In other words, that growth is result of imports. Thus, the value chain participants are automatically stimulating imports with any additional purchase. Croatian economy is highly dependent on tourist sector, which means the consumption growth is mostly influenced by the foreign tourist consumption, or in other words by imports. In the value chain there is imported spiral because all participants are directly or indirectly stimulating imports. Because of that, the domicile production is becoming less competitive. This all arises question on productivity of Croatian strategic approach on economic development, which should emphasize more domestic production and, in that way, decrease import dependency.

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THE IMPACT OF THE COVID 19 PANDEMIC ON THE DEVELOPMENT OF DIGITAL PROCESS AUTOMATION IN SMALL AND MEDIUM-SIZED ENTERPRISES

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ABSTRACT

The connection between company processes and the digital environment is an integral part of every business. In the current period of ongoing digital transformation of companies, a very important aspect is the setting of business processes, their subsequent digitization as a basic prerequisite for digital automation of processes. In this way, repetitive routine tasks and processes can be automated in various programs and services such as Zapier, IFTTT, Integromat, Microsoft Power Automate and Parabola. Digital automation platforms are considered a new category of programming without writing code, increasing the access of developers and even non-technical users to many on-line services and IoT platforms. This makes work easier and more efficient. The ongoing Covid 19 pandemic is also affecting the atmosphere of digital transformation and automation of processes, which to varying degrees has contributed to the temporary elimination of the socialization of the population. As a result, there was a higher demand for the use of digital tools. The article focuses on digital automation and the use of its tools in the field of small and medium-sized businesses. The subject of the research is the analysis of the extent to which companies use tools for digital automation of processes, the identification of barriers, and motivation in this area in combination with the impact of the Covid 19 pandemic. Hyper-automation - higher levels of process automation. Hyperautomation enables complex process automation and paves the way for complex processes in the form of automation with AI or ML tools such as natural language processors (NLP) or intelligent document processing.

Keywords: *digital automation of processes, digital transformation of companies, hyperautomation, IFTTT, Microsoft Power Automate*

1. INTRODUCTION

The term automation was coined in the automotive industry around 1946 on the designation extended to the use of automatic devices as control elements in mechanical production lines. DS Tougher, a technician at the time, is credited with coining the word manager of Passage MotorCompany. Over time, we began to need automated technology. It starts almost in each part of our life, from automatic doors to robots on the workshop line to post-trade automation processes.

1.1 Digital transformation

Thanks for integration of information and communication technologies (IT) with production (operational) technologies. This mutual connection of individual elements consequently leads to horizontal and vertical integration processes, which is the basis for a wider concept of **digital**

transformations enterprises. The one enables the enterprise to automate individual processes related not only to production and logistics , but also to quality, or maintenance. The interconnectivity that already follows from above of the above, essentially intelligent industry, is his **interconnectivity**, that is, **connectivity. Information exchange** and all communication ongoing in the digitized form is several times faster than how the transfer is done in paper form in the form of oral by filing. In an industrial and logistics environment, it is possible to create complex processes in which Smart Industry systems autonomously manage and coordinate partially dynamic systems, in real time (Emans, 2019). Optimization of production and supply processes, reduction of production and logistics, increased efficiency of manufacturing procedures and performance devices, as well as reduction of operational costs, were the most common motivations for the **digitization** and **deployment technologies of the fourth industrial revolution.** The pandemic coronavirus and its immediate range in manufacturing and supply chains started to radically rewrite business priorities. First, the rehabilitation damage location has the goal of saving the company and, in the ideal case, to ensure the fastest return to the state before the pandemic. Change priorities but in this case does not mean change tools. Exactly, on the contrary, relevance digitization under pressure current events and economic influences has yet to rise. Digital transformation, a new technology adaptation, closely related to internal and external process review, for many businesses becomes the question of survival. Crisis-induced spreading of the disease of COVID-19 contributes to **acceleration of digitization** and intelligent automation (Emans, 2020).

H1: Hypothesis H1 in our research verifies the assumption that the automation of business processes increased significantly during the Corona pandemic, or the interest in implementing automation in the near future of the future.

1.2 Digital automation

Automation with does not use only at huge machines that in large ones factories they assemble cars, computers, or other products. By the way, time with namely automation also transformed into informatics through the so-called software robots. With this we receive up to automation processes in business, **RPA/BPA (Robot process automation/Business process automation)**. After creating so called software robots, they started companies from various industries explore how they could implement automation help right in their business. In these businesses where with the computers they perform lengthy operation and are not necessary decision making of a person, sa automation pointed how extraordinary appropriate and above all very advantageous (Horváth, 2019). In recent times, Digital Automation in the form of RPA has been implemented in three important areas. Therefore, each area increases the level of automation in the business environment. The first area is data processing. This is a vast area where the development of information systems has progressed. We most often encounter OCR by digitizing documents, or recognizing handwriting, or fragmenting, cleaning data, identifying data from documents such as address, bank details, recipient's name, etc. In recent years, emphasis has been placed on the greater openness and interconnectivity of software. Applications or services that are not closed or interact with other systems in complex or proprietary ways are preferred. APIs, published standards, and open source solutions are now very beneficial to software developers. The last and very interesting topic is the field of cognitive decision making. Here we get to the level where robots have their own logic and local autonomy in decision making. This area opens up a discussion about the extent to which robots are driven by AI, dangerous by their own intelligence, or to what extent are the vendors' claims about the intelligence of the solutions themselves substantiated (Tech wire Asia, 2021). IT automation has evolved to a number of sophisticated tools that help automate IT tasks and workflows. The concept of automation should be viewed on a multilevel basis due to the complexity of the individual solutions.

It is possible to automate simple low-level tasks up to complex automation, where we work with different operating systems, a number of servers, and multiple data centers in a private, public, or hybrid cloud environment. At individual levels, we can automate workflows, business processes, and at more complex IT operations and processes, or complete infrastructure (Stone, 2022).

2. LITERATURE REVIEW

According to Gartner, automation robotic process software (RPA) will record gradual annual growth because commercial demand is constantly growing. Assumption income from areas applications of RPA software should end to achieve in 2022 a value of $ 2.9 billion (£ 2.3 billion), compared to 2021 an increase of 19.5%. Gartner categorized the RPA software market as the fastest growing in the software industry, and according to his last year's she should have big predictions for the majority organization (72%) to work with this software in two years. Another prerequisite for the aforementioned organization is a continuation of this developmental towards application hyperautomation, which in itself aggregates RPA of individual areas organizations in connection with the artificial intelligence. According to predicts they should have Gartner organizations adopt by 2024 about 15% of software which they allow work with hyperautomation (Conor, 2022).

H2: Here, we establish Hypothesis H2, where we will assume that the primary motivation of small and medium enterprises for the introduction of hyperautomation is the management and complex automation of individual processes in the enterprise.

Alexander Terez of Octopus says that workflow automation tools are a great way to automate common tasks like data entry, accounting, lead generation, and nurturing. Automating common tasks relieves people from manual administrative work and creates more space for creative work. He goes on to say that according to research, more than 25% of CEOs deal with routine tasks that can be done faster and more efficiently by machines; the same is the case in a study where about 60% of employees can save 30% of their working time thanks to automation tools. Alexander Terez assumes that the use of automation tools is motivated by the following reasons (Terez, 2022):

- increase in labor productivity,
- increasing the efficiency of individual work procedures,
- elimination of human errors,
- increasing the speed of processes,
- improving accuracy and reducing deviations,
- Ensure greater responsibility at the individual level,
- removing assumptions and replacing them with facts.

Progress in the field of artificial intelligence is starting to gain more and more speed, and its interaction is starting to penetrate into wider areas, including automation itself. In his article Application of Artificial Intelligence in Industrial Automation, Praveen Kumar Donepudi further explains that with the influx of data and the development of automation skills, companies are concerned with optimizing business processes to achieve the best possible productivity of their operations. Structured data is used in companies, but their infrastructures usually also have unstructured data, which slows down or even stops process flows. In this area, companies that plan to maximize the automation of their processes have a problem.

These are mostly multimedia documents such as videos, photos, websites, but also standard pdf documents that need to be examined, understood, and then based on the information obtained, a conclusion has been drawn, or a decision has been made. These actions significantly slow process flows in the organization and complicate RPA robotic automation (Donepudi, 2018). In the world, for example, in the field of authorization processing, it is quite common for people to send scanned documents to the system or directly in physical form, where it is necessary to manually process and check them. According to a 2019 AIIM survey (Association for Information and Image Management), half of the respondents say that 70% of the data in their organizations is data that need to be examined and 35% of the respondents expect the amount of data to double in the coming years. In the survey, 70% of the organizations identified unstructured data as the main problem in the deployment of robotic automation. In the survey of Deloitte (2021) sa shows that companies they did in the area intelligent automation made significant progress. Pointing out also the fact that unless the company fully takes advantage of benefits, automation is not enough only for introduction processes, but it is necessary to apply the company-wide transformation. Research further shows that the most popular automation of current technology is Robotic automation processes. It also shows them a sample of 78% of managers who technology automation in yours infrastructure already deployed and another 16% of managers who plan to do so in the next three years. According to assumptions, is planning to be deployed in 2023 automation nine out of ten companies questioned. Focus companies in the area automation with orients to increasingly wider areas in-house processes, for example, corporate management of BPM processes (Business Process Management), Data mining, monitoring processes, data analytics, where they receive space also tools artificial intelligence (Deloitte, 2021). According to the worldwide Polaris Research Organization (2019) market and consulting, it is one of the reasons that they support the overall development market, and right now application tools virtual banking, automation through robotic processes are also being supported. In regions such as Asia and the Pacific, there are visible efforts for acceptance automation processes. Companies with them try to create framework for RPA implementation by providing implementation programs shortening time themselves implementation, possibly training, consulting services to as much as possible measure preserved industrial standards. In general, the effort is in the industrial industry by increasing awareness of automation (Polaris, 2019).

3. SURVEY OF DIGITAL AUTOMATION IN SMALL AND MEDIUM ENTERPRISES

Due to the wide and, depending on the company's focus, a diverse spectrum of automation, we focused on the automation of basic processes in companies, which are mainly in areas such as (Podnikajte, 2018):

- **Finance:** data control and transfer, customer management, reporting, financial comparisons, filling out forms, processing claims.
- **Accounting: analysis data,** processing transfers, processing receivables and payables, collection data, reporting.
- **Human sources:** filling forms, obtaining and updating employee data, payroll processing, attendance management, reporting, recruitment people.
- **IT a communications:** collection and management of customer data, automated actions at certain threshold values, file management, download and installation programs, processing emails.
- **The other one is automation within the company's internal tools and systems** - reporting, verification of requests, entering products, and automating orders, processing complaints, automatic sending of e-mails, and data manipulation.

For the purposes of this study, a questionnaire survey was carried out in 2022, in which 84 respondents from the field of small and medium businesses in Slovakia participated. The questionnaire was structured into two groups of questions. The first group with open questions served to identify the researched sample and the second group of combined questions aimed at investigating the application of automation tools. Among the respondents were 38 microenterprises (representing 45.23%), 34 small enterprises (40.47%), and 12 medium enterprises (14.28%). Considering that the most significant benefit of automation is manifested in enterprises with a higher number of employees, we omitted microenterprises from the sample of respondents and further worked only with the remaining sample of 46 respondents (54.76%) representing the category of small and medium enterprises. Among the respondents to the adjusted sample, the most numerous representatives were 22 subjects from the service sector (47.82%), construction sector 9 subjects (19.56%), industry - 6 subjects (13.04%) and agriculture - 2 subjects (4.34%). Among the sample of respondents, 30.43% of subjects have been doing business on the market for at least 8 years, 45.65% of subjects between 4 and 8 years, and 23.91% of subjects in the category under 4 years. In the survey, we first examine whether companies have applied process automation at all. We found that less than half of the adjusted sample of respondents (41.30%) already have automation techniques in the case of their business processes, especially in the area of data collection, marketing, finance and accounting, communication, and human resource management. In this context, we also investigated the time of introduction of automation technologies, which we divided into 2 segments; the first was companies until 2020, and the second was companies during the pandemic period from 2020 to 2022. The field of automation was dominated by small business companies founded before 2020 focused on marketing, where mainly the automation of setting product prices during various campaigns took place. In the case of the period of the corporate crisis, these companies recorded the most significant growth. Automation of the process area mentioned above was implemented by 23.91% of small and medium enterprises, of which 15.21% did so after 2020. In this context, there was a greater representation of small companies focused on services and trade, where automation implementation during the pandemic was carried out by a sample of 10 .87% of respondents. The data collection area was second, where, as in the previous case, a small business sample of 6.52% was dominated, of which a sample of 4.37% of the respondents implemented automation during the pandemic. The field of finance and accounting followed to a negligible extent, where automation was applied to identify data from individual documents such as extracting information from invoices and comparing them with information in the system, extracting information from blocks, processing unmatched payments, checking invoices, etc. In the area of communication, among the respondents there was a case of automation of communication with the customer during the processing of orders.

Confirmation of hypothesis H1:
From the point of view of the significant implementation of automation tools by small and medium companies during the Covid 19 pandemic, we can confirm Hypothesis H1, where there was a positive difference between the number of automation tools implemented before and after 2020.

In terms of available tools suitable for automation, among the respondents who applied automation tools, the most used solutions were Zapier 17.39%, IFTTT 10.87%, Microsoft power automate 8.69%, and the remaining 4.34 % used Integromat and Parabola applications.
Between the biggest benefits of automation, to which the respondents recorded belonged :

- Primary benefits automation processes with the most occurring abbreviated duration processes that identified by 19.5% of respondents.

- Next, automation significantly benefits reflected in the elimination of entering data into the system from paper documents, rewriting data from tables, rewriting give between applications, preparation data in messages and reports, etc., which was identified by 10.86% of respondents.
- Companies identified as reduction costs by 6.52% of respondents.
- Workers they have more time on the execution of more important and creative tasks, which improves the nature of their work and general job satisfaction, as expressed by 4.34% of respondents.

From the examined sample, 15.22% of respondents said that they would like to introduce a higher level of automation, the so-called hyperautomation, for the following reasons:
- Intelligent automation allows robots to process unstructured information (documents) in advance, motivating 4.36% of the respondents.
- Introduction complex automation, which would cover and manage individual already automated processes and would have a higher measure decision-making motivates 8.69% of respondents.
- Data analytics - Automation statistical give for the purpose analysis and prediction motivates 2.17% of respondents.

Confirmation Hypotheses H2:
When investigating motivational factors for the introduction of hyperautomation, we can also confirm hypothesis No. 2, where the main factor is the solution of complex automation, which has a higher degree of decision making and management of several automated processes of the company. In the case of 58.69% of respondents who did not have introduced automation, we are identified as follow barriers :
- In many organizations there exist obsolete systems that _ contain sensitive information about products and customers , where with organizations they prevent revealing these systems - stated by 13.04% of respondents.
- automated systems usually perform manufacturing processes with less variability how human workers perform, which leads to greater control and consistency quality of products – said 17.39% of respondents.
- New security risks, where, in the event that faulty step automation technology can cause chain reaction error rates in all connected processes - stated by 28.20% of respondents.

4. CONCLUSION
Robot process automation (RPA) is appropriate to introduce in processes during which employees perform repetitive tasks with computer applications. We can automate all of such processes if no significant change in these processes is planned in the near future. The RPA tools then increase the efficiency of such processes and services without changing internal systems. After implementing RPA into corporate processes, they perform these “robot” processes and they imitate a person with applications. These robots with after that they decide on the basis of simple rules. In this trial they perform software robots with minimal participation people who are after automation necessary only at solutions exceptions. From the point of view of an organizational point of view, so is not limited, what processes in which areas they will be automated. From the principle automation, they are more likely important Categories, repeatability, standardization, volume data, count processors. What the greater the share routine work, entering data and rewriting between different systems, simple decision making according to data, preparation of of documents and tables in the designated format, processing data into analyzes (reports), team the greater the potential for automation.

Before application automation in the company should be performed more detailed process analysis area which will be to solve At automation processes need to for sure think on the option dramatic changes and any excavations certain ones processes, or complete cancelation some related processes. In the case of the implementation of intelligent automation, hyperautomation, the question of firing employees is raised. For the success of this process, it is important to involve employees in the implementation of these changes, which will ensure the use of human resources for commercial activities useful for the company.The impact of the Covid 19 pandemic has created a greater need for the use of digital tools, including automation tools, which over time are becoming an essential need for the company to maintain its competitive position.

ACKNOWLEDGMENT: *This work was supported by grant VEGA no. 1/0398/22 - The current status and perspectives of the development of the market of healthy, environmentally friendly, and carbon-neutral products in Slovakia and the European Union.*

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THE EFFECTIVE CONFLICT RESOLUTION AND NEGOTIATION SKILLS SCALE APPLIED TO PORTUGUESE HIGHER EDUCATION

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ABSTRACT

The goal of the current study was to examine the psychometric properties of the Effective Conflict Resolution and Negotiation Skills Scale (Mamatoğlu and Keskin, 2019) for use in Portuguese higher education context. To achieve the objective, we collected data using this scale, which assesses behavioral, emotional and cognitive conflict resolution and negotiation attitudes through 40 items onto a five-interval Likert type scale. We examined the validity through confirmatory factor analysis (CFA) and reliability using internal consistency. The study of the original scale (Mamatoğlu and Keskin, 2019) only examined the structural validity through exploratory factor analysis and revealed seven dimensions. The scale was administered to 235 graduate students, from a Portuguese higher education institution, which 138 (58.7%) were female and 97 (41.3%) were male, with ages between 18 and 50 years. Using the robust maximum likelihood estimation (MLR - Mplus version 6.12), and after some modifications to improve the model fit, the results showed reasonable model–data fit ($\chi 2/df$ = 1.66; RMSEA = 0.057; SRMR = 0.054; TLI = 0.91; CFI = 0.92). The scale demonstrated good internal consistency, with alpha scores of the subscales ranging from .81 to .93. The Cronbach's Alpha of total scale was .97. The main conclusion of this study is that this scale on effective conflict resolution and negotiation skills was validated in the context in which it was applied in Portugal (higher education institution), so it is a promising measure, and the preliminary results of the CFA provided evidence supporting the seven dimensions proposed by the authors of the original scale.

Keywords: *Confirmatory factor analysis (CFA), conflict resolution, negotiation skills, Portuguese higher education, scale validation.*

1. INTRODUCTION

Global Citizenship focused on the development of the main humanistic values, such as conflict resolution. Thus, this is one of the key issues in higher education, as it is essential for students to have negotiation and conflict resolution skills, which can help them not only in their academic but also professional careers. Although this topic has already been explored, it is important that there are scales applicable to contexts where these skills are essential, such as higher education institutions. Thus, based on the existence of a scale already validated in Turkey (Effective Conflict Resolution and Negotiation Skills Scale (Mamatoğlu and Keskin, 2019), this study tried to apply and validate this same scale in a Portuguese university, with the aim of understanding to what extent it is possible to measure, scientifically, negotiation and conflict management skills, of higher education students, namely at the university under study. With this theoretical framework and the methodology that was used (application of the scale in a group of students), the validation of the scale under analysis allows us to obtain a reliable instrument for the study of these competences in Portuguese higher education.

2. THEORETICAL FRAMEWORK

2.1 Global citizenship and Higher Education

For education in the 21st century, the processes of globalization present a whole host of problems and opportunities for the promotion of a global citizenship education. Critical Global Citizenship Education goals are to deepen and widen students' readings of social and environmental in/justices with planetary in/sustainability to determine actions towards socio-environmental peace and sustainability within and between local to global contexts (UNESCO, 2015). In this way, citizenship education goes beyond education into the realm of politics and ethics and offers a venue to insert educational systems in the context of cosmopolitan democracies based on the regime of human rights. It surpasses the realm of an educational approach, towards a new political pedagogical narrative with methodological, theoretical, and practical implications for all levels of Education, including Higher Education (Veugelers, 2011). With regard specifically to Higher Education, it is essential to ensure education for global citizenship. Public policies must intervene to facilitate access to higher education suited to social changes. In this perspective, Education and investment in the formation of human capital are fundamental for the progress of societies in the new millennium (Stromquist, 2009). Effectively, although universities were initially aimed at privileged groups, they gradually began to open, on a global scale, to other social groups, in fulfilment of the right to Education for all (Charles and Verger, 2012). Currently, it is intended that Higher Education provides its students with an Education for Global Citizenship focused on the development of the main humanistic values - tolerance and respect for human dignity and interpersonal and intrapersonal skills, such as emotional awareness, communication, cooperation, problem and conflict resolution, capable of acting effectively in the labour market (UNESCO, 2015).

2.2 Conflict resolution, negotiation and conflict management skills in higher education young people

As Deutsch and Coleman (2000) refer, conflict occurs between people in all kinds of human relationships and in all social settings. By the classic literature review (Deutsch, 1994; Fisher, 1997; Pruit, 1998), conflict is defined as an incompatibility of goals, interests, needs or values between two or more parties in interaction, combined with efforts to control and antagonistic feelings. The incompatibility or difference may exist or may only be perceived by the individuals involved. Nonetheless, conflicts are very real marks of human interaction and refer to their socialization. As regards, conflict management strategies can be understood through the profile of individuals, linked, for example, to the motivations and satisfaction (Thomas, 1992) or biographical variables such as age, gender, ethnicity, culture, and socioeconomic status (Brett and Thompson, 2016). One of Rahim's (1983) studies found that the female gender adopts more of an integrating, avoidance and compromise approach and less of an accommodating one than the male gender. According to the same perspective, Chanin and Schneer (1984) recognised women's skills and approaches to managing conflict situations, which allowed them to be considered collaborative. In this sense, this gender role advocates competitive or dominating behaviour in males (reflecting high concern for oneself and low concern for others) and avoidance or servanthood behaviour (reflecting high concern for others and low concern for oneself) (Monteiro, Serrano and Rodrigues, 2011). In this sense, the styles adopted in a conflict are associated with personal propensities and preferences. Some individuals are more inclined to collaboration and others more inclined to competition, or some individuals position themselves in the face of conflict in a more intentional way while others in a more conductive way. So, conflict management involves acquiring skills related to conflict resolution, self-awareness about conflict modes, conflict communication skills, and establishing a structure for management of conflict in interpersonal, social, and organizational environment (Thakore, 2013). Considering the literature, a study by Lee Agee and Kabasakal (1993) presents the differences between Turkish and American students and how they would resolve conflicts. In the analysis of the sample between Turkish and American students, there are no significant differences between the groups in their management of interpersonal conflicts that involve confrontations with a colleague who has an incompatible personality. However, there are significant differences between the two cultures when conflict arises from different work styles (Lee Agee and Kabasakal, 1993). Another comparative study on conflict management between university students at Aligarh Muslim University (AMU) and Jamia Millia Islamia (JMI) university students (Ahmed and Aijaz, 2021), demonstrates significant results were obtained in the Social Sciences and Sciences stream students of AMU, in JMI, only Arts stream students showed significant differences. The students of the Social Sciences stream used the Power style; Science stream students preferred Consideration and Doubt styles while the Atmospheric style was adopted by Arts stream students.

2.3 Importance of measurement. Scales and the requirements of their application - adaptation to different cultural contexts

The term “cross-cultural adaptation” is used to involve a process that considers language (translation) and cultural adaptation issues in the process of preparing a scale (questionnaire, for example) for use in another setting. Cross-cultural adaptations must be considered for many different scenarios. In some cases, this is more obvious than in others. Guillemin, Bombardie, and Beaton (1993) recommend five different examples of when to pay attention to this adaptation comparing the target (where it will be used) and source language (where it was developed) and culture. Recommended examples are: 1. use in same population. No change in culture, language, or country from source; 2. use in established immigration source country; 3. use in another country, same language; 4. use in new immigrants, not English-speaking, but in same source country; and 5. use in another country and another language (Guillemin, Bombardie, and Beaton, 1993). The cross-cultural adaptation process tries to produce equivalence between origin and destination based on content. The assumption that is sometimes made is that this process will ensure retention of psychometric properties such as validity and reliability at an item and/or scale level. Cross-cultural adaptation of a study, such as conflict management and negotiation for use in another country, culture and/or language, requires the use of a method to achieve equivalence between the original version and the target version of the scale. In scales applied in other cultures, the items must not only be well translated linguistically, but must also be culturally adapted to maintain the content validity of the instrument at a level in different cultures (Ferraz, 1997; Herdman et al, 1997).

3. EMPIRICAL FRAMEWORK

The goal of the current study was to examine the psychometric properties of the effective conflict resolution and negotiation skills scale for use in Portuguese higher education context. The study involved 235 graduate students, which 138 (58.7%) were female and 97 (41.3%) were male. At the time of data collection, most of the students attended the first year of the course (n = 116; 49.4%), followed by those who attended the second year (n = 74; 31.5%), and the third year (n = 45; 19.1%).

In terms of time since they initiate the course, 101 (43%) of the students initiated about two to three years ago, 86 (36.6%) less than a year, 33 (14%) between one and two years, and 15 (6.4%) more than three years. Most students were attending Management (n = 69; 29.4%), followed by Psychology (n = 48; 20.4%), and other courses (n = 118; 50.2%). Forty-six (19.6%) participants were student workers.

3.1 Measures

The Effective Conflict Resolution and Negotiation Skills Scale (Mamatoğlu and Keskin, 2019) is a valid and reliable original scale, developed and applied in Turkish culture. The development of the scale employed three different phases of investigation. This scale assesses behavioral, emotional and cognitive conflict resolution and negotiation attitudes through 40 items onto a five-interval Likert type scale. The scale includes 7 sub-dimensions, namely negotiator's style (items: 7, 12, 17, 18, 19, 21, 24, 25, 33); rationality and common sense (items: 1, 11, 15, 16, 22, 23); sensitivity for opponents (items: 27, 28, 30, 31, 32, 40); goal orientation (items: 34, 35, 36, 37, 38, 39); planning (items: 2, 3, 4, 5); effective communication (items: 6, 8, 9, 10, 26); expressing oneself decidedly (items: 13, 14, 20, 29). In the original study, the Cronbach's Alpha was .87 for negotiator's style, .74 for rationality and common sense, .61 for sensitivity for opponent, .74 for goal orientation, .67 for planning, .75 for effective communication and .61 for expressing oneself decidedly. The Cronbach's Alpha of total scale was .90.

3.2 Data Analysis

Preliminary data analyses were executed to examine the adequacy of the data using IBM SPSS, version 28, software package for Windows. Univariate and multivariate skewness (Sk) and kurtosis (Ku) values were verified to examine if there was a severe bias to normal distribution. Confirmatory factor analysis (CFA) was performed, using the MPlus 6.12 software, to test the factor structure of the scale. A robust maximum likelihood parameter (MLR) estimation was chosen. In order to assess the goodness of fit for each model, a range of fit statistics were examined, including the comparative fit index (CFI; Bentler , 1990); the Tucker-Lewis Index (TLI; Tucker and Lewis, 1973); the Root Mean Square Error of Approximation (RMSEA; Steiger, 1990); the standardized root mean square Residual (SRMR; Jöreskog and Sörbom, 1996); and the chi-square adjustment adequacy test, where the null hypothesis is an indicator of good adjustment. However, the chi-square test is extremely sensitive to the size of the sample, and in large samples (i.e., larger than 200), the test result tends to reject the null hypothesis. Due to the restrictiveness of the model chi-square, researchers have sought alternative indices to assess model fit (Hooper, Coughlan and Mullen, 2008). Therefore, the relative chi-square test (i.e., $\chi 2/df$; Wheaton, Muthen, Alwin and Summers, 1977), in which a value lower than two is indicative of good adjustment (Tabachnick and Fidell, 2012), was used in the present study. The extant literature suggests that CFI and TLI values close to or greater than 0.90 represent an appropriate fit. The RMSEA and SRMR values at or below .08 indicate good fit. All standardized factor loadings (λ) should present statistical significance ($p < .05$; Schumacker and Lomax, 2010) with adequate values of 0.5 or greater on their latent factors. Reliability analyses were calculated through the Cronbach's Alpha.

4. RESULTS AND DISCUSSION

Univariate skewness and kurtosis values did not reveal a serious bias to normal distribution (Sk < 3 and Ku < 4). However, all normality tests (Kolmogorov-Smirnov and Shapiro-Wilk) rejected the null hypothesis revealing problems in term of normal distribution and Mardia's multivariate skewness and kurtosis test (Cain, Zhang and Yuan, 2017) rejected the null hypothesis showing that the data are not multivariate normally distributed (multivariate skewness = 611.89, p < 001 and multivariate kurtosis = 2072.07, p < 001). Thus, the CFA was conducted using the MLR estimator. All items presented adequate factor loadings ($\lambda \geq .5$) and were statistically significant, with variances accounted by each factor above 30%. However, while some CFA estimators showed reasonable model–data fit ($\chi2/df = 2.24$; RMSEA = 0.078; SRMR = 0.066), others showed poor model–data fit (TLI = 0.81; CFI = 0.83). Modification indices indicated that freeing some parameters would improve the fit of this model. We deleted items 7, 9, 26, and 33 considering that they were cross-loaded on multiple latent factors. Also, 12 pairs of residual correlations were established to achieve a better model fit on the collected data (i.e., item13 with item12; item32 with item31; item40 with item39; item22 with item21; item24 with item23; item17 with item16; item27 with item25; item30 with item29; item35 with item34; item38 with item4; item4 with item1; item21 with item20). After these modifications, model fit indices were improved, providing acceptable data-model fit on all fit indices, ($\chi2/df = 1.66$; RMSEA = 0.057; SRMR = 0.054; TLI = 0.91; CFI = 0.92), with all items presenting adequate factor loadings ($\lambda \geq .5$) (Table 1) and latent factors highly correlated (Table 2).

Table 1 - Results of the Confirmatory Factor Analysis of the Modified Model

Factor	Item No.	Loading (λ)
Negotiator's style	12	0.56
	17	0.62
	18	0.81
	19	0.79
	21	0.80
	24	0.82
	25	0.77
Rationality and common sense	1	0.63
	11	0.66
	15	0.62
	16	0.63
	22	0.71
	23	0.61
Sensitivity for opponent	27	0.78
	28	0.73
	30	0.79
	31	0.79
	32	0.81
	40	0.61
Goal orientation	34	0.81
	35	0.84
	36	0.83
	37	0.75
	38	0.90
	39	0.83
Planning	2	0.72
	3	0.69
	4	0.70
	5	0.82
Effective communication	6	0.74
	8	0.72
	10	0.76
Expressing oneself decidedly	13	0.65
	14	0.73
	20	0.77
	29	0.75

(Source: Own authorship)

Table 2: Correlations Among Latent Factors

Latent factors	1	2	3	4	5	6
1. Negotiator's style	-					
2. Rationality and common sense	.84***	-				
3. Sensitivity for opponent	.81***	.77***	-			
4. Goal orientation	.76***	.73**	.88***	-		
5. Planning	.75***	.78***	.69***	.64***	-	
6. Effective communication	.75***	.77***	.71***	.67***	.85***	-
7. Expressing oneself decidedly	.87***	.80***	.81***	.74***	.73***	.74***

Note. $^{***}p < .001$

(Source: Own authorship)

Additionally, Cronbach's Alpha was calculated, and the results showed good internal reliability for all latent factors, including the total scale, namely for negotiator's style (α = .88), rationality and common sense (α = .81), sensitivity for opponent (α = .92), goal orientation (α = .93), planning (α = .86), effective communication (α = .83), and expressing oneself decidedly (α = .81). The Cronbach's Alpha of the total scale was .97.

5. DISCUSSION

We examined the factor structure of the Effective Conflict Resolution and Negotiation Skills Scale via CFA. The overall results of the model fit, and its indices provided evidence supporting a 7-domain structure (negotiator's style, rationality and common sense, sensitivity for opponent, goal orientation, planning, effective communication and expressing oneself decidedly) with 36 questions. These results replicated the theoretical structure of the original scale, but with less four questions because methodologically, the cross-loadings suggested that they are explained by more than one latent factor. For instance, question 7 "I listen to the other side without interrupting in a negotiation" loaded on the original factor ("negotiator's style"), but also loaded on "rationality and common sense", "sensitivity for opponents", "planning", and "effective communication". Additionally, our results also show the existence of several residual correlations suggesting that these questions share some relevant information that is not accounted for in the latent variable. This is because some questions can use similar wordings or are near to each other on the layout of the scale. However, the problem is the correlated errors of questions from different latent factors, as suggested by the modification index. Methodologically this is not an ideal procedure and future studies should revise the factor structure, by adding for instance another latent variable that will contain these questions. Nevertheless, this must be done by considering the core theory of the original study, which should be the subject of further investigations, considering that correlated errors may represent a missing piece of the theory. Perhaps, as the original theoretical model was based on Turkish culture, this model may have to be further adapted to Western countries, such as Portugal.

6. CONCLUSION

The main conclusion of this study is that this scale on effective conflict resolution and negotiation skills was validated in the context in which it was applied in Portugal (higher education institution), so it is a promising measure, and the preliminary results of the CFA provided evidence supporting the seven dimensions proposed by the authors of the original scale.

This study is important because it validates a scale not yet validated in the context of Portuguese higher education, which gives it scientific applicability, which is essential to measure the negotiation and conflict management skills of higher education students in Portugal. With the results of studies of this nature, it is possible to assess these competences and adapt curricular programs and pedagogical methodologies, to develop in students conflict management and negotiation competences, especially when it is observed that they do not exist or do exist to a reduced level. In fact, higher education currently plays a fundamental role in enhancing the personal, technical, scientific and professional development of citizens, providing them with fundamental skills and abilities for the world of work and the development of society. However, there are limitations, namely in terms of cultural differences arising from the two contexts in question (Turkish and Portuguese). In the future, this study can be reproduced at different levels of education and even in other contexts, namely at companies and not just at academic level, as it assesses a set of skills that are essential in different spheres of life (personal, academic and professional).

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HEALTH CARE IN EU: THE INFLUENCE OF THE CJEU JURISPRUDENCE

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ABSTRACT

The Court of Justice of the European Union (CJEU) guarantees compliance and correct application of EU law in the Member States. Over the years, CJEU delivered judgments that have strengthened European integration, while at the same time recognizing increasingly comprehensive rights for citizens, particularly in the field of health care. Cross-border healthcare has been regulated in the EU since the 1970s. Developments in this matter have been largely marked by the case law of the CJEU. In the present study we present the results of the research and study of the most striking decisions made by the CJEU regarding cross-border healthcare provided in the EU. In general, EU law allows patients to travel to another Member State to be treated there after obtaining prior authorization from their pension fund. When this authorization is granted, treatment costs are generally assumed or reimbursed to the patient at the rates in the country of treatment, even if these rates are higher than in the patient's country. Since Kohll and Decker judgments on 28 April 1998, the Court initiated a long series of judgments which inspired the EU legislature to significantly amend EU health care legislation. The present study aims to analyze the influence of the TJUE Jurisprudence about cross-border Health care. As methodology the study is developed from the analysis of TJUE decisions (case law) and shows the importance of case law in application the rules of UE legislation and guarantee to European citizens the access to the fundamental right to health.

Keywords*: cross-borber health services; CJEU case law; The primacy of EU law*

1. INTRODUCTION

Access to cross-border healthcare is a goal promoted in the last 40 years in the European Union (EU). More recently the Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 was a great incentive to this objective. The aim is to promote patient mobility and the possibility of access to new treatment opportunities independently of the patient’s nationality and an EU-wide health service. The Directive 2011/24/EU, of the European Parliament and of the Council, of 9 March 2011 sets the rights of European Union citizens to cross-border healthcare, and guarante freedom of choice and access to high-quality healthcare in the European Union (EU). The Directive applies to the provision of cross-border healthcare from a Member State (MS) to another (ERS: Report 2017). This Directive covers a wide range of healthcare broadly, public or not, but excludes the provision of continued care, organ transplantation and public vaccination. Its aim is to ensure patient mobility in accordance with the principles established by Treaty on Functioning of the European Union (TFEU) and the Universal Declaration of Human Rights (UDHR), which in Article 25 (1) recognises the right to health, medical care and safety in the disease. Similarly, the Convention on Human Rights and Biomedicine also protects human beings in their dignity and identity, promoting their well-being. Also the article 35º of the Charter of Fundamental Rights of the European Union presents access to health as an fundamental right. The TFEU, in articles 4, 6 and 168, gives power to European Union to legislate on public health. The aim is to safeguard the security of the Member States by outlining a common strategy in the fight against the disease.

To pursue this objective, it is up to the EU to adopt health information and education measures and to monitor threats and risks to public health. The Directive was born in 2011 in this legal framework, so we can say that since then the EU has a legal mechanism that guarantees to european patients, in and from any member State, the access to quality healthcare in safe conditions, and their mobility in the EU. To this end, some social and health benefits have been established which the MS should guarantee on an equal way to all European citizens. Nevertheless, the national competences of each MS in the definition and organisation of their health services are safeguarded. The Directive enforce the idea of solidarity and efficiency in the management of health services among MS, which is very important, in particular, to fight against specific diseases as pandemic situations. Despite some initial disorientation, it is noted that the Directive's scheme played an important role in fight against the COVID 19 crisis, especially in the first and second waves of the pandemic. In this context Since 1952, the Court of Justice of the European Union (CJEU) has ensured compliance with and the correct application of EU law in the Member States. Over the years, we have delivered judgments that have strengthened European integration, while at the same time recognizing increasingly comprehensive rights for citizens, particularly in the field of health care. This work results from the continued investigation of the theme of cross-border healthcare that we have been developing since 2018 (Anjos, M. R. & Cepeda, J. V., 2020). Several landmark judgments of the Court of Justice on this matter will be presented in the following pages. with the postulates of the Rule of Social Law, inspired by the imperative of ensuring a dignified living condition for all human beings, without exception. In this work paper we abord the influence of CJEU jurisprudence implementation of measures and the rights of patients in the EU.

1.1 Methodology

Over this work we develope a theoretical study of the CJEU jurisprudence. The research carried out focused primarily on the collection of some importante CJEU decisions, distinguishing two periods: until 1998 and after 1998, that is, after Kholl and Decker decisions.
In this study we collected and analyse decisions of the Court of Justice of the European Union which focuses on health services in the EU for European citizens, which are guideline (precedent) for future decisions.

2. DEVELOPMENTS IN CJEU CASE LAW

Since 1971, the issue of cross-border healthcare has been regulated by Regulation Nº 1408/71 on the application of social security schemes employed persons and members of their families moving within the Community. In general, this European legislation allows patients to be another Member State to be treated after obtaining prior authorisation from their pension fund. When this authorisation is, as treatment costs are generally those which are considered reimbursed to the patient according to the rates charged in the country of treatment, even if these rates are higher than in the patient's country. In the early 1990's, the European Union became an area without borders, a circumstance that facilitated the free movement of people. More and more patients then wanted to be treated by doctors established in another Member State, and the central question was whether they systematically needed prior authorization from their pension fund. In 1998, the Court decided on two cases in which patients had not applied for or obtained prior authorization, but in which, nevertheless, they intended to be reimbursed by their pension fund. Since 2011, the healthcare provided for in the Directive covers health services provided by health professionals, including the prescription, dispensing and supply of medicines and medical devices. The concept of providing cross-border healthcare means the possibility for an EU citizen to have access to healthcare in another Member State, bordering the State of his nationality. The aim is to promote patient mobility and the possibility of access to new treatment opportunities and an EU-wide health service.

However, Member States may prohibit their nationals from accessing healthcare in another member when the "*public interest*" justifies it. For example, in case of danger to public health due to infectious diseases (paragraphs 11 and 12 of the Directive). The Directive also allows the exclusion from its application when the expenditure associated with medical treatment is of very high value, putting in danger the financial sustainability of the national health system. A study by the European Commission (EC. 2014: Final Report) carried out with users and funding entities concluded that the main motivations for seeking cross-border care under are healthcare costs and waiting times in the patient's nationality country. The user's degree of confidence in the national health system is important, but it is not the main decision factor. According to this report, for the informed decision of the user, it is essential that information on prices and waiting times is made available, ideally online, and the information must be transparent about each member State providers in order to gradually the users get confidence in all health systems of all EU member states. Another study by the European Commission (EC. 2015: Final Report) published in September 2015, which involved several stakeholders (user groups, supervisory bodies, healthcare provider organizations and existing national contact points in each MS), has conclude that the Directive could have more benefit if the Member States increased information to users. The results show that citizens are not informed about the new treatment opportunities that the Directive recognizes to them, neither about the existence of national information points. According to the same report, users interviewed in different Member States declare that the main reasons for the lack of cross-border care relate to administrative matters, in particular the applications for prior authorization denied or waiting for a decision for a long time. The interviewees also considered that the information available on most contact point *websites* does not provide sufficient detail (ERS. 2014.Annual Report: 6-7). A third European Commission study, published in 2015, presents the results of a survey conducted in the 28 EU Member States countries on the demand for cross-border healthcare. This report concludes that only 5% of Europeans received medical treatment in another EU country (in Portugal the percentage was 7%) in the 12 months preceding the interview (held in October 2014. Let see the influence of CJEU decisions. In 1998, the Court decided on two cases in which patients had not applied for or obtained prior authorization, but in which, nevertheless, they intended to be reimbursed by their pension fund.

3. THE KOHLL AND DECKER DECISIONS OF 1998 IN APPROACH

In Kohll decision the Court decided that prior authorization is not required for outpatient care scheduled in another Member State. It was really innovator and an important step for clarification of access terms to cross border health services. Looking the case, in 1994, Mr Kohll, national from Luxembourg, wanted his minor daughter to be treated by an orthodontist established in Germany and applied for authorization from the Luxembourg pension fund. The Luxembourg fund it rejected the application on the ground that the treatment was not urgent and that they could be dispensed with in Luxembourg. Relying on the freedom to provide services (and not Regulation No 1408/71), Mr Kohll considered that he had the right to choose to treat his daughter in Germany without prior authorization and to claim reimbursement of the costs to his pension fund, not at the rates of the country of treatment (Germany), but in accordance with the tariffs practiced for that type of treatment in his State of entry (Luxembourg). The Court has held that treatment by a healthcare professional should be regarded as a service. In those circumstances, the fact that the reimbursement, at the rates in the patient's country, of the costs of scheduled outpatient medical treatment is an obstacle to the freedom to provide services, in so far as such authorization discourages social security beneficiaries from recourse to health service providers established in another Member State.

The Court also points out that that regulation was not justified by a serious risk to the financial balance of the social security system or for public health reasons (28 April 1998, Kohll, C-158/96). In a similar understanding, CJEU decided the Decker case, considering that no prior authorization is required for the purchase in another Member State of prescription-only medical products or devices. Thus, it means that a patient who is prescribed medicinal products or medical devices by a doctor established in one Member State may decide to purchase the products at a pharmacy in another Member State (whether he or she physically proceeds to purchase by mail order). This was the case of Mr Decker, who in 1992 bought glasses in Belgium which had been prescribed to him by an ophthalmologist established in Luxembourg. The Luxembourg pension fund refused to refund the glasses on the ground that this purchase was made abroad without prior authorization. The Court has declared that the refusal to reimburse medical products purchased, without prior authorization, in another Member State constitutes an unjustified obstacle to the free movement of goods, since that requirement is not justified on grounds of public health linked to the protection of the quality of medical products supplied in other Member States. Since then, patients may purchase their medical products or devices without prior authorization in another Member State and claim their reimbursement to their pension fund in accordance with the tariffs in their own country (28 April 1998, Decker, C-120/95).

4. THE INFLUENCE OF KHOLL AND DECKER JUDGMENTS

After delivering Kohll and Decker decisions the Court gave a long series of judgments that inspired the EU legislator to significantly amend EU health care legislation. Kohll and Decker have shown that the system established by Regulation No 1408/71 and its Implementing Regulation No 574/72, which provides for a prior authorization mechanism for the reimbursement of health care costs scheduled in another Member State, in accordance with the tariffs practiced in the Latter, does not constitute an obstacle to access to health care. The fundamental freedoms enshrined by the Treaties must be guaranteed without formal hinds. Thus, the freedom to provide services is preserved, resulting in the Kohll case, and the freedom of movement of goods in the Decker case. These freedoms may be invoked to obtain reimbursement, without prior authorisation from the pension fund, outpatient care or medical product premiums in a Member State, as standard is carried out in the patient's country. Through its case-law, the Court has thus progressively contributed to the definition of the criteria to be considered to guarantee the rights of citizens in this regard. That case-law was codified by the EU legislature, with the adoption of Regulations 883/04 and 987/09 and Directive 2011/24, which today offer citizens precise rules on reimbursement of medical care and medical purchases in another Member State. After Kohll and Decker, the Court had the opportunity to interpret the 1971 Regulation on several occasions, and it did so in two main areas: scheduled hospital care and unscheduled hospital care. The influence of this jurisprudence on revision of the Regulation 1971, by the new regulations of 2004 and 2009 is quite evident. From now on, 'prior authorisation' is different for scheduled and unscheduled hospital care. So, for scheduled hospital care, where the necessary authorization for a scheduled hospitalization in another Member State has been wrongly refused and, for some reason, that authorization is subsequently granted, the patient shall be entitled to reimbursement of the costs incurred as if the authorization had been granted in a timely manner, as stated on CJEU decision of 12 July 2001, in Vanbraekel case (C-368/98). In order to be able to refuse the patient's permission to be admitted abroad on the basis that the patient is treated in a hospital in his country, the national authorities should ensure that the decision does not exceed an acceptable period, taking into account the state of health and clinical needs, as is clear from the Court's decision of 16 May 2006, in Watts case (C-372/04).

In addition, prior authorization cannot be refused when the lack of primary medical supplies may make it impossible for patients to receive timely hospital care in their country. This is the understanding on Petru case of 9 October 2014, (C-268/13). On the other hand, prior authorisation may be refused if medical benefits abroad are not reimbursable by the patient's social security system. However, if the method of treatment abroad for benefits reimbursed in the Member State of the patient, the authorisation cannot be refused on the fact that this method is not practised in that Member State. This topic was discussed and decided by CJEU on Elchinov case, of 5 October 2010 (C-173/09). Where a patient has obtained authorization to be treated in a hospital in another Member State and bear part of the hospitalization costs, he may ask his pension fund to reimburse all or part of that expense depending on the cost of equivalent treatment in his country, as stated in Watts case of 16 de may of 2006, (C-372/04).

4.1 Hospital Care not programmed

As far as hospital care not programmed in 1971, replaced by Regulation Nº 883/04, provides that employed or self-employed persons whose state of health requires immediate health care during their stay in another Member State (urgent medical care) shall have the right to obtain reimbursement from his pension fund of the costs relating to such care, without prior authorization of the same, according to the tariffs practiced in the country of treatment. Where a retired person travels to another Member State and must be hospitalized as a matter of urgency, his pension fund may not reimburse the medical costs of an authorisation or condition that the illness of that person has manifested itself, even if that condition applies to employed and self-employed persons. The difference between pensioners and workers is explained by the willingness of the Union legislature to promote the effective mobility of pensioners in view of their vulnerability and dependence on health. This is clear in the IKA Court's decision of 25 February 2003 (C-326/00). On the other hand, when a person with prior authorization is treated in another Member State and the doctors of that State decide to transfer it, for reasons of medical urgency, to a hospital located in a State not part of the EU (Switzerland, for example), the patient may continue to receive medical cover. Indeed, the patient's pension fund must rely on doctors in the Member State of treatment, who are best able to assess the care that the patient requires, as stated on Keller judgment 12 April 2005 (C-145/03).

Finally, when urgent hospital care is dispensed during a trip to another Member State, the patient's pension fund may refuse to reimburse it as expenses which, in the State of treatment, are the burden of patients (such as the amount of the moderator tax) as decided on Commission/Spain process, on 15 June 2010 (C-211/08). Following the Kohll judgment in 1998, the Court of Justice clarified its case law concerning the case of a person who decides to receive treatment in another Member State not based on the 1971 Regulation but based on the freedom to provide services. These clarifications concern only scheduled medical care (outpatient or in-patient) and not emergency medical care (unannounced care). Member States must also provide in their national legislation for the possibility for social security beneficiaries to be reimbursed for the costs of laboratory analyses and examinations carried out in another Member State (27 January 2011, Commission v Luxembourg, C-490/09). Moreover, Member States may not limit the reimbursement of the costs of outpatient care provided abroad to unique and exceptional situations in which the national health system has no solution for treating the registered patient (27 October 2011, Commission v Portugal, C-255/09). The Court of Justice has, however, recognised that Member States may make the reimbursement of outpatient care provided in another Member State conditional on prior authorisation where that care requires the use of expensive equipment (MRI, TEP-SCAN, for example).

In view of their particularly costly nature, such equipment must, like hospital services, be the subject of a planning policy to guarantee throughout the national territory a supply of care that is rationalised, stable, balanced and accessible, but also in order to avoid any waste of financial, technical and human resources. The requirement of prior authorisation for that type of care therefore constitutes a justified restriction on the freedom to provide services (5 October 2010, Commission v France, C-512/08).

4.2 Hospital Care programmed

The Court of Justice has held that, unlike non-hospital outpatient care (see previous page), the requirement of prior authorisation for hospital care can be justified by the need to ensure sufficient and permanent accessibility to a balanced range of quality hospital care in the Member State concerned, to ensure control of costs and to avoid a waste of financial, technical, and human resources. At the same time, the Court of Justice has indicated that the conditions for obtaining such prior authorisation must be justified, non-discriminatory and proportionate (12 July 2001, Smits and Peerboms, C-157/99). It follows that, for scheduled hospital care, prior authorisation is always required, whether it is a question of obtaining reimbursement of the costs of that care according to the tariffs in force in the country of treatment (2004 and 2009 regulations) or according to the tariffs in force in the patient's country (2011 directive). Prior authorisation may be refused if there is, in the patient's own country, treatment which is the same or equally effective as the treatment envisaged abroad and if such treatment can be provided in good time in the patient's own country. In that regard, the national authorities must take into consideration the patient's medical condition, past medical history, the probable course of the disease and the degree of pain and the nature of the disability (13 May 2003, Müller-Fauré and Van Riet, C-385/99). A Member State may not limit the reimbursement of hospitalisation expenses to certain categories of person (children, for example) or according to whether the hospital providing the care is public or private. Such a broad exclusion from the reimbursement of hospitalisation costs would be contrary to European Union law in that it would discourage or even prevent patients from being hospitalised in other Member States (19 April 2007, Stamatelaki, C-444/05). Finally, if, for the hospital treatment in question, the charges in force in the country of treatment are lower than those in force in the patient's country, the patient is entitled to a supplementary reimbursement corresponding to the difference between those two charges ('differential supplement') (12 July 2001, Vanbraekel and Others, C-368/98). Another relevant question is whether travel and accommodation costs can be reimbursed. When a patient goes to another Member State to receive medical treatment, he necessarily incurs travelling and possibly accommodation costs. The question therefore arose whether the patient's health insurance fund must also reimburse those costs. A patient who is authorised by his sickness fund to go to another Member State to receive medical treatment under the 1971 regulation (or the 2004 and 2009 regulations) cannot claim reimbursement of his travel expenses or, in the case of out-patient treatment, his accommodation costs. On the other hand, in the case of scheduled hospital treatment, subsistence and meal costs are reimbursed. The obligation to reimburse relates exclusively to the cost of treatment received by the patient in the Member State of treatment (15 June 2006, Herrera, C-466/04). This is also the case where authorisation is granted under the freedom to provide services (2011 Directive). However, if, in the case of treatment provided on national territory, travel and accommodation costs are reimbursed by the patient's health insurance fund, those costs must be reimbursed when the patient goes for treatment in another Member State (16 May 2006, Watts, C-372/04). In any case (both under the regulations and the Directive), Member States may reimburse travel and accommodation costs if they so choose.

5. CONCLUSION

The influence of CJEU jurisprudence about health care in EU is remarkable. The CJEU guarantees compliance and correct application of EU law in the Member States. All over the years, CJEU delivered judgments that have strengthened European integration, while at the same time recognizing increasingly comprehensive rights for citizens, particularly in the field of health care. Cross-border healthcare has been regulated in the EU since the 1970s. Developments in this area have been largely marked by the case law of the CJEU, such as the Kohll and Decker cases, which have proved decisive in subsequent decisions, as well as in the revision of European legislation. In general, EU law allows patients to travel to another Member State to be treated there after obtaining prior authorization from their pension fund. When this authorization is granted, treatment costs are generally assumed or reimbursed to the patient at the rates in the country of treatment, even if these rates are higher than in the patient's country. Since Kohll and Decker judgments on 28 April 1998, the Court initiated a long series of judgments which inspired the EU legislature to significantly amend EU health care legislation. Following kohll in 1998, the Court set out its case-law in relation to the case of a person deciding to be a Member State, not based on the 1971 Regulation, but based on the free provision of services. These clarifications only concern scheduled medical care (outpatient or hospital) and not emergency medical care (inopinated care). Member States should also provide in their national legislation for the possibility for social security beneficiaries to be reimbursed for expenditure on laboratory tests and tests carried out in another Member State. Furthermore, Member States may not limit reimbursement of outpatient care costs provided abroad to unique and exceptional situations where the national health system does not have a solution to treat the enrolled patient. The Court has, however, recognized that Member States may make reimbursement of outpatient care provided in another Member State dependent on prior authorization, where such care requires the use of costly equipment. In short words, over the decades, most prominently since 1998, the case law of the CJEU has decisively influenced the evolution of European (and Member States') legislation in this area.

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MAJOR CONTROVERSIES OF CRYPTOCURRENCIES

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ABSTRACT

Designed to partially replace the traditional global financial system, Bitcoin arrived with great fanfare on the world stage in 2008. Friedrich A. Hayek suggested, in 1976, that the public needed relief from the absolute state monopoly over the money supply and reliance on the government for maintaining a stable value of money. Such observations may have helped inspire the inventors who generated the ideas for cryptocurrencies. The launch of Bitcoin provoked an intense debate over its functions as a currency and its role in the financial system globally. This paper attempts to explore the major controversies associated with the most popular cryptocurrency Bitcoin and shed light on the potential threats it has posed to the economy and society.
Keywords: *Bitcoin, Cryptocurrency, Blockchain Technology; Reserve Currency; Store of Value; Standard of Accounting; Negative Externality*

1. THE INVENTION OF BITCOIN AND ITS CONTRIBUTIONS

Driven by dissatisfaction with the monetary and banking systems after the 2008 crisis, Satoshi Nakamoto designed Bitcoin as a virtual currency that would rely on blockchain technology (Monrat et al., 117134-117151). The blockchain allows Bitcoin users to make peer-to-peer transactions without official third-party institutions that keep track of the history of every transaction in a secure set of encrypted blocks (Farell). By setting blockchain as the foundation of its monetary system, Bitcoin claims to provide users with a safer, easier, and faster way to save and transfer value than those offered in banks and other financial institutions. Nakamoto limits the total amount of Bitcoin, enabling the Bitcoin system to be decentralized without the control or intervention of any central government. Bitcoin is meant to eliminate the "trust" required in the current money system and replace the reserve currency that people now rely on (Nakamoto). Bitcoin has brought innovative technology and perspectives for people to reflect on the function and value of the existing currency system, which may contribute to an evolvement of the system. Back in 1976, Hayek proposed taking the monopoly of money issuance away from the government to maintain the stable value of money with the help of competition. The creation of Bitcoin marks the appearance of a series of new ideas about how money ought to be. The decentralized financial system using blockchain is still at its early stage, and people believe that blockchain can be applied to other fields (Al-megren et al., 1417-24). The consistent innovation and development of blockchain technology may bring some brilliant ideas that can be applied to the current financial system. Additionally, the anonymity offered by Bitcoin provided better options for people living in countries with repressed economies, such as Argentina and Venezuela (Kethineni et al., 141-57; Cifuentes, 99-116). With proper regulations, Bitcoin offers more convenient international trade options because it is designed to be a universal currency that eliminates currency exchange, bringing trade globalization to a different level (Ganne). Nevertheless, a number of the other arguments favoring Bitcoin, upon closer examination, fall apart. Bitcoin is not necessarily a curse, nor is it as beneficial as its defenders claim when compared to the reserve currency system we have now.

2. BITCOIN'S POTENTIAL AS A RESERVE CURRENCY

Exchange methods evolved from barter to fiat money through the prevalence of hard currency, coinage, and the gold standard (Davies). From the Dutch Guilder to the British Pound and the United States Dollar (USD), reserve currencies did their job well (Dalio). In most cases, people freely use currencies when countries that issued them remain economically and diplomatically strong. For example, banks around the globe hold large amounts of USD, enabling easy international transactions (Goldberg, 2-5). Although there is no single international currency, the dollar essentially serves this role. When the financial condition of a country declines significantly, people start doubting its ability to maintain the stable value of its currencies and switch to currencies that are issued by more financially sustainable countries. With this cycle, a reserve currency will always prominently remain in the financial market, allowing most people to use it as a widely-accepted payment in transactions (Dalio). In an ever-changing financial system that always has stable reserve currencies available for transactions, switching to Bitcoin has no obvious necessity.

3. BITCOIN'S POSITION AS A STORE OF VALUE

Turning to Bitcoin's practicality, it barely fits the definition of money that British economist William Stanley Jevons devised in 1875, later supported by Carl Menger, Ed Dolan, and Greg Mankiw. Analyzing how Bitcoin functions as a store of value, the standard of accounting, and the medium of exchange, we found that it is an inferior form of "money" compared to prominent reserve currencies that we have now and in the history. As a store of value, for example, Bitcoin leaves much to be desired. Speculation drives its price, and the value of a Bitcoin is mercurial. Bitcoin simply cannot serve well as a store of value because of its high price volatility. For instance, Bitcoin increased 623% in value from November 1st, 2020, to November 9th, 2021, then decreased by 45% from November 9th, 2021, to April 1st, 2022 (Coinbase). While the value of major currencies such as USD, GBP and CNY, fluctuate due to inflation, international trades and other factors over time, historically the rate of change remains much more stable and lower than that already exhibited by Bitcoin. Observations of the Consumer Price Index (CPI) between the outbreak of Covid-19 in November 2019 and April of 2022 evidence only a 0.07% decrease in prices followed by an increase of 12%, suggesting that the dollar, even in a major crisis of an epidemic, is a far more stable currency (U.S. Bureau of Labor Statistics). For a longer period, USD has generated a change of 609% in roughly 51 years since the United States abandoned the gold standard, while Bitcoin could generate this change in less than a year (Coinbase; Gavin 15). Furthermore, the place in which people store Bitcoin needs to be evaluated, and the security of the crypto wallet remains a crucial concern. Unlike a bank where people deposit money into accounts, a decentralized money system means users must carefully monitor the value they possess in a crypto wallet. People are more vulnerable to suffering a value loss in a Bitcoin hack than losing dollars in a bank robbery (Kaushal et al., 172-77). In the case of the current financial system, governments can ensure deposits in regulated banks, for example, by establishing the Federal Deposit Insurance Corporation (FDIC). Bitcoin users, however, are supposed to take full responsibility for their value lost because issuance for crypto assets is limited, according to Brian O'Connell, an insurance analyst at Insurance Quotes (Cabello). The volatility of Bitcoin and the security problem of Bitcoin wallets together indicate that Bitcoin is an unsafe and uncertain way to store value.

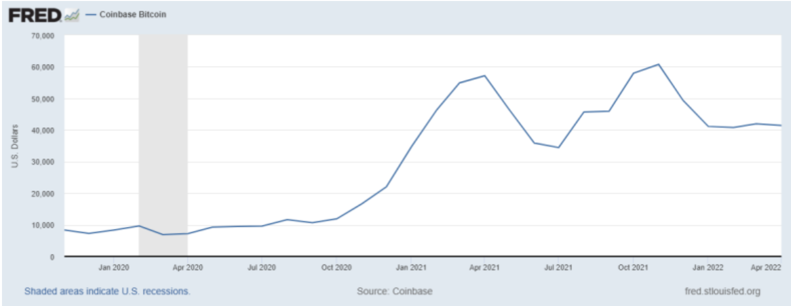

Figure 1: Bitcoin price from November 2019 to April 2022
(Source: FRED)

Figure 2: Consumer Price Index from November 2019 to April 2022
(Source: FRED)

4. BITCOIN'S FUNCTION AS A STANDARD OF ACCOUNTING AND MEDIUM OF EXCHANGE

Bitcoin's function as a standard of accounting performs worse than the USD. The price of goods in terms of Bitcoin will fluctuate even without changes in supply or demand because the value of Bitcoin is volatile. Using a quickly-changing currency to measure the market value of goods, services, and other transactions, sellers lose money if they fail to adjust to the changing value of the currency. On the other hand, if sellers adjust the price of goods consistently, the frequent price change will induce menu costs, making the Bitcoin-based financial system costly to society (Sheshinski and Weiss, 287-303). The USD, the current reserve currency, also induces menu cost, but with a slow inflation rate, the menu cost is not so significant as that of Bitcoin (FRED). Although one can argue that Bitcoin develops a more accurate measurement of money – with the smallest unit Satoshi = 0.000,000,01 BTC – a straightforward calculation disproves this argument (CNBCTV18; Tasca 1-6). If Bitcoin is replacing the USD, a Satoshi will be worth \$0.011, calculated using the current amount of Bitcoin (Best; FRED; Buckho). Since a US cent is worth \$0.01, the so-called precise unit of Bitcoin does not even meet the current accuracy of the USD. This level of precision is ignorable and unnecessary in a modern economy, as the penny has limited usage, and so will a Satoshi. Regarding the final definition of money given by Jevons, the high volatility of Bitcoin makes it harder to use as a medium of exchange, and the mining system it is based on makes the transaction costly. The buyers suffer if the money they hold suddenly depreciates, making it cost more Bitcoin to purchase an item. The sellers' lives will not be made easier if they receive money representing half the value it held the day before. The uncertainty regarding Bitcoin's value explains why it is only used by a few corporations or institutions, further complicating its day-to-day use (Kewell, 491-98).

5. THE NEGATIVE EXTERNALITY OF GENERATING BITCOINS

The process of generating Bitcoin poses a negative externality to society as it requires significant energy consumption. Bitcoin is based on the Proof-of-Work (PoW), and "mining" is the foundation of the Bitcoin system (Kroll et al., 1-11). In a transaction, "miners" use colossal computing power to solve a difficult algorithm.

The first miner who solves the algorithm will broadcast to all nodes in the Bitcoin blockchain system and get some Bitcoin as a reward. With the increasing popularity of Bitcoin, energy consumption and electricity use is soaring (CCAF). When deciding whether to mine Bitcoin, miners consider the electricity cost, mining farm cost, and the awards or coins they will get (Kroll et al., 1-11). What generates externality is that miners make decisions without considering environmental pollution. The Bitcoin system generates both technical and pecuniary externality, though the latter does not induce deadweight loss (Murphy; Mankiw; Viner). The current banking system, nevertheless, does not produce as much external cost as Bitcoin does. To visualize the externality generated by Bitcoin mining, total private cost and social cost are calculated using the data of Bitcoin's energy consumption, average electricity price, amount of carbon emission, the average cost of Bitcoin miners, amount of Bitcoin miners, and average life-span of miners. The social cost per transaction of Bitcoin is then roughly $34, compared to essentially zero for the USD (Vries et al., 498-502; Rennert and Kingdon; Jain; Buy Bitcoin Worldwide; Blockchain). Few people are aware of the amount of social cost now since the current extent of Bitcoin transactions is limited. The situation will only be more severe as Bitcoin spreads its influence.

When the cost burden pressed by Bitcoin starts impacting most people, it will significantly drive down the demand in the market, causing a recession and damaging the economy. Mining Bitcoin also causes the pecuniary externality by inducing rising electricity costs (Counts, as it requires a huge amount of electricity, pressing the cost burden on electricity and consumers who neither mine nor trade Bitcoin (O'Dwyer et al., 280-85). Studies by the Matteo Benetton, Adair Morse and Giovanni Compiani reveal that households paid an "additional $165 million a year in energy costs, while businesses paid an extra $79 million" in upstate New York due to Bitcoin mining's energy consumption (Benetton et al., 14-18). The electricity wasted by Bitcoin mining not only drives up prices but also induces the misallocation of resources.

In addition to the electricity consumption, time spent on maintaining mining equipment and hardware & software & building used for mining generate opportunity costs and the waste of resources, as Bitcoin itself fails to benefit society by effectively using these resources (Williamson 107-15; Wieser). Resources are occupied, and the market can only allocate resources to people who can convert them into productivity at a higher price. It decreases the supply of other goods and services in the market, driving the overall price up and making people's lives more expensive. Consequently, considering its externality and misallocation, Bitcoin's usage in transactions will be costly for society, compared to the reserve currencies which people already adopted. Bitcoin will only generate more inefficiencies and external costs if it becomes more widely used and replaces the current money system, making it not a blessing but a catastrophe for society.

6. CONCLUSION

To conclude, despite the creation of the meaningful decentralized financial transfer system, Bitcoin is unlikely to serve as an absolute blessing and the "revolutionary hero" of the economy. Traditional reserve currencies can still deliver the main functions of "money" more efficiently than Bitcoin as they are more suitable as stores of value and mediums of exchange without producing external costs to society. Bitcoin is more accepted as an innovative form of currency, but it can still hardly replace the significant role that major currencies have in the current financial system.

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THE RELATIONSHIP BETWEEN LEADERSHIP AND RESULTS IN THE AUTOMOTIVE SECTOR

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ABSTRACT

This paper addresses the relationship between different management styles and organisational outcome in the automotive sector. The research was focused on companies based in Leiria, in the heart of the centre region of Portugal. The results of the latest four years of activity of Lizdrive and LPM's car dealerships, in which the implementation of internal marketing concepts was operationalized, were observed. The main objectives of the research were verifying the possible relationship between the type of leadership and the financial-economic results of the participating car dealerships; and testing the possible relationship between the implementation of coaching processes and the financial-economic results in the automotive sector, using such companies as proxies. Accordingly, the research hypotheses addressed the examination of a possible direct relationship between attitudes of determination and financial-economic results in automotive dealerships; and the examination of a possible direct relationship between attitudes of openness and financial-economic results in such car dealerships. In order to achieve the research purposes, a survey was employed to gather information about the main types of leadership and the implementation of coaching processes in the management made by executive administrators, general directors, financial directors, after-sales managers, spare parts managers, and sales managers, which totalled 12 participants. Following a set of interviews, the collected data was treated statistically in order to analyse the fulfilment of the hypotheses and main objectives. It was observed that in Lizdrive company there is a significant correlation between the open management style and the financial-economic performance. Concerning the implementation of coaching processes, a direct correlation with economic performance was captured, an expected outcome.

Keywords*: Leadership, retail, commercial management, financial-economic results, internal marketing, automotive sector.*

1. INTRODUCTION

Throughout history, the automotive sector has gone through periods when business management and leadership skills were not so much in need to sell vehicles, which were already been produced in mass production mode. After the industrial revolution, an uncertain period between the 18th and 19th centuries, and after the emergence of the first mass-manufacturing organizations for automobiles, all production was absorbed by consumers almost instantly.

In this way, market and employment conditions favoured the high consumption of goods and inadequate working conditions, given the emergence of an innovative and transforming product, and the socio-economic precariousness of this period. At this moment in history, known as the Production Era, the only concern was to produce in scale and with considerable quality (Kotler, Kartajaya & Setiawan, 2010). In 1929, when the deepest financial crisis of capitalism was experienced, which forced companies to change their management strategies. It then began to focus on sales and reduction of stocks in all industrial sectors, even though consumers did not feel the need for new acquisitions. It is observed at this time the emergence of the creation of the need to buy in the customer by the companies through new sales and marketing techniques, since the main objective now was to "push goods down the throats of the customers", marking the beginning of the Era of Sales.

At this time, companies began to realize that there were other factors that influenced the purchase decision of customers, which were more related to psychological impulses and motivations unrelated to the law of supply and demand (Gracioso, 1997). A few years later, with the recovery from the great crisis and the resumption of the normal functioning of the industrial sector, when the so-called Marketing Era began, in which research began and focused on repeating sales; business strategies are from now focused on customer loyalty to their products, services, and their own brands. Consumers are now at a level of demand from companies, and are no longer seen as markets for products and have become candidates for relationships (Gronross, 2000). With the spread of the internet and the emergence of social networks, companies were more exposed to criticism from their consumers, especially when sustainability ideals and new concerns with social well-being appeared.

These virtual reviews have high potential for organic advertising that can either enhance or devastate a company's reputation. For this reason, organizations invest heavily in relational marketing, which is defined by Achrol and Kotler (1999) as a set of lasting relationships that organizations build to differentiate themselves based on trust between customers, distributors and suppliers; together with the clear definition of management goals and objectives (vid. e.g. Doran, 1981). In today's society, it is clear that the automotive sector is no longer as busy as in its early days. Private vehicles, in addition to no longer being innovative products in their nature, have been losing ground to other forms of transport and are no longer being essential items to being luxury items. People have been exposed to new forms of social organization and locomotion within urban centres, which are promoting a decrease in the need for private vehicles around the world. Examples include: the emergence of more accessible private transport services, such as Uber, Lyft, 99; the new environmental awareness implanted in consumers, led to reduce environmental impacts through the reduction of consumption and the emission of pollutants; the improvement of mass transport in large urban centres; the emergence of bicycle and electric scooter service companies at very low annual costs; government incentive to create sustainable societies.

In Portugal, it is clear that the automotive sector is too sensitive to market trends and environmental legislation proposed by the European Union. It was noted that in September 2018, the mandatory WLTP protocol for verifying consumption and vehicle emissions resulted in drops in sales, due to the increase in final car prices (Peugeot, 2020). In terms of recent sales trends, from January to September 2019, the number of registered vehicles fell by 3.9% when compared to the same period of the previous year, representing a cumulative market decline for the eighth consecutive month (Associação do Comércio Automóvel de Portugal [ACAP], 2019). This trend would get even worse with the Covid-19 pandemic and its lockdowns and need for online remote labour.

The automotive sector faces serious challenges, also due to the energy crisis and need for transition. At current times, there is the need for effective business management to promote strategic actions capable of reversing the current situation in which the sector finds itself. Managers must undergo constant transformations to understand the needs of the economy, customers, as well as their subordinates, in order to continue and increase sales and service quality, even in periods of consumption decline or even in periods of global crisis.

2. COMMERCIAL MANAGEMENT, INTERNAL MARKETING AND LEADERSHIP IN THE AUTOMOTIVE INDUSTRY

Regardless of the economic situation, internal marketing emerges as an essential tool for structuring and implementing strategies for maximum cost efficiency. Despite more than thirty years of study, there are not many cases of application of internal marketing in companies, a fact explained by the difficulty of understanding the concept and its practical applications by organizations (Conceição, 2012). In the automotive sector, more specifically in car dealerships, there is a remarkable lack of research on the use of internal marketing to increase performance. This research, in turn, was produced in order to fill this gap, by trying to analyse the relationships of internal marketing and leadership with the economic results obtained by car concessions. As will be shown later, effective leadership must have the ability to stimulate, influence and persuade people (in the case of this research, car dealership employees) in order to lead them to follow ideals (fulfilment of organizational objectives) in a spontaneous and without any sense of imposition. The use of internal marketing as a management tool can be very relevant for companies. Despite the difficulty of defining this type of marketing, through a broad and objective concept, its application is easily perceived in the business sector. Internal marketing is considered versatile and shaped according to the mission and main objectives determined by the companies, which require the dedication of its employees for its implementation (Conceição, 2012). According to the same author, the first major application of internal marketing can be verified in the quality management of products and services to be sold by companies. In this way, quality improvement strategies can be effectively disseminated and practiced by all employees through the implementation of internal communication mechanisms arising from internal marketing, together with other quality-related corporate policies. Internal marketing is also seen as a tool to generate trust in employees, given the current unstable contractual working relationships. The latter can generate dissatisfaction on the part of the employee, since professional stability is commonly considered one of the decisive and motivating factors in the worker's dedication. As is well known, internal marketing also encompasses greater integration and employee participation in business activities, generating a sense of greater appreciation in achieving the company's objectives, making them more committed to the employment organization. Finally, Conceição (2012) also considers that internal marketing is an essential tool in change management processes. In the business sector, change can be seen both as processes of innovation and/or creation of a business culture, and as knowledge management and innovation. Since this type of marketing allows the transmission of information in a more effective way, its importance is clearly perceived during any type of change that occurs within a company. As a manager of an enterprise, it is essential to know how the conceptualizations of internal marketing can be implemented, and generate the contentment of employees in order to achieve the greater goals of the company. The first way to captivate internal customers is through motivational actions, which may or may not be financial. Monetary bonuses, performance bonuses, dental and health insurance for the employee and dependents are some examples of financial motivational actions. Psychologically speaking, there are appealing ways of recognizing the importance and prominence of the employee, such as hierarchical aspects related to the function, and the autonomy and sophistication associated with a certain position.

In order to further improve the company's image in the eyes of its employees, opportunities for career advancement and professional training must also be offered. As with an external customer, the idea of these motivational actions is to extract the maximum from the employee's dedication and knowledge in exchange for investment and recognition by the company. This type of relationship, when healthy for both parties, makes the employee wear the company's shirt and defend it with “tooth and nail” in the face of competition. With this accomplished, the management and implementation of strategies become less arduous and more effective tasks. Despite the existing gap in the literature, there are some examples of research on internal marketing (vid. e.g. Gummesson, 1987, Rafiq & Ahmed, 2000).

More noteworthy, Abou-Shouk, Salah and Fawzy (2019) outlined specific objectives to explore the relationship of internal marketing with the organizational commitment of employees in the travel agency sector, as well as to measure the effects of internal marketing on organizational commitment, and to classify them according to their influence. These researchers, based on the previous studies, as by Chang and Chang (2007), defined five important variables as internal marketing dimensions, for organizational commitment, namely: incentives, training, employee empowerment, administrative support, and internal communication. For each variable, Abou-Shouk et al. (2019) established hypotheses that aimed to confirm the existence of positive influences of each on organizational commitment on the part of employees. On another strand of research, Berry et al. (1976), used Delta Airlines as an example of a company that makes good use of internal marketing to improve its services standards. This company had one of the lowest customer complaint rates and employee turnover rates of any airline at the time. This was thanks to the monthly recognition awards given to employees; they received monetary awards, in addition to a plaque of recognition and citation in the Company's monthly magazines (which are strategies with a more psychological appeal, giving the employee the importance expected by him and increasing his motivation). Furthermore, executives regularly spoke with lower-ranking employees to gather feedback, and to understand the degree of satisfaction of external customers and employees themselves. Another highlight is the openness to suggestions and opinions from employees about Delta Airlines’ policies and practices, in order to improve the services provided to end customers. Finally, employees were paid above-average salaries, which attracted motivated and excellent employees to the Company.

Another factor considered relevant in the application of internal marketing is the construction of a favourable work environment, in which the employee feels comfortable and recognized. As an example, one can cite the decoration and architecture of the office of a high-ranking member of a company, whether a director or a CEO, who must offer comfort and bring with them psychological factors associated with the importance of their role to the company, making the employee's perceived value as high as possible. As with the sale of products to external customers, it is necessary to understand how much is being perceived by the employee in relation to the working conditions offered, so that the maximum of their expertise can be naturally extracted and that there is a positive impact on their motivation. A healthy work environment, along with other psychological factors involved in professional and interpersonal interactions in the business environment, materializes the organizational climate that, despite not being seen, can be felt by employees, and affects performance, behaviour at work, interactions with colleagues, and finally, the economic results, whether positive or negative (Costa, 2010). Closely linked to the organizational climate, there is another important tool in the implementation of internal marketing: internal communication.

It is conceivable that all essential information for the achievement of an organizational culture and the company's objectives must be transmitted efficiently through internal communication channels, be they corporate TV, online platforms, informative emails, periodical magazines, banners, flyers, and even the collaborators themselves through oral communication. Of course, each level of communication has its differences and power of transmitting information, but they are all part of this internal marketing tool and should be used wisely.

3. RESEARCH METHODOLOGY

From the main research question "is there a relationship between leadership style and economic results in the automotive area?", the investigation supporting this paper was carried out with the purpose of elaborating a case study capable of analysing the relationship between the types of leadership of concessionaires located in the district of Leiria, with their economic results obtained between the years 2016 and 2019. In this investigation, the types of leadership are characterized according to the attitude of determination and openness of managers of the Lizdrive and LPM concessions, both members of the NOV Automóveis Group. Among the possible management roles in the participating concessions, the following were taken into account: CEOs, general managers, financial directors, after-sales managers, those responsible for the parts sector, and those responsible for sales. Finally, there was also a relational analysis between the application of coaching processes and the economic results of each company. For the purpose of this research goals achievement, two research hypotheses were created, as outlined below:

H1: Is there a direct relationship between attitudes of determination and economic results in automotive companies?
H2: Is there a direct relationship between opening attitudes and economic results in automotive companies?

4. POPULATION AND SAMPLE

This paper aims to study the relationship between the economic performance of different car dealerships located in the district of Leiria, with the prevailing management attitudes in each organization. Therefore, the object of study is constituted by car concessions accredited by the manufacturers. For this investigation, the participating dealerships were Lizdrive and LPM, both belonging to Grupo Nov Automóveis. It is important to mention that, initially, the participation of all accredited concessionaires with activities within the district of Leiria was sought. However, the planning had to be changed due to difficulties in communicating with the managers of most concessions, in addition to the scarcity of information necessary for the analyses carried out in this investigation. Another selection requirement considered would be in relation to the number of employees of each concession, since, theoretically, a similar number of employees has the capacity to generate the same results, when exposed to the same working conditions and professional training. In other words, the same workforce, when managed, trained and subjected to the same working conditions, which should theoretically exist in all car dealerships, should be able to generate the same number of sales and service provision. in a certain period. Closely linked to this, it was also thought that the companies considered in the investigation should provide the same types of service (sale and rental of cars, and after-sales services), in order to be comparable with each other. However, all these commented selection requirements that would be feasible if the number of participating companies was sufficiently large. As there is a low number of accredited companies within the district, there was a possibility that data collection would be inadequate and, for this reason, all concessions would be worked here.

In this way, there would be no differentiation of the objects of study by the number of employees, identifying possible discrepancies in the economic results of each company as limitations of the investigation. The following table 1, shows in detail the concessionaires that would be analysed in this investigation, whether the whole population would be considered.

Company	Dealer	Range	Locations
Aruncauto	Toyota	Generalist	Leiria Pombal
Ascendum	Volvo	Premium	Leiria
Auto-Industrial	Opel Isuzu	Generalist	Leiria
Bomcar	BMW MINI	Premium	Leiria
Caetano Auto	Toyota Lexus	Generalist Premium	Caldas da Rainha
Centro Porsche Leiria	Porsche	Premium	Leiria
Faria e Filhos	Suzuki	Generalist	Leiria
FH Rocha Marques	KIA	Generalist	Leiria
Grupo Auto Júlio	Hyundai Nissan Volvo Mazda Mitsubishi	Generalist Premium	Leiria Caldas da Rainha Pombal
Joaquim Gameiro	Renault Dacia	Generalist	Pombal
Leiribéria	SEAT	Generalist	Leiria
Lizauto	Renault Dacia	Generalist	Leiria Caldas da Rainha
Lizdrive	Ford	Generalist	Leiria Caldas da Rainha Pombal
Lizitalia	Fiat Abarth Jeep Alfa Romeo	Generalist Premium	Leiria Caldas da Rainha
LPM	Peugeot KIA Volvo	Generalist	Leiria Caldas da Rainha Pombal
Lubrigaz	Volkswagen Skoda	Generalist	Leiria Caldas da Rainha
Lubrisport	Audi	Premium	Leiria Caldas da Rainha
Meiricarro	Citroen	Generalist	Pombal
Ondal	Honda	Generalist	Leiria
SACEL	Citroen	Generalist	Leiria Caldas da Rainha
Silva & Santos	Renault Dacia	Generalist	Pombal
Sodicentro	Mercedes-Benz SMART	Premium	Leiria

Table 1. List of accredited car concessions in the district of Leiria.

Since the purpose of the present investigation is to study vehicle dealerships, it is expected that the population would be composed of all employees of the participating concessions. Based on the questionnaires sent, the total population was estimated at 130 people, when considering administrative services, sales, the parts sector, sheet metal services, quick services and maintenance.

Company	**Sample**	**Service Time (years)**		
		Leiria	Pombal	Caldas
Lizdrive	CEO	24		
	General Manager	12	12	12
	Sales Head		20	
	APV Head	18	15	2
	Parts Head	20	-	20
	Financial Manager	15		
LPM	CEO	24		
	General Manager	21		
	Sales Head	18	20	10
	APV Head	15	15	2
	Parts Head	20	-	20
	Financial Manager	15		

Table 2. Research sample.

When comparing the population with the sample, there are interesting conclusions to be drawn. It can be observed that the population (*N*) is given by the sum of the number of employees of all dealerships, which was 126 people, 93 at LPM and 33 at Lizdrive. These numbers were based on the number of workers reported in the magazine Região de Leiria, Edition 4350, which does not specify whether these workers are only from the district of Leiria or whether it also cover other districts. From the previous table, sampling size (*n*) can be given by the sum of the number of participating employees, which results in 12 people. When comparing the variables *N* and *n*, it is possible to define the type of population studied in this investigation. From a statistics standpoint, for *n* greater than or equal to 5% of *N*, we should have a population of finite type. Therefore, for a finite population, *n* must be at least 7 (0.05**N*), which is confirmed in this research. After defining the population and sampling, the data collection method responsible for acquiring the information regarding the sampling is studied in the following section, in order to identify leadership profiles and relate them to the economic results of each company.

5. RESEARCH RESULTS

The results obtained from testing hypotheses one and two are as follows. In relation to *H1*, which tested whether is there a direct relationship between attitudes of determination and economic results in automotive companies, the results can be observed in Table 3, shown below.

H1	**Company**	***Spearman* (between the average of determination responses and economic results)**	**Result**
Direct relationship between attitudes of determination and economic results in automotive companies	Lizdrive	0.189	Unconfirmed
	LPM	-0.154	Unconfirmed

Table 3: Hypothesis One Testing.

From the observation of Table 3, one can infer that it was not possible to obtain any statistical relationship between the type of management determined and the economic results of Lizdrive and LPM. According to the answers obtained for both companies, most of the sample is characterized as determined or balanced (when there is a balance between the characteristics of openness and determination). Therefore, it is also expected that there is no statistical relationship between the opening responses and the economic results, which will be discussed below. Concerning *H2*, which tested whether is there a direct relationship between opening attitudes and economic results in automotive companies, the results can be observed in Table 4, shown below.

H1	**Company**	***Spearman* (between the average of opening responses and economic results)**	**Result**
Direct relationship between opening attitudes and economic results in automotive companies	Lizdrive	0.584	Non-Rejected
	LPM	0.000	Unconfirmed

Table 4: Hypothesis Two testing.

From the observation of previous Table 4, showing hypothesis 2 testing results, was confirmed only for the company Lizdrive, with no statistical relationship for the responses obtained for the LPM. From the previous section, it was expected that there would be no statistical relationship between openness attitudes and economic results, as no open manager was identified in both companies. Furthermore, the characteristics of a balanced leader imply some similarity between the results for determination and openness. Therefore, similarly as in hypothesis 1, which was not fully satisfied; Hypothesis 2 should automatically not be fully satisfied as well. The following table justifies the statistical relationship between the mean determination and openness responses for both companies. Through it, it is noted that the average responses are directly related to each other, so they should similarly influence economic performance.

X	**Opening Average**	**Correlation**	**Company**
Determination Average	0.712	Yes (Direct)	Lizdrive
	0.648	Yes (Direct)	LPM

Table 5: Spearman correlation between average determination and openness responses for participating companies.

6. CONCLUSION

Due to the number of “determined” and “balanced” managers in the companies studied, it is noted that the attitudes of openness are less frequent when considerer in an isolated manner. However, they are not less relevant, since they are in balance with the attitudes of determination in practically 50% of the cases. From the sample collected, it can be concluded that employees who identify themselves more with attitudes of determination, or with both, in a balanced way, are more likely to assume leadership positions within Grupo Nov Automóveis. Given the size of the Group and its influence on the automotive market in Portugal, it can also be inferred that people who take more responsibility for themselves, and who prioritize attitudes of determination, or seek a balance between the two styles of leadership, are more likely to grow professionally in the automotive sector, more specifically in the car dealerships business.

From the statistical analyses carried out, there was a satisfactory statistical correlation only for the open leadership style, within the company Lizdrive, which exercises a direct influence on economic performance, although without full statistical robustness. Consequently, as more characteristics of openness are perceived, and as higher the level one observes among the managers of a company, then the greater are the economic results. It was expected that this outcome would be accompanied by the direct influence of the determined style on the economic results, as the leadership styles highlighted at Lizdrive company are considered to be "determined" and "balanced". As this later leadership style also brings strong influences from attitudes of openness, this discrepancy can be possible associated with the reduced size of the sample tested. Nevertheless, it was possible to test and partially accept Hypothesis 2.

AKNOWLEDGMENT: *This work was financially supported by the research unit on Governance, Competitiveness and Public Policy (**UIDB/04058/2020**) + (**UIDP/04058/2020**), funded by national funds through FCT - Fundação para a Ciência e a Tecnologia.*

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RESOLVING COMPLAINTS IN THE HOTEL WITH THE GOAL OF ACHIEVING GUEST SATISFACTION

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ABSTRACT

Modern hotel management strives to achieve service quality, due to the need to provide guests with the expected service that would encourage them to visit that hotel again or recommend it to their friends. The quality of service in hotels is an important criterion for the evaluation of a particular hotel, because of which guests continue to use the services of the same hotel in the future or do not return to that hotel. The aspect of quality is an important segment of marketing, considering that satisfied guests talk about their stay, experience the hotel and destination, and about the satisfaction of the service provided to their friends, relatives and acquaintances. On the other hand, dissatisfied guests do negative marketing to a hotel that did not meet their needs. The aim of this paper is to determine the factors of the hotel staff's approach to the dissatisfied guest, and the way of handling remarks and complaints based on the theory that satisfaction with the service in the hotel consists of two factors, one is responsible for avoiding dissatisfaction, while the other factor has a significant impact on creating satisfaction. The hypotheses that will be tested in the paper will indicate the impact of hotel service providers and their knowledge, experience and speed of resolving complaints and complaints on the satisfaction of service recipients.

Keywords**:** *standards in hotel industry, quality of hotel service, remarks and complaints, satisfaction of hotel guests*

1. INTRODUCTION

Successful hotels differ from less successful ones by the diversity of their offer and the quality of service they provide to hotel guests. Quality products and acceptable prices, as well as an individual approach to guests, is the most common reason why guests return to a certain hotel. Recipients of hotel services are willing to pay for good service. (Hayes and Ninemeier, 2005:33-34). An important part of a successful hotel policy is the manager's knowledge and way of managing the hotel. For the hotel business, it is important that the manager in his work:

- has clear visions of hotel development,
- define and develop an employee performance management strategy with the aim of improving service quality,
- define service standards that achieve guest satisfaction,
- take into account the approach to the employee and his satisfaction with working conditions, working atmosphere and elements of corporate culture,
- rewards the work and excellent results of hotel employees,
- hire, train staff and encourage teamwork with the aim of achieving service quality,
- insisting on the quality of relations with guests,
- insists on a friendly attitude towards guests,

- providing services using modern technology, but with an individual approach to each guest individually,
- adapt to trends in the world tourist market.

Achieving profit and reducing costs is usually the only guiding thread for most managers. This is important for the operation of the hotel company itself, but not crucial. Great importance must be given to achieving the quality of products and services with the goal of guest satisfaction. The hypotheses of the work are:

Hypothesis 1: The speed of resolving hotel guests' complaints increases their satisfaction.
Hypothesis 2: The knowledge and experience of hotel staff in handling complaints contributes to guest satisfaction with hotel service.

2. STANDARDS IN THE HOTEL INDUSTRY

Psychologically designed handling of complaints of all kinds is an extremely important item in dealing with guests and largely affects the overall image of the hotel directly, but also the image of the recalled destination. Tourism has become one of the most socially visible and unrecognizable phenomena of global modern culture, research on this specific form of mobility is quite rare today and often lacks conceptual and theoretical depth. Why do people travel? How were all these different forms of tourism, different forms of social needs, mobility and new orders created in the world? Why are tropical islands today, looking at them through tourist brochures, full of beautiful women, and not ethnology, culture? Which symbols and economic resources are being mobilized in tourism today, and which were activated before, in the past, at the very beginnings of tourism? What are all the meanings of terms, over time, such as nature tourism, culture tourism, ethics of tourism, indigenous tourism, etc.? Why is the peristyle in Split beautiful? Why is the amphitheater in Pula eternally interesting? Why do tourists often say that the place they visited looks like their home, but some hundred years ago? Who are the hosts in tourism, and what does it mean to accommodate tourists, care for tourists? How do hosts know what their guests need? Why do some nations and countries behave and are hospitable to some, but not all, people who want to visit them? Are guests always friends? Is it okay to share a meal with them? Or a drink? Or a bed? Or your cities, your customs, culture, heritage?

These and many other such questions define the complexity of the integrated tourist product, and thus the services in the hotel. People satisfy their needs and desires with products. Products include not only goods and services but also experiences, people, places, organizations, information and ideas. Based on the various tourist offers, consumers decide which event they want to experience, which tourist destinations they want to visit, in which hotels they will stay and in which restaurants they will eat. (Kotler, Bowen, Makens, 2010:15-16). According to Cerović (2010:135-137), a standard is a regulation, how something should look, a list of characteristics, what a material, product or service should have or satisfy. The standard is the prescribed quality that is offered. The application of standardization encouraged an increase in the quality of the offer, which instills security and protection in the guests, and enables the manager to optimize the organization. It also encourages better control, more efficient management systems, and leads to quality that generates higher profits. After the introduction of the standard, the hotel emphasizes its specificity and recognition. By introducing the standard, the guest is given security or a guarantee that he will receive the quality determined by the highlighted standard.

The process of hotel standards is a long-term procedure, which cannot be a one-time, or occasional, rather a constant process, which requires the teamwork of several types of experts, and standards are reached through several stages (Cerović, 2010:137):

- Prescribing standards,
- Education and training of all workers in the hotel, ranging from the cleaning lady to the director,
- Realization of standards - implementation and application in practice,
- Permanent control of compliance with standards and elimination of deviations,
- Improvement of standards and permanent education of staff and managers.

Standards are important in the education of hotel staff in order to achieve the appropriate level of service provision, but they should not be the only framework of behavior. Hotel employees should master the basic standards with an individual approach to each guest and in each individual situation. For the employees of the hotel, the prescribed standards enable simpler work, speed and dedication to the guests at the appropriate level and meeting their needs. The forms of the area of application of standards in the hotel industry determine the types of standards that are applied in the hotel industry and can be divided into the following areas (Avelini Holjevac, 1998:69):

1. Standards in the construction of hotel facilities,
2. Standards of equipment and devices of rooms and other rooms in hotels,
3. Standards of hotel work processes (procurement, production, service, sales)
4. Quality standards of catering products and hotel services,
5. Standards of communication and business ethics,
6. Hotel information system standards,
7. Personnel standards - work standards
8. Standards of hotel terminology and symbols,
9. Hotel management standards,
10. Ecological standards,
11. Safety and health standards,
12. Other standards.

Standards are always the basis of a hotel's business success, they enable lower costs, make the guest satisfied, encourage more rational business, which ultimately results in higher profits (Cerović, 2010:137). The implementation of hotel standards is aimed at achieving the best possible business result, whether it is about the quality of service provision, continuous improvement of the business processes of the hotel company, maintaining market share and achieving profit from business. There are numerous difficulties faced by modern hoteliers, and the application of standards enables service providers to identify everyday problems in hotel business, as well as developed standards that represent solutions to these same problems.
Problems encountered by hoteliers can be (Hayes and Ninemeier, 2005:35-40):

I. Business problems
Lack of workers. Almost all hoteliers are faced with the problem of a lack of sufficient quality workers, so they often resort to low-quality staff. Expense reduction. Hoteliers strive to reduce costs in all departments without affecting the quality of service.
II. Marketing problems
Hotels that are managed responsibly and properly will achieve an excellent result on the market. However, increasing competition makes it difficult to maintain market share, as well as constant changes in the tourist market.

Market segmentation is increasing. Certain hotels opt for certain market niches. There are those hotels that provide limited service either due to cost cutting or unskilled manpower.
Increased number of contents. Hotels offer numerous new facilities such as business and recreation centers, so it is difficult to maintain market share.
Increased consumer sophistication. Hoteliers are faced with a high level of competition due to better informed consumers. A large percentage of consumers book rooms online, but also leave reviews that influence future consumers.
Trademarks overlap. Problems arise when hotel franchise owners who offer limited service expand the number of their trademarked brands, then franchisees from the same owner become competitors to each other.

III. Technological problems - the latest technological achievements:

Technological achievements installed in the rooms, such as the menu review system, overall hotel offers, guest check-out, etc., do not necessarily leave a good impression on the guests due to less communication with the hotel staff. Data storage technologically enables hotel staff to creatively use guest data for marketing and sales purposes. The interactive reservation system allows potential guests to make a reservation in a short time at convenient prices.
Earnings management. Hotels exist to please their guests by optimizing room prices. When the demand for rooms is high, the discount price is not applied, however, when the demand is low, the discount price is applied. Technological achievements enable the application of earnings management, which predicts the demand for rooms and therefore projects the income from accommodation units.

IV. Economic problems

Due to the impact of globalization, today's economy is increasingly connected to economic conditions in other countries of the world. The accommodation industry is an integral part of the tourism industry. It is therefore affected by the total number of tourist trips within the country as well as the total number of trips in the world.

3. MARKETING IN HOSPITALITY AND HOTEL INDUSTRY

Consumers in tourism today, with limited resources and numerous desires, choose products that bring the most satisfaction for the money they are willing to spend. Consumers in tourism choose products that provide the greatest value for their money. They choose the integrated tourist product whose benefits seem the most satisfying, considering their wishes and limited possibilities. The basic lifestyle of people all over the world is the desire and demand for travel, hotel, relaxation and the like. In order to design adequate marketing strategies, information and an understanding of the wishes and needs of users of products and services are needed. (Kotler, Bowen, Makens, 2010:15-16).

Consumer behavior in tourism is the primary focus of every marketing activity and management of tourist destinations because tourism entities have realized that consumers do not always behave and react in accordance with their expectations. (Vuković, 2017:28). Hotel and hospitality marketing is a social management process by which individuals and groups get what they need and want through the creation and exchange of products and values with others (Kotler, Bowen, Makens, 2010:31). Guests most often choose the marketing offer that provides the greatest value. They compare the actual value of consuming the product with the expected value that affects their satisfaction. Their level of satisfaction will influence future behavior when using the service again. The total value for the guest is the sum of the total product, services, image value that the customer receives through the marketing offer. The total cost for the user of products and services is the sum of all monetary costs related to the costs of time, energy and physical costs that are related to the highlighted offer (Kotler, Bowen, Makens, 2010:389).

Vuković, (2017:28) believes that the purchase of products or services does not end with the act of purchasing a specific product or service, but in the last stage, subsequent evaluation. The experience with the purchased product or service is influenced by the consumer's decision on whether or not to repeat the purchase of the used product or service. Basic marketing principles are focused on guests with the goal of satisfying their wants and needs as well as satisfying the employees who serve the guests. Marketing, with its focus on the client, has become the job of every employee of a hotel company, regardless of the function the employee performs. The purpose of marketing is to produce value for hotel guests, but also to achieve the company's goals, including reducing costs and achieving profit for the company. The basic task of marketing specialists is to produce satisfaction and value for the user of products and services and at the same time to achieve the company's goals. (Kotler, Bowen, Makens, 2010:17-19).

3.1. Quality of service - orientation towards guests

The quality of service can be defined as matching the requested and desired quality of service, which corresponds to hotel standards (Cerović, 2010:153). Quality has a direct impact on the success of the product or service, that is, on the business result of the business entity. It is directly related to customer satisfaction and value. (Kotler, Bowen, Makens, 2010:19-20). The quality of service brings higher costs to the hotel business, but such an investment is usually profitable due to satisfied retained guests and higher occupancy. In order to achieve the satisfaction of hotel guests, it is important for service providers to adjust the offer of products and services according to the wishes and needs of guests. Such a relationship achieves a positive marketing result (Kerum, Vuković, Hunjet, 2021:6). However, when decisions are based on the hotel's needs in such a way as to try to achieve maximum income, reduce costs and implement the easiest solutions, without putting the quality of the offer in the foreground, then the service will be worse. will affect the hotel's long-term financial operations (Hayes and Ninemeier, 2005:34). Regardless of the fact that the hotel rooms look the same when the guests are sleeping, the fact is that the guest pays both for the product, i.e. the room, and for the services provided with the room. An excessive reduction in either the quality of the product or the service will affect the business, which will result in a decrease in the hotel's profit. (Hayes and Ninemeier, 2005:37). In order for service providers to provide quality service, their managers need to know how to motivate staff and convince them of the importance of providing quality service. It is important that they set a strategy for providing quality and that they know which models and procedures are used to achieve quality. It is necessary to have clear criteria by which the level of quality offered to guests is evaluated. A customer-centric company can always increase customer satisfaction by lowering its price or improving its services, but this may lead to lower profits. Hotel managers must be aware of the increasing competition on the market and the ever-expanding offer of hotel products and services in order to direct their way of management, as well as setting short-term and long-term business goals. In order to achieve competitiveness in the market, it is necessary for hotel managers to focus on achieving guest satisfaction, because this way of management leads to satisfied guests who are willing to pay the appropriate price for quality. The result of such business is the company's profit. The hotel management must find out what the guests' expectations are regarding the level of service quality. Differentiating hotel companies from the competition can only be achieved through higher quality products and services. The management of hotel companies that are oriented towards consumers have directed their business activities towards understanding the needs and wishes of guests and achieving their satisfaction. Successful managers know that the profit of a business entity should be understood as the result of good overall operations and not as the sole purpose of the company (Kotler, Bowen, Makens, 2010:6-7).

One of the biggest challenges for hotel management is to increase the value of their product on the market. In order to achieve a good result, managers must know their guests and understand what creates value for them. Hotel guests as well as competition change over time, so it is clear that it is a permanent process of creating value for consumers. Customer value is the difference between the benefits the customer receives from owning or using the product and the cost of acquiring the product. Product costs can be monetary or non-monetary. Consumer satisfaction depends on the perceived success of the product in relation to consumer expectations about the same product. If the product or service does not meet the consumer's expectations, he is dissatisfied. If the performance of the product or service is in line with expectations, the consumer is satisfied. When performance exceeds expectations, the guest is delighted. The goal of successful companies is to delight their guests by offering or promising only what they can fulfill, and then giving more than they offered and promised. (Kotler, Bowen, Makens, 2010:16-17). Quality control often implies backward control (comparison of what was achieved with what was desired), but forward control (control of offered quality) and comparative control (control of performance of activities) (Sikavica, Bahtijarević-Šiber, Vokić, 2008:822).
Quality management must satisfy the following: (Daft, 1997:641)

- Reflect the complete connection of management with the quality achieved by the company
- Be dedicated to the prevention of business processes, not their correction
- Focus on measuring the quality of service provided by using backlinks
- Reward quality achievement by encouraging and sanctioning staff
- Conduct quality training for all organizational levels
- Emphasize the importance of identifying problems and finding solutions
- Encourage innovation and continuous improvement
- Promote the activities of all members of the business entity
- Emphasize high standards of execution with zero errors
- Prepare reports on cost savings and work on them without affecting quality.

The establishment of a formal quality policy by management is crucial for successful quality management because only then will employees not establish their own policies. Effective quality management starts at the top, not in the quality department (Crosby, 1989:123)

4. OBJECTIONS AND COMPLAINTS

Consumer satisfaction and dissatisfaction represent positive or negative feelings about the selected product or service. They appear after the realized experience. Guests are attracted and retained so that their needs are met. Not only do they return to the same hotel or restaurant, but they also tell others about their satisfaction in a positive way. (Kotler, Bowen, Makens, 2010:6). Objections and complaints are an example of customer dissatisfaction. When the client is dissatisfied, it can result in several forms of complaints from the guests. Guest complaints can be verbal reactions (expressed dissatisfaction directly to the hotel staff), private reactions (expressing negative opinions about the hotel in front of friends) and reactions to a third party (referring complaints to agencies or even taking legal measures). Service providers must be aware that dissatisfied guests convey their experiences and opinions to more people than satisfied guests. Likewise, oral personal messages and expressing opinions can be very influential and persuasive (Kerum, Vuković, Hunjet, 2021:7). When it comes to achieving hotel guest satisfaction, all details matter, details make the difference. It is important for the staff who are in direct communication with the guests to try to help the guest in every situation they find themselves in.

It is important that the hotel staff act in accordance with the set standards and that, with knowledge and dedicated work, they contribute to the provision of quality service by politely addressing guests, taking care of their appearance and tidiness, sincere kindness, and endeavoring to resolve objections and complaints if they arise.

5. RESEARCH METHODOLOGY

The research was conducted through descriptive analysis in the 2021 season and the pre-season of 2022. A total of 299 respondents were questioned regarding their satisfaction with the hotel service. Below are the basic characteristics of the respondents from the sample. Descriptive analysis was performed in the SPSS program, version 23. Out of a total of 299 respondents, 294 of them declared their gender. Among those who declared (n=294), the majority are women, namely 55.44%, while 44.56% are men.

Table 1. *Respondents by gender*

Sex	n	%	valid %
M	131	43.81	44.56
F	163	54.52	55.44
Total valid	**294**	**98.33**	**100.00**
It's missing	5	1.67	
In total	**299**	**100.00**	

Source: creation of the author

Regarding the age of the respondents, 296 of them gave an answer. The largest share of respondents is between the ages of 26 and 35 (25%). Cumulatively, the largest share falls on respondents aged 26 to 45, and that's almost half of the sample (46.62%). More than half of the sample (57.09%) of respondents is 45 years old or younger. Therefore, it can be concluded that the relatively younger part of the population in the sample prevails. However, the smallest and equal share is made up of the age groups 16-25 and 56-65 (10.37%).

Table 2. *Respondents by age*

Age	n	%	valid %	cumulative %
16-25	31	10.37	10.47	10.47
26-35	74	24.75	25.00	35.47
36-45	64	21.40	21.62	57.09
46-55	47	15.72	15.88	72.97
56-65	31	10.37	10.47	83.45
65+	49	16.39	16.55	100.00
Total valid	**296**	**99.00**	**100.00**	
It's missing	3	1.00		
In total	**299**	**100.00**		

Source: creation of the author

In the structure of the respondents according to schooling, respondents who have completed college predominate (36.91%), while the smallest share is those with the lowest, i.e. elementary, level of education (3.02%). The proportion of respondents with a master's degree is also relatively high (23.15%), which indicates the fact that highly educated respondents predominate in the sample. One respondent did not give an answer to this question regarding the age of the respondent, 296 of them gave an answer.

Table 3. *Respondents according to school preparation*

School readiness	n	%	valid %	cumulative %
elementary school	9	3.01	3.02	3.02
secondary school, vocational school	53	17.73	17.79	20.81
high school	43	14.38	14.43	35.23
college	110	36.79	36.91	72.15
master's degree	69	23.08	23.15	95.30
doctorate	14	4.68	4.70	100.00
Total valid	**298**	**99.67**	**100.00**	
It's missing	1	0.33		
In total	**299**	**100.0**		

Source: creation of the author

According to the number of overnight stays in the selected accommodation, respondents with the lowest number of overnight stays, i.e. 1-3 overnight stays, predominate, and they make up half of the sample (50.34%). By increasing the number of overnight stays, the number of respondents decreases, which indicates the fact that the majority of respondents in the sample mostly spent shorter nights in the selected accommodation.

Table 4. *Respondents according to the number of nights in the selected accommodation*

Number of nights in the selected accommodation	n	%	valid %	cumulative %
1-3 overnight stays	148	49.50	50.34	50.34
4-7 overnight stays	102	34.11	34.69	85.03
8-14 overnight stays	35	11.71	11.90	96.94
More than 14 overnight stays	9	3.01	3.06	100.00
Total valid	**294**	**98.33**	**100.00**	
It's missing	5	1.67		
In total	**299**	**100.00**		

Source: creation of the author

Respondents gave multiple answers to the question of what is their most common motive when choosing a tourist destination. Different respondents gave different answers, but for the majority of respondents rest and relaxation alone or in combination with other reasons is the primary motive when choosing a tourist destination. This is followed by cultural activities and the beauty of nature and landscape.

Table 5. *Respondents according to the most common motive when choosing a tourist destination*

(Table follows on next three /3/ pages)

What is your most common motive when choosing a tourist destination?	n	%	valid %
gastronomic offer	6	2.01	2.02
gastronomic offer, beauty of nature and landscape	2	0.67	0.67
gastronomic offer, beauty of nature and landscape, cultural content, appropriate ratio of price and quality of hotel accommodation and other facilities	1	0.33	0.34
gastronomic offer, shopping, sports content, hobby, entertainment and new experience	1	0.33	0.34
gastronomic offer, health content, hobby	1	0.33	0.34
hobby	5	1.67	1.68
cultural content	25	8.36	8.42
cultural content, entertainment and a new experience	1	0.33	0.34
the beauty of nature and landscape	23	7.69	7.74
beauty of nature and landscape, cultural content	4	1.34	1.35
beauty of nature and landscape, cultural content, hobby	1	0.33	0.34
the beauty of nature and landscape, cultural content, appropriate price-quality ratio of hotel accommodation and other facilities, entertainment and new experiences	1	0.33	0.34
the beauty of nature and landscape, the appropriate ratio of price and quality of hotel accommodation and other facilities	3	1.00	1.01
beauty of nature and landscape, shopping	1	0.33	0.34
the beauty of nature and landscape, sports content, hobby, appropriate price-quality ratio of hotel accommodation and other facilities, entertainment and new experiences	1	0.33	0.34
the beauty of nature and landscape, sports content, appropriate price-quality ratio of hotel accommodation and other facilities, entertainment and new experiences	1	0.33	0.34
the beauty of nature and landscape, fun and a new experience	1	0.33	0.34
appropriate ratio of price and quality of hotel accommodation and other facilities	9	3.01	3.03
appropriate ratio of price and quality of hotel accommodation and other facilities, entertainment and a new experience rest and relaxation	1	0.33	0.34

rest and relaxation, gastronomic offer	89	29.77	29.97
rest and relaxation, gastronomic offer, beauty of nature and landscape, cultural content	1	0.33	0.34
rest and relaxation, gastronomic offer, beauty of nature and landscape, cultural content	1	0.33	0.34
rest and relaxation, gastronomic offer, the beauty of nature and landscape, the appropriate relationship between the price and quality of hotel accommodation and other facilities	2	0.67	0.67
rest and relaxation, gastronomic offer, sports content, entertainment and new experiences	1	0.33	0.34
rest and relaxation, gastronomic offer, sports content, entertainment and new experiences	1	0.33	0.34
rest and relaxation, hobby	1	0.33	0.34
rest and relaxation, cultural content	1	0.33	0.34
rest and relaxation, cultural content, appropriate ratio of price and quality of hotel accommodation and other contents	2	0.67	0.67
rest and relaxation, cultural content, appropriate ratio of price and quality of hotel accommodation and other facilities, other	1	0.33	0.34
rest and relaxation, cultural content, entertainment and a new experience	2	0.67	0.67
rest and relaxation, beauty of nature and landscape	9	3.01	3.03
rest and relaxation, the beauty of nature and landscape, hobbies, the appropriate relationship between the price and quality of hotel accommodation and other facilities	1	0.33	0.34
rest and relaxation, beauty of nature and landscape, cultural content, entertainment and new experiences	3	1.00	1.01
rest and relaxation, the beauty of nature and landscape, the appropriate relationship between the price and quality of hotel accommodation and other facilities	3	1.00	1.01
rest and relaxation, the beauty of nature and landscape, the appropriate relationship between the price and quality of hotel accommodation and other facilities, entertainment and new experiences	4	1.34	1.35
rest and relaxation, beauty of nature and landscape, shopping	1	0.33	0.34
rest and relaxation, the beauty of nature and landscape, shopping, cultural content, the appropriate relationship between the price and quality of hotel accommodation and other facilities, entertainment and new experiences	1	0.33	0.34

rest and relaxation, the beauty of nature and landscape, shopping, entertainment and new experiences	1	0.33	0.34
rest and relaxation, beauty of nature and landscape, sports content	1	0.33	0.34
rest and relaxation, the beauty of nature and landscape, sports content, appropriate ratio of price and quality of hotel accommodation and other facilities	2	0.67	0.67
rest and relaxation, the beauty of nature and landscape, sports content, appropriate ratio of price and quality of hotel accommodation and other facilities, entertainment and new experience	3	1.00	1.01
rest and relaxation, the beauty of nature and landscape, fun and a new experience	3	1.00	1.01
rest and relaxation, appropriate ratio of price and quality of hotel accommodation and other facilities	1	0.33	0.34
rest and relaxation, appropriate price-quality ratio of hotel accommodation and other facilities, entertainment and new experiences	1	0.33	0.34
rest and relaxation, work, gastronomic offer	1	0.33	0.34
rest and relaxation, visiting friends/relatives	5	1.67	1.68
rest and relaxation, visiting friends/relatives, gastronomic offer, beauty of nature and landscape	1	0.33	0.34
rest and relaxation, visiting friends/relatives, cultural content, entertainment and new experiences	1	0.33	0.34
rest and relaxation, shopping, appropriate price-quality ratio of hotel accommodation and other facilities	1	0.33	0.34
rest and relaxation, shopping, other	1	0.33	0.34
rest and relaxation, shopping, health content, sports content, the appropriate relationship between the price and quality of hotel accommodation and other content, entertainment and new experiences	1	0.33	0.34
rest and relaxation, sports content, cultural content, hobby, entertainment and new experiences	1	0.33	0.34
rest and relaxation, sports content, entertainment and new experiences	1	0.33	0.34
the rest	1	0.33	0.34
the job	12	4.01	4.04
visiting friends/relatives	11	3.68	3.70
visiting friends/relatives, shopping	1	0.33	0.34
shopping	4	1.34	1.35
sports content	2	0.67	0.67
fun and a new experience	25	8.36	8.42
fun and a new experience, other things	1	0.33	0.34

health content	3	1.00	1.01
Total valid	**297**	**99.33**	**100.00**
It's missing	2	0.67	
In total	**299**	**100.00**	

Source: creation of the author

Observing the respondents according to the level of personal monthly income, it can be concluded that more than half of the respondents have a monthly income of up to 2000 euros (59.51%). The largest share of respondents are with monthly incomes from 1,001 to 2,000 euros (40.49%), while the least number of respondents are with incomes up to 500 euros (4.58%). Cumulatively, the sample also includes 40.49% of respondents with incomes of 2001 and more euros. The above data indicate a relatively high standard of living of the respondents in the sample.

Table 6. *Respondents according to personal monthly income*

Personal monthly income	n	%	valid %	cumulative %
To 500 EUR	13	4.35	4.58	4.58
501 – 1.000 EUR	41	13.71	14.44	19.01
1.001 – 2.000 EUR	115	38.46	40.49	59.51
2.001 – 3.000 EUR	61	20.40	21.48	80.99
More than 3.000 EUR	54	18.06	19.01	100.00
Total valid	**284**	**94.98**	**100.00**	
It's missing	15	5.02		
In total	**299**	**100.00**		

Source: creation of the author

According to the frequency of stay in the hotel, as many as 41.46% of the respondents are only in the hotel for the first time, followed by those who have stayed in the hotel 2-5 times (37.28%). 37 respondents, i.e. 12.89% of them, stayed in the hotel more than 10 times. In general, it can be concluded that the vast majority of respondents (78.75%) stayed in the hotel 5 times or less.

Table 7. *Respondents according to frequency of stay in the hotel*

Frequency of hotel stays	n	%	valid %	cumulative %
it's my first time in a hotel	119	39.80	41.46	41.46
2-5 times	107	35.79	37.28	78.75
6-10 times	24	8.03	8.36	87.11
more than 10 times	37	12.37	12.89	100.00
Total valid	**287**	**95.99**	**100.00**	
It's missing	12	4.01		
In total	**299**	**100.00**		

Source: creation of the author

Furthermore, the respondents had to answer the question of how many times they had been on a trip longer than three days in the last 12 months. 289 out of 299 respondents answered the above question.

The largest share of respondents (44.64%) was on a trip longer than three days in the last 12 months 2-5 times, and slightly less of them (42.91%) not once or once. Cumulatively, this makes up to 87.54% of respondents who have been on this type of trip up to 5 times. It can be concluded that the majority of respondents did not prefer trips longer than 3 days more than 5 times in the last 12 months from the moment of the survey.

Table 8. *Respondents by frequency of trips longer than three days in the last 12 months*

How many times have you traveled for more than three days in the last 12 months?	n	%	valid %	cumulative %
0 – 1	124	41.47	42.91	42.91
2 – 5	129	43.14	44.64	87.54
6 – 10	26	8.70	9.00	96.54
11- 15	5	1.67	1.73	98.27
more than 16	5	1.67	1.73	100.00
Total valid	**289**	**96.66**	**100.00**	
It's missing	10	3.34		
In total	**299**	**100.00**		

Source: creation of the author

The largest number of respondents (23.59%) believe that the wealth of cultural heritage makes a rich and varied offer that distinguishes high-quality from less-quality tourist destinations. In addition, a relatively similar number of respondents believe that the difference in the quality of destinations is determined by the offer of tourist excursions (16.20%), the wealth of natural heritage (15.14%) and activities that contribute to the preservation of the natural environment (14.44%). The least number of respondents (2.82%) believe that the respect and implementation of ecological standards is crucial in differentiating higher and lower quality destinations.

Table 9. *Respondents according to their attitude about the offer that distinguishes high-quality tourist destinations from low-quality ones*

A high-quality tourist destination differs from a lower-quality tourist destination by its rich and varied offer	n	%	valid %
activities that contribute to the preservation of the natural environment	41	13.71	14.44
tourist trips	46	15.38	16.20
wealth of cultural heritage	67	22.41	23.59
wealth of natural heritage	43	14.38	15.14
availability of sports and recreational facilities	29	9.70	10.21
respecting and implementing ecological standards	8	2.68	2.82
by the price level in the destination	29	9.70	10.21
protection and safety of tourists	21	7.02	7.39
Total valid	**284**	**94.98**	**100.00**
It's missing	15	5.02	
In total	**299**	**100.00**	

Source: creation of the author

As for preferences for the type of accommodation in the chosen destination, as many as 80.60% of respondents prefer hotels, while private accommodation (13.04%) comes second. The least respondents prefer camps or other types of accommodation.

Table 10. *Respondents according to the preferences of the type of accommodation*

What type of accommodation do you prefer the most?	n	%	valid %
Hotel	241	80.60	82.53
Hostel	9	3.01	3.08
Private accomodation	39	13.04	13.36
Camp	2	0.67	0.68
The rest	1	0.33	0.34
Total valid	**292**	**97.66**	**100.00**
It's missing	7	2.34	
In total	**299**	**100.00**	

Source: creation of the author

Hypotheses of the work:

Hypothesis H1: The speed of resolving hotel guests' complaints increases their satisfaction.
Hypothesis H2: The knowledge and experience of hotel staff in handling complaints contributes to guest satisfaction with hotel service.

Structural equation modeling (SEM) was used to test the hypotheses. SEM is a multivariate technique that combines aspects of factor analysis and multiple regression. It enables the simultaneous examination of a series of interrelated dependence relationships of manifest variables (indicators) and latent variables, as well as between several latent variables (Hair et al., 2010). One of the essential characteristics and advantages of this methodology is manifested precisely in the ability to display and include latent variables in the model, which cannot be measured directly. Such variables are measured through manifest variables (indicators) that are previously collected using different methods (surveys, tests, etc.). This is exactly the case in this research, where the main variables are the speed of resolving complaints, the knowledge and experience of the hotel staff, and the satisfaction of guests. The mentioned variables cannot be measured directly, but were measured through a survey questionnaire, where for each variable, i.e. construct, there is a certain number of indicators that determine it. The research model simultaneously observes the impact of complaint resolution speed (BRP) and the knowledge and experience of hotel staff (OS) on guest satisfaction (ZAD). The speed of resolving complaints was measured using three indicators, the knowledge and experience of hotel staff using 36 indicators, and guest satisfaction using 22 indicators. Almost all the proposed indicators were included in the final model, except for one indicator related to BRP, which actually refers to the survey questions with which the respondents reflected their attitude towards the mentioned concepts. The indicators are therefore presented as a Likert scale from 1 to 5, where the value 1 indicates complete disagreement and the value 5 indicates complete agreement with the statement. Taking into account the nature of the indicators themselves, i.e. the manifest variables used to measure the constructs, the robust WLSMV (mean and variance adjusted weighted least squares) method, developed for categorical and ordinal variables, was used. The Mplus program, version 7, was used to perform the SEM analysis. The first part of the analysis refers to the measurement model, i.e. the analysis of convergent validity and reliability of the constructs in the model.

The indicators used are average variance extracted (AVE), construct reliability (CR) and Cronbach's alpha coefficient. Table 15 gives explanations of the indicators (survey questions) of the final model with their abbreviations, which will be used in the continuation of the analysis. It can be noted that with the knowledge and experience of the hotel staff, as well as with guest satisfaction, the expectation and experience of certain determinants of the mentioned variables were examined, in order to actually see whether the expectations of the guests in the selected accommodation were met.

Table 11. *Indicators of constructs in the model*
(Table follows on next two /2/ pages)

Speed of resolution of complaints (BRP)	
BRP1	In your opinion, how important is communication and ways to resolve possible objections or complaints in the hotel?
BRP2	In your opinion, how important is the employee's sympathy for a complaint or objection and the intention to solve the problem?
Knowledge and experience of the hotel staff (OS)	
OS 1	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The attitude of the hotel staff towards the guests is friendly, open, positive, accompanied by a smile
OS 2	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The attitude of the hotel staff towards the guests is friendly, open, positive, accompanied by a smile
OS 3	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The hotel staff was always ready to provide information and help solve any problem
OS 4	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The hotel staff was always ready to provide information and help solve any problem
OS 5	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The hotel employees are reliable and I have full confidence to turn to them and entrust the problem
OS 6	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The hotel employees are reliable and I have full confidence to turn to them and entrust the problem
OS 7	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) Hotel employees perform their work responsibly
OS 8	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) Hotel employees perform their work responsibly
OS 9	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The staff is trained and professional in performing their tasks
OS 10	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The staff is trained and professional in performing their tasks
OS 11	When choosing hotel accommodation in a tourist destination, evaluate the importance of the above elements (My expectations) Hotel employees look neat and professional
OS 12	When choosing hotel accommodation in a tourist destination, rate the importance of the above elements (My experience) Hotel employees look neat and professional
OS 13	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The waiting time for a particular service is appropriate
OS 14	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The waiting time for a particular service is adequate
OS 15	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The staff speaks/communicates in several languages
OS 16	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The staff speaks/communicates in several languages
OS 17	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I got the impression that the staff (who are in direct contact with the guests) are competent

OS 18	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I got the impression that the staff (who are in direct contact with the guests) are competent
OS 19	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I have the impression that the staff work with a lot of enthusiasm and are dedicated and committed to the work they do.
OS 20	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I have the impression that the staff work with a lot of enthusiasm and are dedicated and committed to the work they do.
OS 21	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) Hotel employees provide complete and accurate information about events, attractions and events in the destination
OS 22	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) Hotel employees provide complete and accurate information about events, attractions and events in the destination
OS 23	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) Special attention is given to each guest
OS 24	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) Special attention is given to each guest
OS 25	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The staff knows the traditions, customs and history of the place
OS 26	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The staff knows the traditions, customs and history of the place
OS 27	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The staff gives useful advice on additional activities
OS 28	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The staff gives useful advice on additional activities
OS 29	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The staff is familiar with the local gastronomy
OS 30	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The staff is familiar with the local gastronomy
OS 31	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The hotel staff has an individual approach to the guest
OS 32	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The hotel staff has an individual approach to the guest
OS 33	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The mutual communication of the staff is direct and effective
OS 34	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The mutual communication of the staff is direct and effective
OS 35	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) The staff is trained and sufficiently equipped to perform a specific job
OS 36	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) The staff is trained and sufficiently equipped to perform a specific job
Guest satisfaction (ZAD)	
ZAD1	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the decoration, equipment, quality of equipment and cleanliness of the room
ZAD2	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the decoration, equipment, quality of equipment and cleanliness of the room
ZAD3	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the decoration, equipment, quality of equipment and cleanliness of the bathroom
ZAD4	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the decoration, equipment, quality of equipment and cleanliness of the bathroom
ZAD5	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the decoration, equipment, quality of equipment and cleanliness of the room

ZAD6	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the decoration, equipment, quality of equipment and cleanliness of the room
ZAD7	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the decoration, equipment, quality of equipment and cleanliness of all common areas
ZAD8	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the decoration, equipment, quality of equipment and cleanliness of all common areas
ZAD9	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the appearance and equipment of the restaurant
ZAD10	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the appearance and equipment of the restaurant
ZAD11	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the variety of drinks offered in the hotel bar
ZAD12	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the variety of drinks offered in the hotel bar
ZAD13	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the local gastronomic offer of meals in the hotel's restaurant
ZAD14	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the local gastronomic offer of meals in the hotel's restaurant
ZAD15	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the food in the hotel, which is tasty and well presented
ZAD16	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the food in the hotel, which is tasty and well presented
ZAD17	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the quality of the food
ZAD18	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the quality of the food
ZAD19	When choosing a hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the offer of entertainment
ZAD20	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the offer of entertainment
ZAD21	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My expectations) I am satisfied with the offer of other hotel facilities
ZAD22	When choosing hotel accommodation in a tourist destination, evaluate the importance of the mentioned elements (My experience) I am satisfied with the offer of other hotel facilities

Source: creation of the author

Table 12 shows the results of convergent validity and reliability of the model constructs. It can be seen that all standardized factor loadings are extremely high, above 0.7 and are statistically significant at a significance level of 1%, indicating the fact that they well reflect the construct they measure. The values of the AVE indicators for all constructs in the model are satisfactory, given that they exceed the value of 0.5, therefore each construct explains more than 50% of the variance in its indicators.

The CR indicator can also provide a conclusion on convergent validity, as well as on the reliability of the construct. Its values are above the recommended 0.7 and are extremely high, so it can be concluded that reliability is satisfied and that all indicators in the model consistently represent the appropriate latent construct. Reliability was tested with Cronbach's alpha coefficient, which for all three constructs is extremely high and above the limit of 0.7, thus confirming the internal consistency of the indicators of all observed constructs in the model. All three analyzed indicators lead to the conclusion that all indicators explain well the constructs they represent in the model.

Table 12. *Results of the analysis of convergent validity and reliability of the constructs (Table ends on the next page)*

	Standardized *factor loading*	**AVE**	**CR**	**Cronbach's alpha**
Complaint resolution speed (BRP)				
BRP1	0.859**	0.708	0.829	0.786
BRP3	0.823**			
Knowledge and experience of hotel staff (OS)				
OS1	0.742**	0.683	0.987	0.993
OS2	0.782**			
OS3	0.814**			
OS4	0.829**			
OS5	0.853**			
OS6	0.831**			
OS7	0.867**			
OS8	0.867**			
OS9	0.846**			
OS10	0.871**			
OS11	0.853**			
OS12	0.795**			
OS13	0.813**			
OS14	0.825**			
OS15	0.814**			
OS16	0.829**			
OS17	0.823**			
OS18	0.798**			
OS19	0.850**			
OS20	0.848**			
OS21	0.865**			
OS22	0.806**			
OS23	0.846**			
OS24	0.797**			
OS25	0.851**			
OS26	0.783**			
OS27	0.857**			
OS28	0.821**			

OS29	0.873**			
OS30	0.829**			
OS31	0.869**			
OS32	0.834**			
OS33	0.822**			
OS34	0.810**			
OS35	0.776**			
OS36	0.748**			
Guest satisfaction (ZAD)				
ZAD1	0.827**	0.686	0.980	0.988
ZAD2	0.788**			
ZAD3	0.836**			
ZAD4	0.862**			
ZAD5	0.851**			
ZAD6	0.823**			
ZAD7	0.802**			
ZAD8	0.833**			
ZAD9	0.862**			
ZAD10	0.849**			
ZAD11	0.860**			
ZAD12	0.834**			
ZAD13	0.865**			
ZAD14	0.852**			
ZAD15	0.848**			
ZAD16	0.811**			
ZAD17	0.804**			
ZAD18	0.832**			
ZAD19	0.788**			
ZAD20	0.758**			
ZAD21	0.827**			
ZAD22	0.799**			
*** significantly at level 0.01*				

Source: creation of the author

In the following, discriminant validity was tested according to the Fornell-Larcker criterion, in order to determine whether each construct is truly different from the others. Table 13 shows the results of the analysis. The table represents the correlation matrix between the constructs, while the values on the diagonal are the values of the second root of each relevant AVE indicator. Given that the values on the diagonal are higher than the correlation coefficients in the relevant rows and columns for each construct, it can be concluded that there is no problem of discriminant validity. In other words, each of the listed constructs is truly different from the other constructs in the model and measures a separate concept.

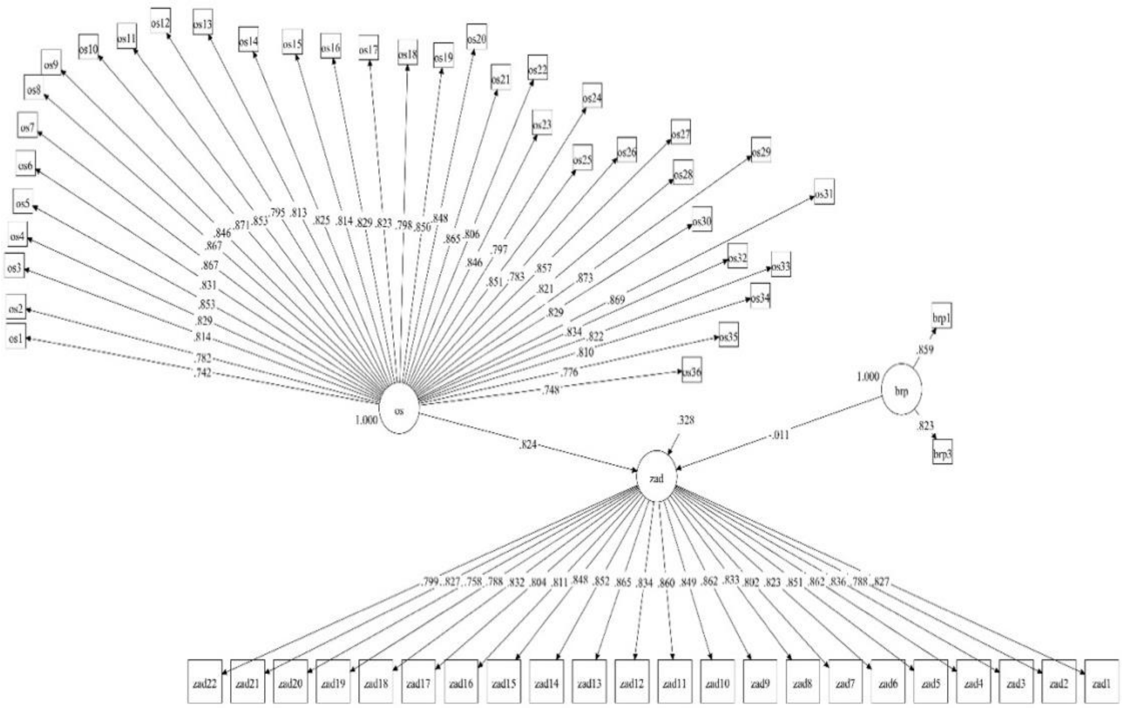
Table 13. *Results of discriminant validity analysis*

	BRP	OS	ZAD
BRP	**0.841**		
OS	0.341	**0.827**	
ZAD	0.270	0.820	**0.828**

Source: creation of the author

As previously mentioned, the constructs in the research model are complaint resolution speed (BRP), hotel staff knowledge and experience (OS), and guest satisfaction (ZAD). ZAD represents the main dependent variable, i.e. an endogenous construct, while BRP and OS are exogenous constructs and play the role of independent variables in the model. At the same time, the influence of BRP and OS on ZAD was observed, as well as the relationship between the two independent variables BRP and OS. Table 14 shows the results of the structural model and its adjustment indicators.

The chi-square value is statistically significant (p-value ≤ 0.001), which indicates an unfavorable result. However, given that this indicator is known to be sensitive to sample size, its value may be influenced by this. Therefore, further adaptation indicators are examined. The root mean square error of approximation (RMSEA) is 0.085, which is an acceptable result, i.e. the model estimation error is not significantly high. In addition, the comparative fit index (CFI) and the Tucker Lewis index (TLI) exceed the limit of 0.90, which indicates a good fit of the model (CFI=0.914 and TLI=0.910). It is concluded that all measures, except the chi-square, show that the model is suitable.



Picture 1. Path diagram with standardized coefficients

Source: creation of the author

Structural coefficients, i.e. connections between constructs, are also shown in Table 14 with associated p-values. It can be seen that BRP does not have a statistically significant effect on ZAD, while OS has a positive statistically significant effect on ZAD. In addition, OS and BRP were also significantly positively correlated. From these results, it can be concluded that hypothesis H1 cannot be accepted: The speed of resolving hotel guests' complaints increases their satisfaction. Namely, the model shows a negative influence of the speed of resolving complaints on guest satisfaction, but this influence is certainly insignificant and statistically insignificant, which is why the hypothesis is rejected. On the other hand, hypothesis H2: The knowledge and experience of hotel staff in handling complaints contributes to guest satisfaction with hotel service can be accepted. The SEM model shows an extremely high positive influence of the knowledge and experience of hotel staff on guest satisfaction, which is statistically significant at a significance level of 1%. This result points to the fact that guests who evaluate the expectations and experiences of the hotel staff positively in terms of their knowledge, experience and actions, consequently achieve a higher level of satisfaction with their stay in the hotel. In addition, one can also comment on the existence of a positive statistically significant two-way relationship, i.e. the correlation between the speed of resolving complaints and the knowledge and experience of the hotel staff. She indicates that the fact that guests who evaluate the expectations and experiences of the hotel staff more positively also consider the communication, manner and compassion of the staff to be more important when dealing with complaints.

Table 14. *Results of the structural model with adjustment indicators*

Assumed relationship	Standardized coefficients	p-value
BRP $\rightarrow$ ZAD	-0.011	0.768
OS $\rightarrow$ ZAD	0.824	<0.001
OS $\leftrightarrow$ BRP	0.341	<0.001
χ^2 = 5221.627, p-value ≤0.001, RMSEA (90% C.I.) = 0.085 (0.082-0.087), CFI=0.914, TLI= 0.910		

Source: creation of the author

The described connections of the estimated model are shown through the so-called path diagram in Figure 1. Circles represent constructs, while squares indicate their associated indicators, which in this case are survey questions. On the arrows that move from the construct to the indicators, the values of the standardized factor loadings are indicated, and on the arrows that move from one construct to the other, there are the values of the structural coefficients. The endogenous construct ZAD also has an error component shown, which amounts to 0.328, and from its value the coefficient of determination for the same construct can be obtained, whose value is then 0.672. This coefficient shows how much of the variance (67.2%) of the dependent construct is explained by the set of independent constructs. In other words, BRP and OS explain 67.2% of the variance of the construct ZAD.

6. CONCLUSION

As hotels belong to the service industry, the perceived quality of service has always been considered an essential component, i.e. factor of consumer satisfaction. Getting to know and understanding these relationships is especially important for hotels. Consumer satisfaction in tourism, and the related concept of service quality, are important factors in achieving the hotel's long-term goals, which results in the need to constantly research defined relationships and propose appropriate solutions. Quality begins with the needs of hotel guests and ends with their satisfaction. It has been proven that there is a direct link between the quality of the product and the operational financial performance of the hotel.

The goal is to exceed the expectations of hotel guests in terms of the product obtained and the quality of the service provided. A hotel thrives if business decisions are based on the needs and satisfaction of hotel guests. If the hotel's guests experience a service that exceeds their expectations, the guest will be delighted and these guests will very likely use the same hotel's services again. The best measure of quality is satisfied guests who return to the same service provider.

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CONSISTENCY PRINCIPLE OF ACCOUNTING POLICIES IN HOTEL COMPANIES

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ABSTRACT
The principle of consistency is considered an important element of accounting policy, as it affects the information published in the notes to the financial statements which is necessary for decision-making. By consistently following accounting policies, companies record processes or transactions based on the same accounting methods cotinuously from one accounting period to the next, making accounting information comparable and useful, which is an important qualitative characteristic of financial statements. The purpose of this paper is to investigate the consistency of accounting policies published in the notes to the financial statements over a period of 10 years (from 2011 to 2020) for the Croatian hotel companies that publish their shares on the financial markets. Data on accounting policies were collected from publicly available notes to financial statement, and content analysis was performed. The research results show that Croatian Hotel companies consistently apply accounting policies and disclose them in the notes to the financial statements in order to provide stakeholders with important information for decision making. Regarding the content of applied accounting policies in hotel companies, it is suggested that the information on accounting policies in the notes to the financial statements should be presented more concisely, systematically and clearly in order to meet the requirements of stakeholders and improve the standardization of the accounting framework for hospitality industry.
Keywords*: consistency principle, accounting policy, notes to financial statements, hotel companies*

1. INTRODUCTION

The purpose of financial statements is to inform various stakeholders on the results of operations, financial position and cash flows of a business in a standardized form so that they can make business decisions. The financial statements are accompanied by explanatory notes to financial statements that disclose, in a non standardized form, additional material information about the items and significant accounting policies presented in the financial statement. Evaluating the quality of financial statements and their explanatory notes raises the question of how their quality can be measured and improved to meet the specific needs of users. In this context the accounting principles have been established as the rules and guidelines that must be followed to ensure that the information in the financial statements is understandable, relevant, reliable and comparable. International financial reporting standards have also been developed on the basis of the accounting principles to improve the relevance, clarity, reliability and comparability of financial statements worldwide.

Qualitative characteristics are attributes that, taken together, form useful accounting information for stakeholders published in financial statements. Among them, comparability is the qualitative characteristic directly related to the principle of consistency of the applied accounting policies in the financial statements. Comparing financial statements that apply consistent accounting policies of a company over time and in relation to other company enable better assessment of one's business. Any changes in accounting policies and their impact on the financial statements should be disclosed and additionally explained in the notes to the financial statements.

This directly leads to inconsistencies in the financial statements from one period to another, but is unavoidable because International Accounting Standard 8 (IAS 8) – *Accounting Policies, Changes in Accounting Estimates and Errors,* allows changes in accounting policies when changes in accounting standards have been introduced or when there have been improvements in the reporting of more reliable and useful information (IFRS, 2017). IAS 8 also requires compliance with other International Financial Reporting Standards (IFRSs) applicable to transactions, events or conditions and provides guidance on the development of accounting policies and error corrections to provide relevant and reliable information to stakeholders. Consistency of accounting policies was not of interest to academic research because there were other, more important questions about the quality of financial statements. With this research, we wanted to answer the research question of whether hotel companies that are required to apply IFRS consistently apply accounting policies over a 10-year period and if so, what improvements and uniformity of their presentation in the part of the Notes to financial statements can be achieved. We also wanted to contribute to scientific research related to accounting policies in the hospitality industry by proposing improvements in the financial reporting in the hospitality industry by shedding more light on the standardization of the notes to the financial statements, which is the only segment of financial reporting that is not formalized. A more systematic and simplified presentation of accounting policies will increase the usefulness and clarity of financial reporting for users generally within the same industry.

2. RESEARCH BACKGROUND

Financial statements remain the most important and effective means of communication with various stakeholders and are considered superior in terms of timeliness, understandability, neutrality, credibility and availability of specific information (Naser & Nuseibeh, 2003; Avram et al. 2017). Accounting information published within financial statements presented for different stakeholders have to be prepared in accordance with the requirements set by accounting standards. The accounting standards that are on the books today were originally written for manufacturing firms that dominated business forty years ago and have been amended and modified to fit the very different firms that exist in the market today (Damodaran 2006. p. 6). The process of adopting and harmonizing accounting standards began with the aim of avoiding a diversity of financial statements and reducing the cost of translating them into other accounting systems. This is still an ongoing process that focuses on developing a single set of high-quality, understandable, and globally accepted accounting standards and on promoting and facilitating their adoption. Regulatory accounting framework set through accounting principles has given international accounting standards an important role because together with technical, educational, quality and other standards, they are considered to be global instruments of financial reporting and are oriented to standardization and harmonization of accounting information. Financial statements which are final products of the accounting information system have different methods and procedures used in their preparation which differently affect the values stated in the financial statements.

Chosing different methods and procedures is the matter of accounting policy, the only thing not being formally regulated. Several research conducted focused on factors influencing the choice of accounting policies of companies (DeAngelo, DeAngelo and Skinner, 1994, Bowen and Shores, 1995; Astami and Tower, 2006). This choice of what is considered an appropriate accounting method is determined by an internal act of management and applies to the preparation of financial statements for external users. The adoption of accounting standards was the first step in limiting management discretion and improving the comparability of financial statements.

The harmonization process also helped to reduce the differences and inconsistencies between accounting standards dealing with accounting policies (APB opinion 20, which was replaced by SFAS 154 and IAS 8) as this was useful for comparing financial statements (Wusteman and Wusteman, 2010). The choice of accounting policies depends on the overall goals of the company's polica, i.e. maximizing profits while ensuring liquidity and long term business continuity (Todorović, 2012). International Financial Reporting Standards (IFRS) clearly state that the details presented in the financial statements and the accounting policies applied must be additionally explained in the notes, and that additional information provided for in IFRS that is not included in the financial statements must also be disclosed. The notes must also disclose other relevant information that is not included in other parts of the financial statements but is relevant to an understanding of their contents. With the increasing use of information technology in accounting and business in general, and the increase in the content of accounting information, more effective ways of reporting business activities and conditions should be explored, and improvements in financial communications should be discussed with stakeholders. This need for change should come from the users of accounting information: managers, investors, financial institutions etc, to follow global trends and respond to the increasing criticism of financial reporting (Lev, 2018). Financial statement quality is recognized by many elements and „is a broader concept that refers not only to financial information but also to disclosures, and other non-financial information useful for decision making included in the report, ... a comprehensive measurement tool to assess the quality financial reporting considering all dimensions of decision usefulness.“(Van Beest et al. 2009; p.4). Existing research mainly focuses on the quality of financial statements in terms of improving investment efficiency (Biddle et al. 2009, Biddle & Gilles 2006, Chen et al. 2011) and investor visibility (Yoo et al. 2013). The accounting principles according to which regulatory framework for financial reporting was established, placed decision benefits at the top of the accounting objectives and emphasized the importance of uniformity of practice within and across entities and constistency of practices over time as qualitative characteristics of accounting information (Nobes & Stadler, 2015). In this way „information must promote comparability and should be consistent and understandable“ (Zeff, 2013; p. 283). However, despite the importance of comparability, a measure of financial statement comparability is not specified and there is little evidence of its benefits to financial statement users (De Franco et al., 2011, p. 896). Previous research is mostly oriented toward factors that influence the improvement of financial statement comparability (Wang 2014, Francis et al. 2014, Barth et al. 2018, Zhang 2018, Kim et al. 2019). In addition, previous research has often used sentence counts as the basis of analysis because they are easily identifiable and not subject to interpretation (Hughes, Sandem, Snyder, 2009, p. 7). To evaluate the qualitative characteristics, which include comparability, the principle of consistency was studied. The principle of consistency in accounting must be studied because it contributes to comparability, which is an element of the quality characteristics of financial statements and contributes to the usefulness of the accounting information they contain. It is also a signal of whether accounting policies have changed, which may be the case changes in accounting standards have been introduced, or whether there have been improvements in reporting more reliable and useful information. The International Accounting Standards Board (IASB) states that "comparability is the qualitative characteristic that enables users to identify and understand similarities in, and differences among, items" (IFRS Conceptual Framework 2.24). The IASB also states that "consistency refers to the use of the same methods for the same items, either from period to period within a reporting entity or in a single period between different". In order to improve accounting comparability, companies should apply accounting policies and methods cosnistently, because consistency helps to improve comparability and

"comparability is the goal; consistency helps to achieve the goal" (IFRS Conceptual Framework 2.26).
As the IASB mentions, the level of comparability is likely to increase if accounting policies and methods are consistent, as it is difficult to compare companies' financial statements if they use different policies or methods for the same items. The IASB considers consistency of accounting policies and methods to be an important issue and states that companies should disclose the nature of changes in accounting policies and provide additional calculations when changes occur. Accounting and auditing institutions also emphasize the importance of consistency in the choice of accounting policies for the following reasons: better comparability of financial statements among companies that use consistent principles or methods for the same items, prevention of profit manipulation through accounting changes that managers could exploit to manipulate profits for their own purposes (Kim, 2020). This additional information is particularly useful for auditors, as it profides them with clear information from which they can understand and evaluate the reasons for changes in accounting policies and disclose this information in their reports (audit reports). The quality of notes to financial statements relates to their disclosures and is defined in three ways: (1) a higher quality disclosure includes more quantitative disclosures as a percentage of total disclosures; (2) a higher quality disclosure includes more sentences specific to the guidance included in the three releases as opposed to merely general language; (3) greater breadth (the number of subjects and topics disclosed) and greater depth (the number of sentences per disclosed subject and per disclosed topic) indicate a higher quality disclosure (Hughes, Sandem, Snyder, 2009, p. 6). Also the research regarding quantity and quality of disclosures as dominant areas of financial accounting research, has for years gained substantial interest of academics, some of them focusing on specific information as segment reporting, disclosures regarding intangibles or connected to the cost of equity (Kavitha & Nandagopal, 2011, 31). It has been noted that methods and measures vary in assessing disclosures, some being subjective or objective, but generally with a clear and operationally defined unit of analysis, numerous studies have examined only a small subset of information or only some sections of the annual report (Beattie, V., 2004, Kavitha & Nandagopal 2011). The process of harmonization of accounting standards that started in 2002 is an attempt to develop a single set of high-quality standards that can be used internationally, improving the consistency and quality of financial reporting worldwide (Alexander and Jermakowicz, 2006, p.154). The principle of consistency ensures the comparability of financial reports and thus contributes to improving the quality of financial statements. Consistency in the financial reporting processes of organisations, supported by a uniform valuation and disclosure technique, enforces harmonisation to improve the decision-making of users of financial information by limiting the degree of variation of information (Deegan & Unerman, 2011; Gonçalves & Lopes, 2015). According to the consistency principle, the accounting and valuation method chosen should be applied for the same period of time. It should be noted that only consistent application of accounting policies can influence the financial information quality. The principle of consistency in accounting should not be considered in isolation, but must be applied in conjunction with other accounting principles. This means that demonstrably consistent information does not mean that it is of high quality, but that other quality characteristics must also be assesed separately. The next step would be to assess the quality of the accounting information on the basis of all quality characteristics. The consistency principle is valuable to all stakeholders because it helps accountants prepare consistent and uniform accounting records and prevents manipulation and publication of unrealistic and favorable financial statements by accountants. It also provides control over assets through valuation methods (e.g. inventory or asset depreciation) and makes financial information comparable, easy to interpret and reliable. Consistency also improves audit performance. Previous research is mostly oriented to other principles than consistency: relevance and reliability (Barth et al.,

2001; Power, 2010, Kadous et al., 2012), understandability (Jones and Smith 2014) and transparency (Barth et al., 2013).
Generally there are two notions of consistency: internal that requires any individual standard to be consistent with the existing system of standards and application consistency that refers to the use of same accounting policies and procedures either from period to period of an entity or in a single period across entities (Wustemann and Wustemann, 2010, 2). Although the consistency principle does not require companies to choose a particular accounting method, it does require a consistent approach once a method has been chosen. For large companies whose processes are numerous and complex, the choice of a particular accounting method (e.g. inventory costing method or depreciation method) can have a significant impact on financial results. On the other hand, accountants can use the lack of consistency as a tool to present more favourable accounting results and higher profits, which is the characteristic of manipulation. In this way, they can present favourable accounting results and higher profits, which can have disastrous consequences for them because they can face penalties related to auditing and non-compliance with laws and regulations, but also the distrust of stakeholders once this situation is revealed. Consistency principle is related to the choice of accounting policies published in the notes to the financial statements. Since the accounting standards allow the choice between different accounting methods, it is very important that the accounting policies are consistent. If the accounting policies are changed, the reasons for this change must be explained in detail, and if this change has an impact on past, present and future financial statements, the retrospective application to them should also be presented. Accounting policies represent specific principles and methods chosen by management to present the actual financial position, changes in financial position and financial results in accordance to generally accepted accounting principles. The application of accounting policies differs in terms of the impact on the financial statement line items. The impact of an accounting policy depends on: the proportion of the position in total assets, liabilities, revenues and expenses. Accounting policies may be changed for one of the following reasons: if the subject is obliged to change the accounting policies due to changes in the accounting standard or interpretation, and if the change in the policies results in more accurate, reliable and important information about business transactions, cash flow and financial results of the company presented in the financial statements. Changes in an accounting policy are applied retrospectively unless it is impracticable to do so or another IFRS Standard contains specific transitional provisions (IAS 8). Accounting policies may also be changed when the company has been acquired by another company that applies a particulag policy and must implement any changes required by the new owner. When accounting policies are changed, companies must disclose and explain why the change has been made and the effect on the financial statements. The information presented in the general part of the notes to the financial statements includes the key elements of the accounting policies, their changes and their impact on profit. These information requirements mean the description of the primary rules of accounting policy as well as the rules necessary for understanding the data presented in the financial statements (Fridrich & Simon, 2018). Research on qualitative assessment of the accunting policy although seems to be interesting, has not been sufficiently studied in the scientific literature (Elgina, 2020, p. 5). The selection of accounting policy is a team effort involving an accountant, a financial manager, a procurement manager, a sales manager, a production manager, and representatives of other corporate functions and is an important tool for management's design of accounting information. The objectives to be achieved by the accounting policies can be different, but mainly relate to the impact on the financial results and financial position of the company (Todorović, 2012). Accounting policies determine the form of reporting and generate relevant information for users, and their quality determines the value of the information generated. They are regulated at the global level by the Financial Accounting Standards Board (FASB), the

International Accounting Standards Board (IASB), at the EU level by the European Accounting Association (EAA), the Accounting Regulatory Committee (ARC) and the European Financial reporting Advisory Group (EFRAG) and the European Comission, and at the national level through National Accounting Standards Committee, Association of Accountants (Maszczak, 2017) Accounting policies are published in the notes to financial statements which give stakeholders detailed information on the content of financial statement. The main objective of the Principles of Disclosure project – a part of General Initiative for better communication in Financial reporting is to: a) help entities to apply better judgement and communicate information more effectively, b) improve the effectiveness of disclosures of the primary users of financial statements and, c) assist the Board to improve disclosure judgement and communicate information more effectively (Abad et al. 2020, p.2). When it comes to the quality of reporting, the same relationships apply to the financial statements and their notes. A higher quality of disclosures on selected accounting policies of companies is called for in the ciscussion paper „Disclosure Initiative – Principles of Disclosure" (IASB 2017), and three categories of accounting policies in the notes are proposed in Table 1

Table 1 Three cathegories of accounting policies in the notes

Category 1 - always necessary to understand the financial statements	the accounting policy relates to material items, transactions or events and is selected from alternatives in IFRSs reflects a change from previous period is developed by the entity in the absence of specific requirements requires use of significant judgements and assumptions
Category 2 - not in category 1 but necessary to understand the financial statements	the accounting policy is not in category 1 but relates to material items, transactions or events
Category 3 not in category 1 and 2 but is used in preparing the financial statements	this category includes all other accounting policies used in preparing financial statements

Source: Pavić I., Žager, K., Rep, A., (2017) Significance of Notes to the Financial statements in business decisions published in proceedings of the International conference Theory and Applications in the Knowledge Economy, TAKE 2017 taken from Snapshot: Disclosure Initiative – principles of Disclosure, Discussion paper, IFRS 2017.

First, all three areas of accounting policy have been considered controversial in terms of comparability, having large and systematic effects on the assets and expenses reported in financial statements (Pincus, 1994; Christie and Zimmermann, 1994). Second, for these particular accounting policies, a number of different alternative treatments have long existed. Third, in each case there is considerable evidence concerning firm-specific reporting behaviour (Jaafar and McLeay, 2007, p. 166). The accounting policies published in the notes to the financial statements provide useful information to stakeholders about the companies' operations. Consistency of applying accounting standards can only be ensured if they are internally consistent, as inconsistent standards allow managers to choose between different accounting methods (Wustemann and Wustemann, 2010), which can „influence" a company's financial results. Although accounting policies are an integral part of the financial statements, their preparation and disclosure should not be focused solely on meeting this legal requirement.

The information disclosed in the accounting policies can have a significant impact on the decision makers who use data from the financial statements.
Based on the above, and according to the requirements of the NAS 1, hotels'disclosed accounting policies should include information about the current accounting methodology used for each accounting object. In order to properly interpret the information in the financial statements, additional disclosures should be made regarding the basis, policies and rules of periodic accounting. This information can be presented as a part of the accounting method for each accounting object or as a separate element of the accounting policy (Ventsislavova Georgieva, 2019). Although it is stated that consistency as an absolute goal cannot be achieved (Alexander and Jermakowicz, 2006), it should be reconsidered when applied to the same industry, in this case the hospitality industry, regardess that Standards and Interpretations dealing with similar and related issues are partly inconsistent (Wusteman and Wusteman, 2010, p.9). The hospitality industry makes a significant contribution to the development of the Croatian economy. The total contribution of tourism to Croatia's GDP was estimated at 19.6% in 2018. (OECD Tourism trends and Policies, 2020). Hospitality industry offers its guests/customers accommodation, food and beverage and other services (wellness, sports, congresses etc.) that are characterised by being highly competitive and substitutable. These services are labour intensive and perishable with a high percentage of fixed costs in this type of business (Singal, 2015). When informing stakeholders about the business results of hotel companies, these characteristics should be taken into account along wiht the needs of users, and therefore changes in accounting policies should be communicated to them in a user-friendly and simple way to avoid information overload. Hospitality activities include several operational processes that simultaneously involve services and products (e.g. purchasing inventories, processing food into meals and selling meals). These operational processes are recorded and evaluated to help control budgets, increase production, meet financial obligations and generate profits. Since hospitality industry first successfully developed and implemented a Uniform System of Accounts for Hotels (USAH) in 1926. which is currently in its 11th edition under the name Uniform System of Accounts for the Lodging Industry (USALI, 2011), for management purposes, it was recognized that opportunities to harmonize accounting policies should be considered for the same industry – in this case hospitality industry. Accounting consistency reduces information asymetry resulting from accounting changes (Peterson et al. 2015), thus increasing their quality, facilitating analysis and comparability. Companies that apply their accounting policies consistently incur lower analytical costs that provide room for manouvre for various stakeholder groups (investments etc.), while companies that change their accounting policies incur higher analytical costs and costs of changing accounting policies, as they have to calculate more complex information due to retrospective application and the information obtained is less accurate.

3. RESEARCH METHODOLOGY

The purpose of this paper is to investigate the consistency of the elements published in the separate section of significant accounting policies in the notes to the financial statements. The sample included Croatian hotel companies that list their shares on the financial markets in order to study the consistency of accounting policies in relation to their publication in the notes to the financial statements in a consecutive period of 10 years (from 2011 to 2020). The sample initially included 23 Croatian hotel companies (consisting of a total of 143 hotels) that list their shares on the national stock exchange (Zagreb Stock Exchange) under the accommodation and food service activities (https://zse.hr/hr/sektor/302?sector_id=I). One hotel company was excluded due to insolvency, and another because it did not include hotels but bungalows and campsites. The hotel companies were then grouped by the hotel chains under which they operate, ultimately resulting in a sample of 9 large hotel chains with 104 hotels. The characteristics of the sample are shown in Table 2.

Table 2. Characteristics of the sample

Hotel Chain	**Hotel Company**	**The Abbreviation of Hotel Company Share**	**Number of Hotels Owned by the Hotel Company**
Amadria	Solaris Sibenik	SLRS	12
Aminess	Hotels Korcula, Njivice, Novigrad	HTPK	10
	Hotels Orebic	HTPO	2
Arena hospitality Group	Arena hotels Pula	ARNT	7
Bluesun	Sunce hotels Bol, Brela, Tucepi, Starigrad Paklenica	SUKC	13
Ilirija Hotels	Ilirija hotels Biograd n/M	ILRA	4
Maistra hotels	Maistra hotels Rovinj, Vrsar, Zagreb, Dubrovnik	MAIS	17
Medora Hotels	Hotels Medora Podgora	HPDG	2
Plava laguna	Plava laguna Porec	PLAG/PLAG2	20
Valamar	Helios faros Hvar	HEFA	2
	Riviera Porec	RIVP	8
	Imperial hotels Rab	HIMR	4
	Jelsa Hotels Hvar	JLSA	3
Number of hotels total:			104

Source: Authors proposal according to Vlašić D, Poldrugovac K. Non-Financial Information in Hotel Companies. Sustainability. 2022; 14(16):10009. https://doi.org/10.3390/su141610009, https://zse.hr/hr/sektor/302?sector_id=I (accessed on 13 June 2021) and companies s' websites.

The notes to the financial statements of hotel chains were studied over a consecutive period of 10 years making a total of 90 financial statements analysed. The data were extracted manually from theaudited financial statements published on the companies' websites, as they were in Word, pdf or scanned format and were not available in machine-readable form. The accounting policies published in Note No. 2 „Significant Accounting Policies“ were collected for each hotel company to determine whether accounting policies used to prepare the financial statements were applied consistently during the observed period. Following the horizontal analysis, the content for the hotel companies was also studied in order to establish guidelines for the disclosure of information on significant accounting policies in the notes to the financial statements of the hospitality industry, which will help to provide accounting information to stakeholders in a simplified and uniform manner. The elements collected and considered were: Basis of preparation, changes in accounting policies, new and amended accounting standards, tangible assets (valuation method, depreciation methods, useful lives of buildings, machinery and equipment, other assets), inventories and cost methods for inventories and operating supplies. Tangible (fixed) assets was taken into consideration because hospitality industry operations depend heavily on it (Joonho Moon and Amit Sharma 2014, p. 75), and through depreciation methods income statements of hotel companies is also affected.

Operating inventories were also taken into consideration because they form an integral part of hotel product (full board or half board or breakfast included within the lodging service) although they „are of low level in the hospitality industry (Guillet, Basak Denzzci, Mattila, S: Anna, 2010, p.678)“. The elements also presented in this note are: Foreign Investments, Segment Reporting, Trade Receivables, Cash, Share Capital, Borrowings, Income tax, Employee Benefits, Trade Payables, Provisions, Revenue recognition, Leases, Earnings per share and Value Added Taxes (VAT). These elements have not been included in the detailed results and conclusions because they require a more detailed approach, are not limited to the hospitality industry and depend on national regulations.

4. RESULTS AND DISCUSSION

Accounting policies in Croatian hotel companies form an important part of the notes to the financial statements, which provide users with detailed information on the items presented in the financial statements. It should be noted that the content of the notes is not uniform and is presented differently from hotel company to hotel company, which make comparison even more difficult and complex. However, it was possible to extract all the necessary information from the notes, which means that it was available to users. For the sample of Croatian hotel companies observed, the basis for the preparation of the financial statements is International Financial Reporting Standards (IFRS) which is highlighted in the introductory part in the note on significant accounting policies as follows: „The financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) …which comprise the standards and interpretations issued by the International Accounting Standards Board (IASB) and the International Financial Reporting Standards Interpretations Committee (IFRIC) and adopted by the European Union“. It is often additionally stated that: „.. the accounting policies have been applied consistently to the periods presented, unless otherwise indicated“. As hotel companies examined consist of several business units, they are also required to prepare consolidated financial statements and are legally obliged to comply with IFRS even when listing their shares on the financial markets. For this reason, it was stated that „the financial statements of the subsidiaries are prepared using uniform accounting policies for the same reporting year as the Company's financial statements“.

This part of the notes also highlights that „the financial statements have been prepared under the historical cost method, except for financial assets that is presented at fair value through profit and loss and financial assets“. The information that follows this part of the notes includes information related to consolidation that provides users with additional definitions of subsidiaries, changes in ownership interests, joint ventures, associates, mergers, segment reporting (indicating that they are reported in a manner consistent with internal reporting without providing details) and currencies, depending on the content used in the financial statements. The following part of this note contains detailed presentation of the new and amended accounting standards. The hotel companies present the information on new and amended standards in very detailed way indicating for each new standard or its amendments the date of its application and the information whether or not this standard has affected the financial statements for the year presented. Table 3 below presents new and ammended standards in the 2011-2020 period for hotel companies and the cycle improvements presented n the notes.

Table 3: New and ammended accounting standards and cycle improvements in Croatian hotel companies (2011 - 2020)

Year	New and ammended standards	Cycle improvements
2011	Ammendments IFRS 1, 7, IAS 1, 27, 32, 34	
2012	Ammendments IFRS 1, 7, 12	
2013	Ammendments IAS 1, 19, IFRS 1, 7, 13	
2014	IFRS 10, 11, 12, IAS 27, 28 ammendments to IAS 32, 39	
2015	IFRS 3, 13, IAS 40	Restatements 2010-12 and 2011-13
2016	-	Restatements 2012-14
2017	Amendments to IAS 7, 12	Restatements 2014-16
2018	IFRS 9 and 15, IAS 40	Restatements 2014-16
2019	IFRS 16, changes and amendments IAS 28, IFRS 1, 3, 9	Restatements 2015-17
2020	Ammendments IFRS 3, 16, IAS 1, 8	Restatements 2018-20

Source: author's research based on Financial statements of Hotel companies available on companies' websites

The Standards ammended in 2011. are: IFRS 1 First-time Adoption of international financial reporting standards, IFRS 7 Financial instruments - Disclosures, IAS 1 Presentation of Financial statements, IAS 27 Separate Financial Statements, IAS 32 Financial instruments - Presentation and IAS 34 Interim Financial reporting, additionally followed by ammendments of IFRS 12 Disclosures on interest in other entities in 2012. For 2013. ammendments of IAS 1 Presentation of financial statements, IAS 19 Employee benefits, IFRS 1 First time adoption of IFRS, IFRS 7 Financial instruments: Disclosures and IFRS 13 Fair Value measurement was noted. In 2014. largest number of new and ammended standards has been notified: IFRS 10 Consolidated Financial statements, 11 Joint Arrangements, 12 Disclosure of interests in other entities, IAS 27 Consolidated and Separate financial statements and IAS 28 Investments in associates, and ammendments to IAS 32 Financial instruments: presentation, IAS 39 Financial instruments: recognition and measurement. For 2015 IFRS 3, 13 Fair Value Measurement and IAS 40 Investment Property was introduced. From that year it was noted that cycle improvements started as for the previous periods (2010-12 and 2011-13). In 2016. no new or ammended standards were introduced, only restatements of 2012-14 were noted. In 2017 Ammendments to IAS 7 Statement of Cash Flow and IAS 12 Income Taxes were noted and restatements for 2014-16 which continued in 2018, together with IFRS 9 Financial instruments and 15 Revenue from contracts with customers and IAS 40 Investment Property. In 2019 IFRS 16 Leases was introduced with changes and amendments of IAS 28 Investments in Associates, IFRS 1 First time adoption of IFRS, IFRS 3 Business combinations and IFRS 9 Financial instruments together with cycle improvements for 2015-17. In 2020.

Ammendments to IFRS 3 Business combinations, 16 Leases and IAS 1 Presentation of financial statements, IAS 8 Accounting policies, changes in accounting estimates and errors were introduced with restatements for 2018-20 being emphasized. This part of the note is followed by information on standards issued but not yet effective and not early adopted. The description of the ammendments to these standards is detailed for each of them, indicating when they become effective and emphasizing whether earlier application is permitted.

They also present managers' assessments of the influence of these standards to be adopted on the financial statements, as well as whether they will affect the financial statements in the future in the following manners: „…the Group and the Company reasonably expects to have an impact on disclosures, financial position or performance when applied at a future date“ and that „they intend to adopt these standards when they become mandatory“.

The part of the notes where tangible assets is presented consists of: evaluation methods, depreciation methods, useful life of buildings, machinery and equipment, other assets. The tangible assets is included in the balance sheet using historical cost less accumulated depreciation. This historical cost includes the costs incurred to acquire the assets. The depreciation method used in the hospitality industry is the straight-line method and is calculated based on the determined useful life of the assets. In hotel companies, the useful life of buildings varies from 20 to 90 years (5% to 1.11%) when comparing these figures within different companies. This has a significant impact on financial reports and should be carefully considered when analyzing hotel companies. It should be noted that there are also changes in the useful life of buildings within the came company. They are additionally explained in the note where it is stated that „the value of assets is carefully estimated in order to present fair and true view in the financial statements“. In this context, the changes in depreciation percentages for the years in the respective periods have also been presented.

The information collected from the financial statements shows that the useful life of equipment and machinery in hotel companies ranges from 4 to 20 years (25% to 4%), depending on the type of assets. In this information, it is emphasized that is carefully estimated by the management so that it can be reported in the financial statements with the actual value. It was also noted that the residual value of assets and useful lives are reviewed at each balance sheet date and adjusted if necessary. The residual value of an asset is estimated depending on its condition and age at the end of its useful life. The useful life of vehicles ranges from 4 to 8 years (25% to 12.5%), computers from 2 to 5 years (50% to 20%) and furniture from 10 to 20 years (10% to 5%). When analyzing the financial statements, it should be taken into account that the depreciation expenses are very different in these cases and in the decision-making process, and that more attention should be paid to this particular information in terms of evaluating the impact on profit or loss. This section also stated that: land and assets under construction are not depreciated; assets held for sale are measured at the lower of their carrying amount and fair value less costs to sell; and investment property held for rental is treated as a long-term investment.

In the part that presents inventories and cost methods for inventories, it has been stated that „…inventories are presented at the lower of cost or net realizable value. The cost method is determined using weighed average method which is applied consistently throughout the observed period in all hotel companies. For „small inventory“, which is classified as current assets in Croatian companies (in hospitality industry it is considered to be china, glassware, silver, towels and linen) different depreciation / written off methods are also used depending on the type: 100% method (expensed in full when put into use), 50% method (half of the value expensed when put into use), or estimated useful life from 3 months to 5 years. It should be mentioned that most of the Croatian hotel companies apply the 100% method, with some hotel companies making a difference in writing off small inventory in connection to the hotel stars (eg. 5* hotels have useful life of 4 years, 4* and other hotels 1 year). In this sense, it was emphasised that „…china, glass, metal, kitchen utensils, working clothes e.g. uniforms and other small items are written off in full at the time of commencement of use, while bed linen, sheets and towels have a useful life of up to 3 years."

This inevitably leads to differences in the value of assets due to the residual value of china, glassware and silver (balance sheet) and expenses (Income statement or profit and loss account). Based on the results presented, it is clear that Croatian hotel companies apply accounting policies consistently and in this way the information presented in the financial statements is comparable for the users of the financial statements. Also, the content of the information published in the notes to the financial statements shows that the hotel companies present the same level of information and therefore it is possible to standardise the notes to the financial statements for the hospitality industry in the future in order to improve the understandability of the presented information for the users.

5. RECOMMENDATIONS AND CONCLUSIONS

Accounting policies in Croatian hotel companies are considered an important part of the notes to the financial statements, providing users with detailed information on the items presented in the financial statements. Although the content of the notes is not presented in a uniform manner and therefore the comparison is more complicated, all elements related to accounting policies are presented and therefore available to users. This implies that the same format should be used for the Croatian hotel companies for the content of the information presented in the notes. This format should contain all current elements of the notes in the uniform order presented in Table 4.

Table 4: Content of accounting policies framework for hotel companies

Basis of preparation	Information on obligatory application of IFRS, currency of presentation	
Basis of consolidation	Accounting judgements, estimates and assumptions	Links to definitions
Business combinations	Goodwill, investments	Links to definitions
Balance sheet elements (following its formal structure)	Intangible assets	Impairment, measurement of recognition
	Property plant and equipment (PPE)	Classification, measurement of recognition
	Financial assets	Classification, measurement of recognition
	Inventories	Method used, Small inventory information
	Accounts receivable	
	Cash and cash equivalents	
	Liabilities	
Income statement elements (following its formal structure)	Revenue	Revenue recognition
	Expenses (leases, grants if any, benefits, provisions, borrowings)	
Earnings per share		
Value added tax (VAT)		
New and ammended standards		Links to national regulatory bodies
Key performance indicators		
Operating segments		

Source: authors proposal according to research results

According to the research, it is suggested that in the future the following content which most of Croatian hotel enterprises already generally have should be presented (table 4):

- Basis of preparation (containing information on obligatory application of IFRS and currency of presentation),
- Basis of consolidation that will present required accounting judgements, estimates and assumptions, without giving definitions regarding consolidation –links for additional explanation could be provided
- Business combinations (covering goodwill, entities under control, investments in associates and joint ventures, Investments in subsidiaries) without giving definitions regarding terms – for that matter also links for additional explanation could be provided
- alance sheet elements (Intangible assets, Property, plant and equipment (PPE), Financial instruments, Inventories, Accounts receivable, Cash and cash equivalents, liablilities) - for more detailed information, a link should be provided that takes the user to a specific element of the balance sheet, and connects it to the income statement or cash flow element eg. for property plant and equipment, a table showing accumulated depreciation, depreciation percentage and depreciation expense amount should be available through this link.
- Income statement elements (Revenue recognition, Leases, Grants, Benefits, Provisions, Borrowings) - for more detailed information, a link should be provided that takes user to a specific element of the balance sheet e.g. depreciation expense should be linked to depreciation percentage and the list of property, plant and equipment and accumulated depreciation of the balance sheet as they are interrelated.
- Earnings per share – brief information within this note, elaborated if necessary in the link
- Standards Issued (new, amended and issued but not yet effective) – only state which are, details should be available on the link (national bodies or associations provide detailed information on their websites)
- Key performance indicators (KPI) in brief – if necessary more information should be also available in documents linked to this section
- operating segments – brief information in this section, more details on link should be available.

With the uniform presentation of parts in Note 2 Changes in accounting policies, a step can be taken toward developing a simplified and uniform set of notes to financial statements for the hospitality industry. The information presented in this manner would be reduced in scope, simplified and concise, but additional content would be available through separate links for users requiring more detailed information. The research conducted has its limitations, as it is a small sample, a single country and a single industry. It is suggested that further research to be conducted include larger sample: in addition to companies that list their shares on financial markets other companies should be included (eg. SME's). Moreover, the sample should be extended to other countries in the region, such as Mediterranean countries or EU member states, or at international level. This research can also be applied to other sectors (industries) of the economy due to its characteristics (e.g. banks, financial institutions, manufacturing companies, retailers etc.) Qualitative research is also proposed to identify the information needs of the stakeholders of financial statements, as well as more detailed research on the individual components. The research results show that Croatian hotel companies consistently apply accounting policies and disclose them in the notes to the financial statements in order to provide stakeholders with important information for decision making. The content of applied accounting policies in Croatian hotel companies differs in their structure, so it is suggested to unify their structure and shorten, systematize and simplify them.

The accounting principle of consistency should be applied in relation to other accounting principles and should not be considered as an obstacle to improvements in accounting standards, but as an element that contributes to increasing the quality of financial reporting. Also, the current content of the notes to the financial statements of Croatian hotel companies is still old-fashioned and outdated, so the possibilities of modern technology should be used to meet the requirements of stakeholders and improve the standardization of the accounting framework for hospitality industry.

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IMPACT OF THE COVID-19 PANDEMIC ON INTERNET SHOPPING BEHAVIOR

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ABSTRACT

The aim of the study was to investigate the factors affecting the internet shopping behavior of consumers during the coronavirus disease (COVID-19) pandemic in Croatia. Corona crisis or COVID-19 pandemic caused a number of negative consequences for the economy as a whole, as well as in Croatia. The research collected data from January 12, 2020 to March 11, 2021 by online survey method through a structured questionnaire. All sectors of the economy have been affected to a greater or lesser extent by this crisis, and retail trade is no exception. However, it could be said that it has a certain advantage given the possibilities of online commerce, which is being used by more and more entrepreneurs and consumers. Although online commerce as a business model was active long before the COVID-19 virus pandemic, it has been growing. On the one hand, more and more retailers are offering their products online, and on the other hand, the number of online consumers is growing. Behavioral changes are therefore visible on both sides. The paper presents the results of research on changes in consumer habits in the field of online commerce, which are a direct response to the pandemic of the COVID-19 virus. The results are based on a conducted survey. The question remains, what will trade look like after the end of the current crisis? Will consumers return to "old habits" or will online shopping almost completely eradicate conventional models of trade in certain sectors.

Keywords: *online commerce, pandemic, consumers, shopping, covid-19, webshop, Wordpress*

1. INTRODUCTION

The 2020 year was perhaps the most challenging year in the past few decades globally. The pandemic caused by the COVID-19 virus has affected all countries of the world and has deeply affected their economies, and consequently every individual. In the midst of political decisions based to a greater or lesser extent on the opinion of experts in the field of epidemiology and virology, citizens are forced to constantly adapt to ad hoc decisions of state and/or local authorities. In addition to the already notorious adherence to epidemiological measures of wearing protective masks, regular hand washing, and maintaining a physical distance of at least 1.5 m, for many businessmen and entrepreneurs it also means a fundamental change and adjustment of business methods and models. The coronavirus pandemic has pushed many consumers to make their purchases online as many physical retail outlets across the world are either closed due to lockdown measures or have limited capacities to maintain social distancing.

For many branches of business, adherence to current government decisions means a temporary cessation of business, but for many entrepreneurs, it can result in permanent closure and business in the long run. One of the branches that have been affected by the "crown crisis" in Croatia is certainly trade. In conditions of such uncertainty, traders who are allowed to do so by the nature of their business are turning to new ways of surviving in the market. This is perhaps best reflected in the application of new technologies and the online store model. Although online shopping as such is neither a novelty nor the result of the current pandemic, it is certainly one of the ways in which entrepreneurs can survive this “pandemic crisis”. Additionally, besides existing entrepreneurs in the market, the so-called corona crisis has also affected those who were just about to enter the market with their products and services, so it remains to be seen what their possibilities are. In order to successfully digitize trade and adapt their business to the new conditions, it is necessary for them to know the needs of their end consumers. This paper provides an insight into Internet sales and online stores, obtained as a result of a survey of users who are oriented in this way of shopping. We start from the assumption that the circumstances that changed the course of the purchase set certain parameters that we must adhere to, and for the purpose of this research, an online webshop was created that has handmade products. For the purpose of this research, the webshop was set up using an open-source CMS Wordpress that has all the necessary elements for Internet sales, and based on predefined questions we received experiences and answers from 150 respondents on the basis of which a premise for future action was obtained. [1][2]

2. CHANGES IN ONLINE SHOPPING

A new survey from PYMNTS[1] found that nearly 36% of US consumers are now buying retail goods online, compared to 29% doing so in mid-April when most brick-and-mortar stores were closed. The same is true for consumers ordering from restaurants online, even though many restaurants have started to open with more widespread dining options. The survey found 21% of consumers are now ordering online from restaurants, up from 13% in mid-April. According to the monthly data of the Central Bureau of Statistics of the Republic of Croatia on retail trade in 2020, the following development is monitored. The press release for January 2020 and February 2020 shows an increase in turnover from retail trade in food and non-food products, while the March 2020 statement shows the largest decline in real retail trade turnover on an annual basis in ten years (11, March 2020 in Croatia, an epidemic was declared and the so-called lockdown). The downward trend continues in April 2020, but at the same time for the first time, there is an increase in traffic in online stores. The described changes that occur in the market relate not only to supply but also to demand. Simultaneously with the adaptation to new business conditions by entrepreneurs, it can be assumed that the habits and expectations of customers are changing. E-commerce has been predominant during the COVID-19 pandemic, and retailers have put much effort into building, improving, and promoting their online stores. The E-commerce industry in Croatia is increasing speedily despite having some barriers and becoming more competitive day by day not only local companies but also foreign companies are engaged in the competition. [3]

It is precisely the research of changes in consumer behavior in the Republic of Croatia that is the purpose of this paper and based on these results, to determine how online shopping can be further improved. This paper will analyze and interpret the structure of consumers in the Republic of Croatia and their preferences for online trade by age, gender, and other criteria, examine whether measures against the COVID-19 virus pandemic have affected changes in consumer behavior and if so in what way.

[1] https://www.pymnts.com/coronavirus/2020/the-great-reopening-doubling-down-on-digital-coronavirus-ecommerce-contactless/

In this regard, the starting assumption is that consumers who were proponents and active users of online shopping before the new conditions of purchase intensified online shopping activities (such as more frequent online shopping, more products, and services purchased online, etc.), while those consumers who may not have been prone to online shopping before also changed their habits and gradually switch to online shopping. As crises can trigger fundamental economic and social changes, companies need to understand consumer behavior at this particular time [4]. Apart from the material havoc triggered by the coronavirus, the spiritual causes behind it are extremely serious, and--if the present pandemic is not to be the first in a series of many catastrophes--all human beings are called upon to respond in a radically transformative way[5].

One recent report from McKinsey & Company found that 37% of respondents said they intended to spend more online during the holidays this year than they did in 2019. The report, which surveyed 3,500 holiday shoppers in September from the US, UK, China, Germany, and France, also found that only 10% said they intended to increase their time in physical stores. Since the survey was done, the UK and parts of Europe went into further lockdown as Covid-19 cases surged. Consumers in those countries were likely to return to digital shopping, the firm predicted [6].

Covid-19 affirmed that we cannot simply turn off the economy and shelter in place. Civilization depends on supply chains to convert the planet's bounty into the products we need and deliver those products to 7.8 billion human beings at a price they can afford. When a virus, a government edict, or a recession hits hard, it tests the people, processes, and systems that keep civilization running [7].

3. SURVEY CONDUCTED ON A SAMPLE OF RANDOMLY SELECTED RESPONDENTS

In order to determine what consumer habits are and whether there are changes in consumer behavior in the online store with regard to current anti-pandemic measures, a primary survey was conducted in the form of an online survey. The survey was conducted on a random sample of 150 respondents. Apart from the questions aimed at researching the age, gender, and status of the respondents, almost all the offered answers to the questions in the survey were descriptive. The aim was to avoid numerical response scales as much as possible where the smallest number indicates one extreme and the largest the other extreme. In terms of content, the survey is divided into questions focused on consumer behavior and habits before and after the onset of the pandemic caused by the COVID-19 virus and questions about the online store "KERADO" specially designed for this research. This site is an online store of handmade ceramic tableware, which, although not active in terms of the possibility of actual purchase, contains all the basic elements of an online store.

The aim of creating this online store was to avoid previously held attitudes and preferences of survey respondents, to annul personal attitudes about an existing brand, and to create a neutral basis for giving answers (new brand, new products that were not previously exposed to the public). The survey itself was conducted in such a way that the respondents first approached a specially designed online store and viewed it at their own discretion. After that, the respondents answered the questions in the survey questionnaire, in general about the habits of online shopping, and then about the online store they visited as part of the survey.

4. ANALYSIS OF RESEARCH RESULTS

The age structure of the respondents is one of the factors for the analysis of the obtained results. The age range of the respondents is from 18 to 47 years of age. When determining the age limits of the respondents, people under the age of 18, as well as people of older age, were not taken into account in a targeted manner.

The target was that part of the population that is of legal age and can earn their own money. In this sense, 39.3% of respondents belong to the group "employed", 60% of respondents to the group "students" and the remaining 0.7% to the group "unemployed". The structure of respondents by gender represents 40.7% of female and 59.3% of male respondents.

The starting point of the research was to determine the condition and habits of consumers before the onset of a pandemic. It was important to determine 1. the frequency of online shopping of respondents, 2. the type of products that respondents most often buy online, and 3. personal review of respondents about online shopping. Out of a total of 150 respondents, 6.7% of respondents stated that they buy online whenever possible, 25.3% of respondents stated that they buy online very often, the majority of 48% of respondents stated that they occasionally buy online, while 18.7% stated that they only buy online when necessary, and only 1.3% never buy online.

Figure 1 Question: Please indicate your opinion on Online shopping
(multiple answers are acceptable)
150 responses

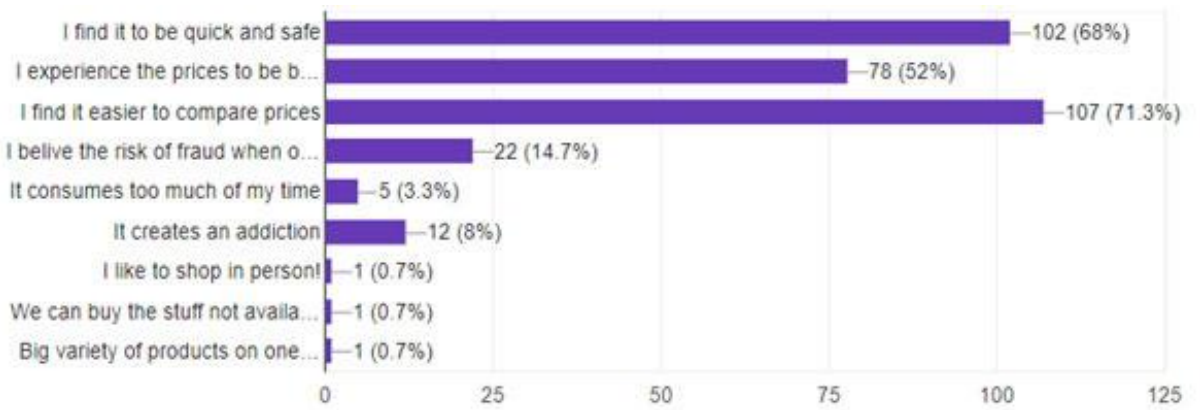

Figure 10 *- Opinion on online shopping*

According to their own views on online commerce in general, 68% of respondents think that online shopping is a fast and safe way to buy, and 71.3% of them said that it is easier for them to compare product prices when shopping online, while 52% think that prices are cheaper than in conventional stores. On the other hand, a small number of respondents believe that online shopping is too time-consuming (3.3%) or addictive (8%) (see Figure 1)

According to the type of product that respondents most often buy online most of them buy clothes (70.9%), electronics (63.5%), and books and literature (28.4%).

Figure 2 Question: In regard to frequency, how did the COVID-19 pandemic affect your online shopping habits?
150 responses

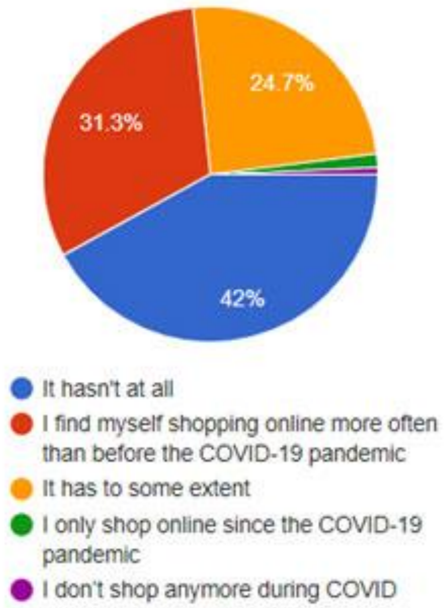

Figure 11 *– Frequency of how did the COVID 19 pandemic effect online shopping habits*

As expected from the questionnaire, the pandemic sampled with the COVID-19 virus also affected the respondents, which is reflected in the fact that as many as 31.3% of them explicitly stated that since the onset of the pandemic they buy online more often than in pre-emergence conditions, while 24,7% of respondents said the pandemic affected the frequency of their online shopping to some extent. From the aspect of entrepreneurs who decide to offer their products and/or services through online stores, these data show great potential and opportunity for growth and expansion in the Republic of Croatia area market. On the other hand, as many as 42% of respondents said that the onset of the pandemic did not affect changes in their online shopping habits in terms of frequency (see figure 2). This of course does not mean that the same 42% of respondents do not have any preference or habit of online shopping.

An interesting result of the survey was the answer of 68.7% of respondents that the COVID-19 pandemic did not affect the type of products they tend to buy online, while 26.7% of respondents said that during the pandemic they buy some products online they would not before.

It follows from the above that the habits of consumers in Croatia during the pandemic are dynamic and still in the phase of adaptation to new conditions in society, but also the market situation. Entrepreneurs who are preparing to change their business model and adapt it to the online environment, as well as those who have yet to introduce themselves to the market, could focus on that part of consumers for whom the conditions of online shopping are also "new". It is important to examine what are the factors to which consumers are particularly sensitive and to which they react in particular. In this sense, the results of the "test" part of the survey and the statements of the respondents about specific products and the Webshop are presented below who had not previously had the opportunity to see and take their own stand.

In the first part, the aim was to investigate the general impression of the respondents about online shopping. The first part of the questions the respondents commented on was the general design of the online store, the choice of colors that dominate the site, its intuitiveness, and the brand name KERADO (logo) and slogan „Your unique tableware“. The highest expectations were based on the latter. On a scale of 1 to 5 where 1 denotes „I disagree“, and 5 denotes „I totally agree“ 36% of respondents are on the statement that they consider the brand name memorable, memorable gave a grade 5, 24% of respondents grade 4, 22% of respondents grade 3, 11,3% of respondents grade 2, and only 6,6% of respondents grade 1. Still, the brand slogan „Your unique tableware“ was noticed by 32% of respondents, and 59,3% of respondents did not notice promotional video „KERADO Tea Time”.

Figure 3 Question: Please indicate your opinion on the KERADO products.
150 responses

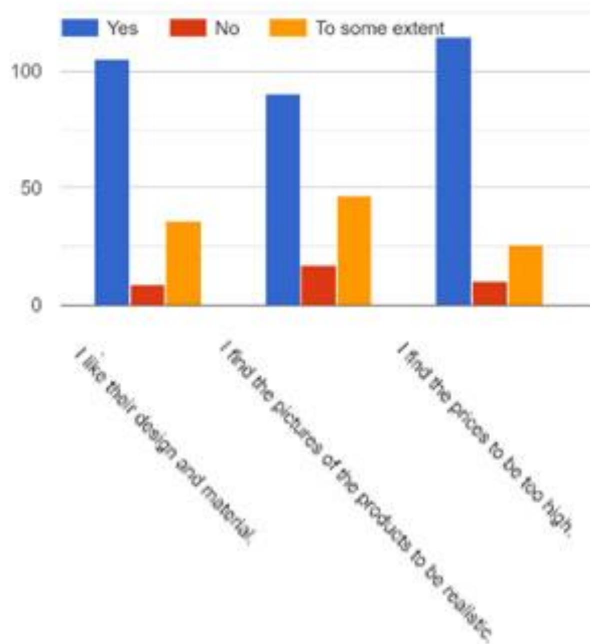

Figure 12 *– Opinion on the KERADO products*

In the second part, the focus was to explore respondents' views on specific products. The results were significantly more positive than the general impression of the respondents about online shopping. In total 70% of respondents stated that they like the design and selected material of the product, 60% recognizes them as multi-purpose products, 76,6% experienced photos of the product as realistic, and 66% the respondent considers that the product description is sufficiently detailed and that sufficient product information has been provided to be able to make a purchase decision (see figure 3).

It follows from all the above that the respondents to the survey questionnaire in the role of potential buyers of KERADO products reacted positively to the products themselves, while the accompanying design factors, especially the dominant colors and slogans, remained without much support. Given the possibilities of technology and online tools that can be used to improve a test website or any other online store, these exposed answers of the respondents provide good guidelines for improving online stores in Croatia.

5. CONCLUSION

There is no doubt that 2020 and the so-called corona crisis introduced many changes in the market and affected traders as well as consumers. In the conditions of a complete lockdown in which work in conventional stores was allowed only to certain categories of stores (groceries, hygiene supplies, etc.), many retailers faced the challenge of how to adapt their business and meet customer needs in an online environment. As a special category stand out those traders who were just preparing to offer their products on the market in the conditions of a pandemic. The starting point for such adaptation is regardless of the offline-online environment the needs of the consumer, the target part of the market demand. The basic premise of this paper was that in the Republic of Croatia consumers who were proponents and active users of online shopping before the new conditions of purchase intensified their online shopping activities (such as more frequent online shopping, more products and services purchased online, etc.), while the consumers who may not have been prone to online shopping before are also changing their habits and gradually switching to online shopping. The survey shows that users are more oriented to Internet shopping, but with certain prerequisites to ensure safe shopping and a user-friendly environment. Based on the research, we came to the conclusion that the most important thing for customers is quick and safe shopping, and to compare prices and product quality, which makes the market dynamic and flexible to change. Although a relatively small sample of 150 respondents proved correct, the assumption that 31.3% of respondents who stated that since the onset of the pandemic more often buy online than in the conditions before its occurrence, and 26.7% of respondents said that during a pandemic online they buy some products that otherwise would not. Thus, not only is there a tendency for more frequent online shopping for consumers in the Republic of Croatia (criterion of the way of buying a conventional store versus online store), but there is also the potential for growth in the aspect of product supply (product category criterion). These are important indicators for all those entrepreneurs who in the new social circumstances decide to start their own business, make and sell products that are not vital (such as jewelry, clothing, interior accessories, etc.). The key is certainly a quality product that meets the needs of the target group of customers, but in the context of online shopping, it is not enough. The conducted primary research showed that the vast majority of respondents extremely like the test KERADO handmade dishes, but they also expressed a relatively high dissatisfaction with the quality of the online store itself. Respondents proved to be sensitive to the design of the website, especially the chosen design colors, loading the page for too long, the "already seen" attribute "unique" which was chosen as key in the KERADO brand slogan, background image, etc. It is important to note that respondents who have a preference for online shopping (25.3% of respondents said that they often buy online, most of 48% of respondents said they occasionally buy online), so it is about consumers who have certain expectations due to previous experience. In this sense, with the growth of the online store offer, one can only expect that the consumer experience will be richer and the requirements more stringent. Therefore, it is important not to neglect any aspect of online shopping

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We thank all participants, authors, partners and supporters!

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Supported by: