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## STAKEHOLDERS AND THEIR INTERESTS IN THE IMPLEMENTATION OF THE LITHUANIAN ARTIFICIAL INTELLIGENCE STRATEGY

Vaida BAČIULIENĖ, Rusnė JEGELAVIČIŪTĖ, Ieva PETROKĖ

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### Abstract

*The agri-food industry is identified as an area that is too slow to accept technological progress, but plays an important role in the Lithuanian economy. The Lithuanian Artificial Intelligence Strategy presents the agri-food sector as one of the main economic sectors that will benefit the most from the application of artificial intelligence systems, therefore, in order to increase the productivity and competitiveness of the Lithuanian agri-food industry, it is important to implement the Lithuanian Artificial Intelligence Strategy, which can be facilitated by the identification of stakeholders and determination of their interests. In the Lithuanian agri-food industry, 6 stakeholder groups have been identified upon implementation of the Lithuanian Artificial Intelligence Strategy, however, these groups, in cooperation with each other, form new stakeholder groups, therefore, the list is not exhaustive. Stakeholder groups must be constantly analysed in order to determine their interests and expectations in the implementation of the Lithuanian Artificial Intelligence Strategy.*

### Key words:

*artificial intelligence strategy, stakeholders, agriculture, agri-food industry, competitiveness*

**JEL Classification:** J43, Q13, Q16, Q18

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### INTRODUCTION

In 2019, the Ministry of Economy and Innovation of the Republic of Lithuania presented the Lithuanian Artificial Intelligence Strategy (hereinafter referred to as the AI strategy), which identifies the agri-food sector as one of the main economic sectors that will benefit most from the application of artificial intelligence systems. According to the data of the Lithuanian Department of Statistics, in 2019, the agricultural production was 2.45 billion Eur or 10.4 per cent greater than the production in 2018. In 2019, the value of crop production increased by 16.5 per cent, and the value of livestock production increased by 1.3 per cent in comparison with 2018. In order to increase the productivity and competitiveness of the agri-food industry, it is necessary to implement the AI strategy, and one of the factors determining the success of the strategy is proper identification and analysis of stakeholders. Stakeholder analysis makes it possible to determine how strategic decisions may affect stakeholders. The effectiveness and efficiency of strategy actions can be increased

and negative impact can be reduced by understanding which stakeholders may be affected by the proposed strategic actions. Determination of stakeholder interests facilitates decision-making in their management in order to meet stakeholder expectations and successfully implement the AI strategy. The object of the research is the stakeholders in the implementation of the Lithuanian AI strategy. The aim of the research is to identify the Lithuanian AI strategy stakeholders in the agri-food industry and their interests. The research methods are scientific literature analysis, document analysis, and secondary data analysis.

### THEORETICAL BACKGROUND

In 1963, the Stanford Research Institute first introduced the concept of stakeholders, defining stakeholders as groups without which the support organization ceases to exist. This concept has been further developed by noticing the need to identify stakeholders not only in the private but also in the public sector, however,

Freeman's (1984) stakeholder theory is still used, which describes stakeholders as "any group or individual that can influence or be affected by objectives of the organization".

Stakeholders may be understood differently in different activities. Scientific literature provides many definitions of stakeholders (Table 1).

Table 1: Definitions of stakeholders

Author	Year	Definition	Source
Stanford Research Institute	1963	Groups without which the support organization ceases to exist	Florea and Florea (2013)
Handen	1981	Parties that may be affected by technology in the private or public sector or that are involved in the technology assessment process through participation in interviews, workshops, surveys, conferences, etc.	Babiuch and Farhar (1994)
Wilekke	1981	Identifiable, but not necessarily socially related groups with a similar pattern of behaviour for the proposed action	Babiuch and Farhar (1994)
Francis	1975	Groups that are immediately affected by the project or policy or that will be affected in the future	Babiuch and Farhar (1994)
Freeman	1984	A group or an individual that can influence or be influenced by the goals of an organization	Gil-Lafuente and Paula (2013)
Post	2002	Groups or individuals who voluntarily or involuntarily contribute to the well-being of an organization and are potential profit or risk bearers	Gil-Lafuente and Paula (2013)
Florea and Florea	2013	Individuals, institutions, organizations, formal or informal groups, concerned organizations, affected by the decisions or actions of the organization or likely to influence them.	Florea and Florea (2013)
Cambridge Dictionary	2020	An individual, employee, customer, or citizen who is related to an organization, society, or alike, and who is therefore responsible for it and has an interest in its success.	Cambridge Dictionary (2020)

Source: own elaboration (2020)

Table 1 shows that even though the definition of stakeholders has been developed in the work of scholars since 1963, the concept

has remained similar, and is best revealed by the definition of stakeholders developed by Freeman (1984), the pioneer of stakeholder

theory. Depending on the subject matter, the most precise definition of stakeholders is revealed by Handen (1981), who defines them as parties that may be affected by technology in the private or public sector or that are involved in the technology assessment process through participation in interviews, workshops, surveys, conferences, etc.

In the scientific literature, stakeholders are divided into groups according to various characteristics. Grouping of stakeholders into internal and external is the most common (Florea, Florea, 2013). According to Freeman's (1984) definition of stakeholders, stakeholders can be divided by the impact, i.e. stakeholders who can influence an organization's goals or

stakeholders who are affected by an organization's goals. Babiuch and Farhar (1994) defined the impact as positive, negative, or neutral changes in social, economic, or political structures that result from the proposed actions. Changes can occur in the plane of space and time. Researchers categorised stakeholders according to the impact of the organization's goals that affect them. Stakeholders may be directly affected by the proposed action (first order impact) may be affected by second or higher order impacts due to the action. In assessing the potential impact of the proposed action, the first, second and third order impacts are distinguished (Table 2).

Table 2: Impact on stakeholders

Impact classification	
First order impact	directly related to the proposed action
Second order impact	resulting from first order impact
Third order impact	indirect impact arising from second order and subsequent impact

Source: Babiuch and Farhar (1994)

Implementing the strategy can be difficult due to the interests of stakeholders. Perez Carillo (2007) emphasises that one of the challenges faced by experts, academics, governments, and private companies is the consensus on how to define and prioritise stakeholder interests. Florea and Florea (2013) note that there may be many different stakeholder interests. The most frequently singled out interests of stakeholders are related to economic aspects, social change, work, security, environment, and education. The decisions of an organisation have a positive effect on one stakeholder while at the same time having a negative impact on the other, so when considering the interests of one stakeholder, the interests of other parties should

be considered as well (Florea and Florea, 2013).

In summary, it can be said that, depending on the subject matter, the most precise definition of stakeholders is the following: parties that may be affected by technology in the private or public sector or that are involved in the technology assessment process through participation in interviews, workshops, surveys, conferences, etc. Stakeholders can be grouped according to different characteristics, however, if the technology is still being developed, it remains unclear what the exhaustive list of stakeholders will be, and prioritising their interests is one of the main challenges.

## RESULTS AND ANALYSIS

In the AI strategy, the Lithuanian agri-food industry is identified as an area that is too slow to accept technological progress, but plays an important role in the Lithuanian economy. There are already examples of the use of artificial intelligence and innovation in the Lithuanian agri-food: hyperspectral imaging for precision agriculture, distributed algorithm processing infrastructure, farm and grain management software, food integrity using artificial intelligence and Raman spectroscopy, electronic nose for food freshness testing, 3D LiDAR programs in forestry, modelling solutions in agriculture and fruit growing. However, in order to accelerate the processes of artificial intelligence development and application, it is important to identify which stakeholders are affected by the goals of the AI strategy so that their interests can be understood, and thus facilitate stakeholder management in implementation of the AI strategy.

The AI strategy consists of 6 sectors, with principles assigned to each sector and implementation mechanisms established. The following is relevant to the agri-food industry: AI strategy, sector 2 “Integration of artificial intelligence systems into all sectors of the economy”, principle 3 “To focus on the key sectors of the economy that will benefit most from the application of artificial intelligence systems” as well as the established

implementation mechanism, which is to develop individual methods of adapting AI innovations to the manufacturing, agricultural, healthcare, transportation and energy sectors. Although the mechanism set out in the AI strategy only involves the development of AI application methods, these innovations will have an impact on a wider range of stakeholders in the agri-food industry. Adams et al. (2015) note that when assessing technologies that do not yet exist or have not yet been developed, it is not always clear what the final list of stakeholders will be, but it is useful to consider the potential impact of technologies in determining which stakeholder groups may be affected by change. Based on the definition of stakeholders – parties that may be affected by technology in the private or public sector or that are involved in the technology assessment process through participation in interviews, workshops, surveys, conferences, etc. – stakeholder groups in the Lithuanian agri-food industry have been identified, which will be affected by the development of AI methods directly or indirectly (Fig. 1).

Figures and tables should be shown as in the following example. Make sure that they are within determined margins, centered, numbered and titled. Below the figure or table explanation should be given showing the importance of an illustration.

Figure 1: Identification of stakeholders in the implementation of the Lithuanian artificial intelligence strategy in the agri-food industry

<b>Public authorities</b>
<ul style="list-style-type: none"> <li>•Ministry of Agriculture of the Republic of Lithuania</li> <li>•Ministry of Economy and Innovation of the Republic of Lithuania</li> <li>•Ministry of Education, Science and Sport of the Republic of Lithuania</li> <li>•Governmental institutional organizations</li> </ul>
<b>Entrepreneurs</b>
<ul style="list-style-type: none"> <li>•Farmers, agricultural cooperatives</li> <li>•Traders</li> </ul>
<b>AI developers</b>
<ul style="list-style-type: none"> <li>•Universities</li> <li>•Science and technology parks</li> <li>•Clusters</li> <li>•Private companies creating and developing AI in Lithuania</li> <li>•Private companies importing AI products</li> <li>•Independent AI enthusiasts</li> </ul>
<b>Investors</b>
<ul style="list-style-type: none"> <li>•Natural and legal entities</li> </ul>
<b>Associations, consultancy and support agencies</b>
<ul style="list-style-type: none"> <li>•Lithuanian Artificial Intelligence Association</li> <li>•Lithuanian Computer Society</li> <li>•Chamber of Agriculture of the Republic of Lithuania</li> <li>•Lithuanian Union of Small and Medium Farmers</li> <li>•Lithuanian Meat Processors Association</li> <li>•Association Lithuanian Food Industry</li> <li>•Lithuanian Family Farmers Union</li> <li>•Lithuanian Agricultural Advisory Service</li> <li>•Agencies providing support</li> </ul>
<b>Consumers</b>
<ul style="list-style-type: none"> <li>•End consumers in the agri-food industry</li> </ul>

Source: own elaboration (2020)

Upon implementation of the Lithuanian AI strategy in the agri-food industry, 6 stakeholder groups were identified: public authorities, entrepreneurs, AI developers, investors, associations, consultancy and support agencies, consumers, however, the list is not exhaustive due to the continuous development of AI methods. Stakeholders can interact with each other, creating new stakeholders, and public authorities, entrepreneurs, AI developers, investors, associations discover new forms of cooperation, e.g. Lithuania Agro Space Digital Innovation Hub is a non-profit regional network uniting Lithuanian research, education, business and governmental institutional organizations to promote cross-sectoral digital technology innovation; AgriFOOD Lithuania is a centre for digital innovation, bringing

together key stakeholders in research, business and society; European Centre for Digital Innovation EDIH4IAE. It has the aim of streamlining the digital transformation of the industrial, agri-food and energy sectors, giving priority to business and public entities operating in the western and central Lithuanian region and introducing key digital technologies (high-performance computers, artificial intelligence, and cyber security). Stakeholder groups work together in the common interest of fostering innovation through investment, however, each stakeholder differs in its range of interests when implementing the AI strategy (Table 3). Meeting the interests and expectations of stakeholders in a balanced way is important because stakeholders who realize that they are not getting enough benefits may

refuse to implement the AI strategy or find other alternatives.

Table 3: Interests of stakeholders upon implementation of the Lithuanian Artificial Intelligence Strategy in the agri-food industry

Stakeholders	Interests
Public authorities	Support for the implementation of artificial intelligence methods; Economic growth; Increasing the competitiveness of regions and farms facing difficulties; Job creation
Entrepreneurs	To use the developed artificial intelligence products and methods to strengthen their activities; To increase competitiveness; To improve financial returns; To use access to qualified workers
AI developers	To commercialise the products under development; To sell the already developed products; Job creation
Investors	Investing in promising artificial intelligence companies boosts economic growth; Quick financial returns
Associations, consultancy and support agencies	Support for companies and farms implementing artificial intelligence methods, their consulting, provision of information; Economic growth; Increasing the competitiveness of regions and farms facing difficulties
Consumers	Quality goods; Lower prices

Source: own elaboration (2020)

Table 3 shows that the interests of all stakeholders are related to economic aspects, but the economic level differs: economic interests of public authorities and associations, and consulting agencies are focused on macro and meso levels, while economic interests of entrepreneurs, AI developers, investors,

consumers are related to micro level. Although the interests of all stakeholders are related to economic aspects at various levels, the public authorities combine economic interests with the introduction of technologies, including the social context – increasing the competitiveness of regions and farms facing difficulties, job

creation; whereas entrepreneurs, AI developers and investors focus on fast and higher financial returns; the interests of consumers include the criterion of better quality goods, and the associations and consulting agencies combine their economic interest with the dissemination of information.

#### 4. CONCLUSION

In summary, it can be said that, depending on the subject matter, the most precise definition of stakeholders is the following: parties that may be affected by technology in the private or public sector or that are involved in the technology assessment process through participation in interviews, workshops, surveys, conferences, etc. Stakeholders can be grouped according to different characteristics, however, if the technology is still being developed, it remains unclear what the exhaustive list of stakeholders will be.

In the Lithuanian agri-food industry, 6 stakeholder groups have been identified in the implementation of the Lithuanian AI strategy, i.e. public authorities, entrepreneurs, AI developers, investors, associations, consultancy

and support agencies, and consumers however, this list is not exhaustive due the continuous process of the development of AI methods. The identified stakeholder groups can interact with each other, thus creating new stakeholders with common interests, which are to foster development and introduction of innovation and investment by attracting investment. Stakeholder groups must be constantly analysed in order to determine their interests and expectations in the implementation of the Lithuanian AI strategy.

Upon implementation of the AI strategy, the interests of all stakeholder groups are related to economic aspects, however, public authorities combine economic interests with the introduction of technologies, including the social context – increasing the competitiveness of regions and farms facing difficulties, job creation; whereas entrepreneurs, AI developers and investors focus on fast and higher financial returns; the interests of consumers include the criterion of better quality goods, and associations and consulting agencies combine their economic interest with the dissemination of information.

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## EMPLOYMENT OF FOREIGN LABOR FORCE IN SLOVAKIA

*Peter BAJZÍK, Peter NOVÁČEK*

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### **Abstract**

*The dynamic changes that are taking place currently in many areas of life in Slovakia have impact also on the area of the employment of foreign labor. At present, Slovakia is becoming a state that accepts foreign labor due to the lack of domestic skilled labor. Based on description and analysis of applicable legislation and relevant statistical data, the main goal of the article is to analyze the current state of employment of foreigner labor force from EU, as well as from the non-EU Member States in particular. Methodological tools used in the research include desk research and complementary methods for textual analysis as description, analysis, generalization, and data synthesis.*

### **Key words:**

*foreign labor force, foreigner, labor code, legislation*

**JEL Classification:** F22, J21, J23

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### **Introduction and literature review**

Slovakia has been gradually changing from the state of emigrants to the transit state, to which foreigners are coming. Since the year 1990 Slovakia is becoming a destination country to which, on the one hand, its inhabitants return from abroad, on the other hand also foreigners from the EU Member States and / or third countries come. More significant changes have been brought by the accession of Slovakia to the European Union and Schengen area. The twenty-first century can be considered as a century of mobility and migration. The first to systematically analyze migration of people was an English author Ravenstein (1885). He was perhaps the first scientist who attempted to study migration. He also distinguished various kinds of migrants, be it local migrants, long-and short-journey migrants and temporary migrants. Though he limited his research to what is now United Kingdom and Ireland, he identified “flows” of migration in this area and presented his Laws of Migration (1885). Based on Casteles (2010), migration contributes to changes in structure and institution in global economic, political and social relationship. We can observe two demographic trends in the EU: the first one is

a continuously aging population and increasing migration flows (European Commission, 2014). According to Zimmermann (2009), mobility can be considered as a factor for safeguarding economic growth, prosperity, employment and social security. The analysis of Baas, Brucker and Hauptmann (2010) shows that labor migration after EU enlargement in 2004 increased GDP in the newly integrated states by approximately 2%. Kahanec (2013) argues, that labor mobility might provide EU with more effective ways to productively use human workforce. Gilmartin states that the relationship between countries and migration is framed through laws and policies (Gilmartin, 2015). Laws define citizenship, legal and illegal migration, necessary procedures, legislative protection and obligations of foreigners.

### **Employment of Foreigners in Slovakia**

Since 2004 especially illegal and asylum migration decreased in Slovakia, and legal migration increased sixfold. In spite of the fact that the increase of the number of foreigners in Slovakia was the second highest among all EU Member States in 2004-2008, the representation of foreigners in the population compared to other EU countries still remains low. Foreigners make

up 2.67% of the total population of the Slovak Republic and their number is growing. Based on statistical data, 145,940 foreigners with a residence permit lived in Slovakia in June 2020 and their number has increased almost sevenfold since 2004 (from 22,108 migrants in 2004 to 145,940 in 2020) (Ministry of Interior of the Slovak Republic, 2020). From among this number citizens of the European Union represent 39.5% of all foreigners in Slovakia. The biggest number of foreigners from the EU countries living in Slovakia comes from the Czech Republic forming 8% from the overall number of foreigners in Slovakia, following by persons from Hungary (6,2%) , Poland (4,1%), Germany (3,1%), Italy (2,1%) and United Kingdom (1,8%). A more significant increase of number of migrants from the EU is from Romania (5%), who came to Slovakia as labor migrants. In June 2020 there were 8.044 Romanians employed in Slovakia as compared to 5.895 citizens of the Czech Republic (Central Office of Labour, Social Affairs and Family, 2020).

The share of third-country nationals represents 60.5% of the total number of foreigners in Slovakia and accounts for approximately 1.6% of the total population of Slovakia. The share of Ukrainian citizens in the total number of foreigners represents 27.1%. From among foreigners from countries outside the EU, migrants from Serbia, Vietnam, the Russian Federation and China also have the largest representation in Slovakia.

In June 2020 74.298 foreigners were working in Slovakia, from this number there were 43.768 third-countries nationals. In 2020, foreigners from approximately 130 countries were employed in Slovakia, mostly from Ukraine (21.411), Serbia (12.380), Romania (8.044), the Czech Republic (5.895) and Hungary (5.075). Among migrant workers, men significantly exceed with more than 73% of all employed foreigners. Thus, there is currently one employed foreigner per 32 domestic employees. Among migrant workers, the ratio of men is significantly higher, more than 73% of all employed foreigners (Ministry of Interior of the Slovak Republic, 2020).

According to Nosková and others besides migration for social reasons, such as family reunification or marriage of a migrant with a Slovak citizen, the most significant legal migration to Slovakia today is for work purposes, business and university studies (Nosková, et al, 2017). The biggest number of employment foreigners from the EU/EEA is working in three Slovak regions: Bratislava, Trnava and Nitra regions.

In recent years, there has been a significant increase in the number of employees from third countries, who supplement the lack of suitable labor, especially due to the required qualifications in Slovakia. According to Treľová, in Slovakia, the number of new jobs created has been increased, however, companies "began to struggle with a modern problem (phenomenon) - the lack of free and skilled labor (especially in the manufacturing sector). One of the fastest and most effective measures to address the lack of a suitable labor force can be the employment of skilled and educated migrant workers and foreign students" (Treľová, 2016).

The three professions that employ the highest number of EU / EEA workers are: operators and fitters of machinery and equipment (8.793 persons), auxiliary and unskilled workers (4.240 people) and skilled workers and craftsmen (4.148 people) (Úpsvr, 2020). In spite of the high number of unskilled employees, the vast majority of foreigners represent the skilled workers. Employed foreigners from third countries work in the following professions: operators and fitters of machinery and equipment (4.696 persons), auxiliary and unskilled workers (4.034 persons) and skilled workers and craftsmen (1.749 persons) (Úpsvr, 2020). A significant part of third-country nationals work as skilled workers, nonetheless, a large number of people are employed in low-skilled occupations.

### **Methodology and research methods**

The object of the research is the foreign labor force in Slovakia from the EU as well as from third countries. As this issue has an international legal dimension, the subject of research is also the

analysis of the Slovak legislation regulating the employment of foreigners.

Standard secondary research was used as a methodological tool, and standard working methods with text such as description, analysis, abstraction and synthesis of acquired knowledge and data were used to process the textual part of the work.

### **Key terms**

The term migrant is not defined in the Slovak legislation, nonetheless, the term foreigner is defined therein. Anyone who is not a citizen of the Slovak Republic is a foreigner. In relation to the person (or a group of persons) who has decided to migrate (from Latin migration within the meaning of wondering, moving, change), and thus temporarily or constantly change their domicile, we distinguish several categories: voluntary migration within the territory of a given country (national migration), and voluntary migration from one country to another (international migration). There is also forced migration, which arises as a result of natural or man-caused situations such as trafficking in human beings, persecution, war conflicts, humanitarian, natural or environmental disasters or the consequences of the implementation of (infrastructure) development projects. The reasons for migration can be: economic with the aim to ensure better livelihoods, labor where there is a paid activity in the state of which the person is not a citizen. Another reason for migration represents the study and research, as well as persecution according to reasons stipulated in the Geneva Convention (in the Slovak legal order the notion of refugee has been replaced by the term asylum seeker.)

### **Basic legislative framework regulating the conditions of stay of foreigners in the territory of the Slovak Republic**

Basic law norm regulating the problematics of immigration to Slovakia represents the Law No. 404/2011 Coll. Z. z. on Residence of Foreigners as amended, which has been amended numerous times from its entry into force. Another applicable law is the Law No. 480/2002 Coll. on Asylum as

amended, which regulates the specific status of foreigners as asylum seekers, persons who were granted asylum and persons who were granted subsidiary protection. According to article 2 paragraph 2 of the Law on the Residence of Foreigners anyone who is not citizen of the Slovak Republic is considered as the foreigner. The EU citizen is anyone who is not the Slovak citizen and at the same time s/he is the citizen of other Member State of the EU or EEA. The Member State of the European Union is according to article 2 paragraph 1 lit. c) of the Law on the Residence of Foreigners considered the Member State of the European Union, except for Slovakia, other contracting State of the Agreement on the European Economic Area (Iceland, Liechtenstein and Norway) and Switzerland. The citizen of third country is anyone who is not the citizen of the Slovak Republic, nor the EU citizen. As the third country national/citizen is considered also the stateless person (Law no. 404/2011 Coll, 2020).

### **Residence of the EU citizens on the territory of the Slovak Republic**

Treaty on the Functioning of the European Union provides the EU citizens with the fundamental freedoms of free movement: free movement of persons, capital, goods and services. According to article 64 of the Law on Residence of Foreigners the EU citizen is entitled to stay in the territory of the Slovak Republic without any further restrictions for the period of three months after the entry. The EU citizen is obliged to have a valid passport or other valid travel document for the purpose of demonstrating his or her identity and citizenship of the EU Member State in a trustworthy way. An EU citizen is obliged to report the beginning of his/her stay in the territory of the Slovak Republic to the police department within 10 working days from the date of entry into the territory of the Slovak Republic and may stay in the territory of the Slovak Republic for 3 months from the date of entry. In case the EU citizen stays longer than 3 months within the territory of the Slovak Republic, s/he is obliged to apply for the registration of the residence by the fulfilled official form in person at the competent police department. The application has to be

accompanied by a confirmation according to the type of residence in the territory of the Slovak Republic (an employment contract in the case of employment; in the case of entrepreneurial activity, proof of being self-employed person).

The EU citizen has the right to reside in the territory of the Slovak Republic for more than three months in accordance with article 65 paragraph 1 of the Law on Residence of Foreigners, if s/he is employed in the territory of the Slovak Republic, or if s/he self-employed person; studies at a primary or secondary school or at a university in the Slovak Republic; or is presumed to be employed; is a family member of the EU citizen; or has sufficient resources for himself/herself and his/her family and thus does not represent a burden for the system of assistance in material need in the Slovak Republic (Slovak Business Agency, 2019). If the EU citizen resides legally in the territory of the Slovak Republic for more than five years without interruption, s/he has the right to apply for permanent residence. S/he has the right for permanent residence in the Slovak territory also in case of his or her residence in Slovakia for less than 5 years. The requirements applicable for the right of the EU citizen (in this case employee, self-employed person or family member of the EU citizen) for permanent residence in case of legal/authorized residence in the duration of less than five years are regulated by article 67 paragraph 2 of the Law on Residence of Foreigners (Slovak Business Agency, 2019).

### **Legal regulation of employment of foreigners in Slovakia with the focus on third countries**

The growing number of persons interested in staying in the Slovak Republic as well as the lack of labor force, which is recorded by many organizations in Slovakia, is also reflected in the change in the legislative conditions of residence. There are not only demographic changes in the labor market, but also changes related to technological development and industry. There are several differences between employment of Slovak citizens and foreigners in Slovakia in the Slovak legislation. The mentioned Law on Residence of Foreigners together with the Law on

Services of Employment No. 5/2004 Coll. represent the basic legislation regulating the area of employment of foreigners in the Slovak Republic. This problematic is also partially regulated by the Law No. 311/2001 Coll. (the Labor Code). According to Peráček and others (2020) in spite of this law has the status of *lex generalis* in the area of Slovak labor law, it is applied only as supporting legislation when it comes to employment of foreigners.

There are two basic groups of foreigners distinguished in relation to their employment in Slovakia:

1. foreigners who are citizens of one of the member states of the EU/EEA after fulfilling the conditions stipulated by the law can be employed in the territory of the Slovak Republic in the same way as citizens of the Slovak Republic. They are regarded as persons with same legal status as Slovak citizens,
2. third country nationals who do not belong to the EU/EEA. For the purposes of third-country nationals employment we distinguish: a) foreigners with permanent residence in Slovakia when employed, they are subject to the same conditions as Slovak citizens; b) foreigners with temporary residence in the Slovak Republic with their temporary residence granted for the purposes of employment or seasonal employment.

Documents and authorizations necessary for granting the temporary residence for the purpose of employment are stipulated in article 32 of the Law on Residence of Foreigners. As temporary residence is also regarded the residence based on the EU Blue Card. The foreigner can also be granted so called single permit for residence and employment, which is the type of temporary residence for the purposes of employment that is issued on the basis of confirmation of the possibility of filling a vacancy. According to the Law on Residence of Foreigners the foreigner can reside in the Slovak territory on the basis of permit, which is linked to the purpose of his stay and for a predetermined period. In the case of granting a temporary residence permit for employment purposes, the foreigner can only be

employed only in a part-time employment relationship for 37.5 hours per week or in a part-time employment relationship. The foreigner cannot be employed in a similar employment relationship (for example on the basis of the contract concluded to perform certain activity) or on the basis of other contract. Temporary residence (maximum 5 years, for the purpose of seasonal employment for a maximum of 180 days for 12 consecutive months) entitles a foreign national to stay in the Slovak Republic at a specified time, with the possibility to travel and return to the Slovak Republic and is tied to one purpose, which may be, inter alia, the purpose of employment. Following institutions cooperate in granting temporary residence permits procedure:

1. police department - decides on granting, prolongation, refusal or dismissal of application for temporary residence permit;
2. Central Office of Labor – determines whether the concrete job can be filled by foreigner without the necessity to examine the labor market in case of job shortages in districts with an unemployment rate of less than 5% per calendar quarter and the employer may employ a maximum of 30% of third-country nationals out of the total number of employees;
3. employer – is obliged to report to the Ministry of Labor, Social Affairs and Family any vacant job that has to be published minimum 10 working days in case of employment permits and minimum 20 working days, in the case of filling a job before applying for a temporary residence permit. The notification is mandatory also in case of shortage of jobs. The employer can employ third-country national only on the basis of employment contract and under conditions stipulated by article 21 paragraph 1 of the Law on Services of Employment and s/he can employ maximum 30% of third-country nationals from the total number of employees;
4. agencies of temporary employment – they employ the foreigner on the basis of employment contract and temporarily assign him / her to perform work for the employer. The employment contract between the temporary employment agency and the foreigner also serves as a document for the purpose of granting temporary residence permit.

The list of jobs with a shortage of labor was published by the Ministry of Labor, Social Affairs and Family for the first time on 25 June 2018. It is based on the database of jobs vacant for at least 3 months during the year as well as on the database of jobseekers suitable for filling vacancies

Third-country nationals can reside freely in the Slovak territory for the period of maximum 90 days within any period of 180 days. Milošovičová and coll. (2018) stresses that if foreigners want to carry out any gainful activity in the territory of the Slovak Republic, they must apply for a residence permit. There are three possibilities provided by the legislation: temporary residence, permanent residence or tolerated residence permits (Milošovičová et al, 2018)

Temporary residence authorizes the third-country national to reside in the Slovak territory, to travel out and return to the Slovak territory during the period of time specified by the police department. Temporary residence may be granted according to 21 paragraph 1 of the Law on Residence of Foreigners: „for the purpose of doing business for maximum 3 years; for the purpose of employment for up to 5 years; for the purpose of study for maximum 6 years; for the purpose of special activity for maximum 2 years; for the purpose of research and development for maximum 2 years; for the purpose of family reunification for maximum 5 years; for the purpose of performing service obligations by civil units of armed forces for maximum 5 years; foreigner who has the status of Slovak living abroad for maximum 5; foreigner who has the status of a person with long term residence in another Member State for maximum 5 years.“

As temporary residence is considered also the residence based on the EU Blue Card. The Law on the Residence of Foreigners in its article 43 stipulates the specific list of persons, third-country nationals, who can be granted permanent residence for 5 years. Requirements for granting permanent residence for unlimited period are regulated by article 46 of the Law on the Residence of Foreigners. Police department can according to article 52 of this Law grant the third-

country national the long term residence permit for indefinite time, if his/her authorized stay in the Slovak Republic territory was continuous during the period of five years immediately prior to the filing of an application, or in case of granted residence on the territory of any Member State of the EU or EEA as a Blue Card holder for at least two years immediately prior to the filling of the application for long-term residence, or his/her permanent residence permit expired according to article 52 paragraph 1 lit. b). In special cases the third-country national can be granted tolerated residence. This is granted for maximum 180 days on the basis of article 58 of the Law on the Residence of Foreigners. The third-country national with granted tolerated residence cannot do business in the territory of Slovakia. In some cases, specified by law nationals with tolerated residence permit may enter into employment relationship.

### Conclusion

Although Slovakia is not considered a target country for foreign workers, the share of employed foreigners from the EU / EEA and third countries in total is more than 2%. Foreigners from the EU/EEA represent the stabile number of employees in Slovakia. The shortage of labor force in Slovakia is compensated by the employment of labor force from third countries, that are mostly working in the regions of Bratislava, Trnava and Nitra. The interest of

foreigners in work depends on the value of salary and sufficient job opportunities, but also to the existing working or entrepreneurial community of fellow citizens and families from the home state. The employment of the third-country nationals in Slovakia is demanding and lengthy. On the positive side, the time limit for processing the temporary residence permit for employment purposes has been reduced from 90 to 30 days in the case of professions with insufficient job applicants. The fact that the employees does not have to prove their education with a certificate if they are not interested in issuing a Blue Card or if it is not a highly qualified job, can also be perceived positively. The employment of foreigners is regulated by the legal regulations such as Labor Code, Law No. 404/2011 Coll. on the Residence of Foreigners and the Law No. 5/2004 Coll. on the Services of Employment. According to article 13 of the Labor Code the discrimination of foreigners in employment relations is prohibited. The applicable laws determine their equal position with other employees in the Slovak Republic. According to article 13 of the Labor Code the employer is obliged in employment relations to treat employees in accordance with the principle of equal treatment that is stipulated for the area of employment relations by the special Law on Equal Treatment in Certain Areas and on the Protection Against Discrimination (Anti-discriminating Law).

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## POSSIBLE RISKS IN THE VALUATION PROCESS

Alena BAŠOVÁ

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### **Abstract**

*The aim of this paper is to determine the value of the company using the principle of going concern through the business method and states possible risks in this process. The article contents several parts, first of them is describing the historical review of valuation methods and shortly states international standards used in expertise. Assumption of using this method is, that evaluated company expecting good results in the future, because we apply going concern principle. In the process of determining the value, in accordance with the opinion of several authors, we encounter different valuation techniques, which also bring us different results. Each method has therefore their risks, negatives, positives, or limitations. Than we determine value of company XY, which does not wish to be named. Valuating process has several steps, in which we explain the procedure for determining the value of that company.*

### **Key words:**

*enterprise value, going concern principle, business method, withdrawable sources, continuing value*

**JEL Classification:** C53, L26, M21

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### **Introduction**

It is often necessary to know the value of a company, because investors -existing or potential, shareholders, creditors, managers want to know this value. When valuing a company, the main task is to determine the so-called "Real value of the enterprise". However, it is important to point out, that there is no such thing as an objective value for the companies. Such value could be the value of the acquisition costs were incurred from the company's assets, and thus to estimate how much the given assets would cost in the re-acquisition. The potential risk subsequently arises from the discrepancy of values in the acquisition of assets in the past and in the current period.

Whereas the objectivized value does not exist in process valuation possible risks follows from this fact. There is no unique and exact methodology to determine the value of a company. The value is not objectively attributable to a company, we can exactly determine its sales or number of employees, but there are no objective criteria which would allow us the determine the exact value. In process setting the value plays very important role the assessor.

If two assessors received the same result, it would be a coincidence, because is

usual, when two assessors get two different results, even when applying the same valuation method. There are several valuation methods, each of them having several modifications, because many factors affect it, which is necessary to take into account and we can calculate the different value, what mean different results for the same company. These risks can create despite the fact that some methods use exact mathematical models.

Crucial to determining the value of a company is the fact that even its past costs and revenues are not decisive for its present value. (Koller, T. et al. 1990) The value of a business is defined by expected future income, whether at the level of owners and creditors, which is discounted to their present value. It is also important that to consider the unlimited life of the company is considered - the principle of so-called going concern. ((Ross, S. – Westerfield R.:(2013)

### **1. Historical overview of valuation methods**

The bases of using present value as one of the valuation methods date back to the beginning of the 20th century. One of the important representatives was Alfred Marshall from the Cambridge school and Eugen von Böhm-Bawerk

from the Austrian school. Modern approaches to company valuation can be found in the works of the American marginalist as well as co-founder of modern economics Irving Fischer in *The Rate of Interest*, from 1907 as well as *The Theory of Interest* from 1930. He presented here four alternative approaches that are suitable for investment analysis. These procedures led to the same results and the basic principle was always based on a comparison of two investments. The preferred variant was characterized by the following features:

- Higher present value at the same market rate,
- The highest difference in the present value of the benefits over the present value of the costs,
- The highest difference in the rate of return above the market interest rate,
- Compared to the other most costly investment, returns in excess of the rate of return should also exceed the market interest rate. (Sabolovič, M.:(2013).

These basic assumptions for evaluating the effectiveness of investments represent the basic criteria for investment decisions, too. The first two points represent the principle of net present value, the third point represents the internal rate of return (hereinafter IRR).

The last point represents the rate of return. (Fernández, P.: (2007) (Later, in 1939, according to the prominent economist J. M. Keynes, the marginal efficiency of capital was calculated as a discount rate that balances the present value of rate of return on assets (ROA) with the present value. (Keynes, J.M.: (2008)

In the 1950s, cash-flow-based models began to be used, mainly stock markets and, of course, corporate valuation. At present, according to the International Valuation Standard (hereinafter IVS), the discounted cash flow (hereinafter DCF) method is considered to be the basic valuation method.

IVS were defined by the International Committee on Asset Valuation Standards, established in 1981.

Using IVS are followed three basic goals (International Valuation and Standards 1981):

- make easier cross-border transactions and increase transparency in financial reporting,

- serve as a professional basis for experts worldwide and enable them to respond to the latest valuation needs,
- provide valuation standards that meet the needs of developing countries.

## 2. The procedure for valuing the company

The general value is determined by an assessor estimate and is the most probable price of the assessed asset at a certain valuation date, including to the condition of an appropriate degree of information and caution and provided that the price is not affected by unreasonable intent. Assessor activity may be performed by experts who are registered in the list of experts maintained by the Ministry of Justice of the Slovak Republic. It is a matter of course to proceed in accordance with the valid expert legislation. The valuation of companies' assets is regulated by the Decree on the Determination of the General Value of Assets (605/2008 Coll.), which regulates the specific method and methods of determining the value of assets.

Valuation is applying in these cases: buy or sell the whole company or a share on it. The seller will be interested in the maximal price and on the other hand the buyer in the minimum buying price.

Valuation is necessary the acquisition or merger, or the company need the loan, decision if to consolidate or reorganized company if is liquid. When subject need more financing sources and will issue new shares, in the case of change in legal form, and insurance payment of taxes.

Proceeding of valuation is like all processes in life, determining the value of a company has its own way. According to Mařík (Mařík, 2018, p.45), the basic recommended procedure in the process of company evaluation is as follows:

- a) Collection of basic input data,
- b) Analysis of collected data,
- c) Elaboration of financial analysis and compilation of financial plan,
- d) Evaluation.

In order to compile a completion financial analysis, it is necessary to supplement by the individual statements with financial and economic strategic plans for the future. It goes

e.g. o a possible plan for the sale of assets, payment of shares and dividends, resp. payment of shares in the profit of shareholders. ( Hitcher, J.:(2011)

### 3. Setting value according Slovak legal framework

Setting value in Slovakia is determined by the Decree on the Determination of the General Value of Assets (605/2008 Coll.), which regulates the specific method and methods of determining the value of assets. Regulates the methods and proceedings that should be applied when we determine the value of a company as a whole should be determined, or the value of asset item or even the value of assets that are not devoted to business activities. The regulation should be applied when the valuation is made by a certified assessor, on request of a public authority, as part of certain legal acts.

*Determination of general value (hereinafter GV) of individual asset items*

Basic value turned with objectification into general value. When the basic value of basic value is accounted value or replacement value, according to the character of the asset item, the general value is influenced by e.g. technical condition, influence of the market and other specific factors. The general value of an asset item is objectivized value of an asset item, the most likely value of an asset item in a certain place on a certain date, market value under the assumption of free competition in the market.

When both the seller and the buyer are properly informed and handle with caution and have no inappropriate motives. General value of inventories is general value of inventories multiply by coefficient of objectification. The coefficient of objectification is influenced by efficiency of inventories, their degree of liquidity, market position of the company in the market for inventories, average cost of capital used to finance the inventories, excess inventories, specific properties of the inventories, turnover ratio. ( Brigham, E. - Houston, J.: (2014).

The business method determines the general value of an enterprise or its part by an assessor organization on the basis of "the capitalization of its withdrawable resources for the period in which the enterprise is valued. "

Withdrawable sources are defined as: "the monetary expression of a benefit derived from disposable gains, income, or the balance of cash flows arising from an enterprise's operations or parts thereof, or from components of an enterprise's assets and depends on its past performance, current market position, but above all from its expected development". For its application it is necessary to briefly state its basic requirements, in order we can determine the value of a particular company in next part of our paper.

Determining the value of the company is one of the management tools with which we can modify or find out the status the "financial health " of the company and thus improve it's the management as the whole or of its individual structures. However, the reasons themselves can be diverse and we can divide them according to whether they are related to the change of ownership of the company.

### 4. Method of Discounted Cash Flow (hereinafter DCF)

We know three modifications of these methods. Two of them are based on income:

1. Method of Discounted Cash Flow of Firm = Free Cash Flow to The Firm (hereinafter FCFF) it is value for both: debtors = debt repayment interest and for owners in payment of dividends.
2. Method of Discounted Cash Flow of Equity (hereinafter DCFE) = Free Cash Flow to The Equity (hereinafter FCFE) it is value only for owners.
3. Method of Discounted Cash Flow Adjusted Present Value (hereinafter DCF APV) is used rarely, because the assumption is zero debt, while discount rate is equal to cost on own capital and present value of tax savings on interest because interests are a deductible item of profit before tax.

Important assessment basis is financial plan and we must have a detailed and accurate financial plan. An advantageous of this method is more accurate the company value assessment. The advantage of these methods over the method of discounting profits is that the cash flows are not so much

affected by the accounting used policies. In addition, they show a greater stability over time than net gains, which may be influenced by frequent and significant changes mainly as a result of extraordinary events. Risks result from a disadvantage of DCF methods, what is the inability to plan future investment expenditures with sufficient accuracy, and thus free cash flows.

Calculation procedure:

Adjusted Net Operating Income (hereinafter NOI) (calculated e.g. by elimination of non-operating & one-off costs and revenues)

– Tax on NOI

= NOI after taxes

+ Depreciation

± Change in reserves and adjustments

– Increase in working capital (needed for only operating activities)

– Investments into long term assets (needed for operating activities)

= Free Cash Flow to Firm (hereinafter FCFF)

– Interest from Debt adjusted by taxes = interest x (1 – tax rate)

– Increase in volume of loans = new loans taken – loan repayments

= Free Cash Flow to Equity (hereinafter FCFE).

Advantage of these method is with compared with Net Income (hereinafter NI) that result is not so influenced by accounting methods, over time, CF stream or more stable than NI stream.

On the other hand, the possible risks can occur because is necessary the very accurate current financial plan needed and the fact, that some data are not easy to predict (e.g. investments.) and it is a disadvantage of this method.

## 5. Application of business method of determine value

The business method determines the general value of an enterprise or its part by an assessor on the basis of "the capitalization of its withdrawable resources for the period in which the enterprise is valued." (Parkinson, A:(2014). Withdrawable sources are defined as: "the monetary expression of a benefit derived from disposable gains, income, or the balance of cash

flows arising from an enterprise's operations or parts thereof, or from components of an enterprise's assets and depends on its past performance, current market position, but above all from its expected development". For the application this business method for determining the value of a particular company is stated in next part of article. Business method capitalization is two phase income-based model. We can divide it: a) for unlimited company life, we can use formula:

$$GVe = Vws + Vc$$

While:

GVe = general value of enterprise (EUR),

Vws = value of withdrawable sources (EUR),

Vc = continuing value.

Value continuing (hereinafter Vc) is general value of withdrawable sources converted to the present value at the valuation date.

b) business model for company limited company life, we have to use formula:

$$GVe = Vws + Vc, GVe = Vws + Vf$$

While:

GVe = general value of enterprise (EUR),

Vws = value of withdrawable sources (EUR),

Vf = if final value of enterprise and it's parts which are converted to the present value at the valuation date. (EUR).

It is estimated net income from monetization of assets in the year following monetization (EUR).

## 6. The determination of value by business methods with going concern principle

In determining the general value of the company XY, the business method will be used due an unlimited company life for the following reasons:

- The company has submitted a financial plan to us, and the company expects to achieve a positive economic result in the future,
- The equity method would not take due account of the company's future planned profits and revenues, and is very static, therefore the business method of determining the company's general value was used,

- All information necessary for the use of the business method with an unlimited company life has been documented.

Calculation of the general value of withdrawable sources:

Interest-bearing borrowed capital - The company XY, does not have any interest-bearing borrowed capital as at 31 December 2018. When calculating the capital structure, we use the actual capital structure, while the share of interest-bearing borrowings is set at 0.00%.

Equity - The amount of the company's equity as at 31 December 2018 is registered at the level of EUR 305,834. When calculating the capitalization rate, we will be based on the actual capital structure of XY, while we determine the share of equity in the amount of: 100.00%.

Borrowed capital costs - as of the valuation date, the company does not record any interest-bearing borrowed capital, therefore we do not consider the cost of borrowed capital in further calculations.

The cost of equity capital is determined using the Capital Asset Pricing Model (hereinafter CAPM). Cost of equity capital (Ce) or more

precisely the return required by owners of equity capital was in line with the methodology determined according next formula:

Valuation of Capital Assets (CAPM) as follows:

$$C_e = R_f + \beta * (R_m - R_f) + SCP + AP,$$

Where:

Rf is the risk-free rate,

Rm is the expected average return on the capital market,

(Rm - Rf) is the average capital market risk premium required by investors as compensation for investing in risky securities,

β is the beta factor, reflecting the rate of systematic risk of a particular investment in relation to the risk of the portfolio of all risky investments,

SCP is a supplementary charge mark - reflecting the size of a company,

AP is an additional mark-up reflecting unique risks.

In terms of used methodology, it was necessary to determine the amount of cost of equity for the company, using the following sources of information and input values.

Table 3 Basis for calculation

Item	Comment	Determination method
Risk free rate	Earning required by investors due investing in a risk-free instrument	Average yield on government bonds, ISIN SK4120012691
Additional surcharge		
Capital market premium	Additional profit required by investors when investing in the so-called market portfolio; such profit also considers compensation for country risk,	Capital market premiums for individuals countries (defines Damodaran)
Beta coefficient	Relative risk parameter compared to market portfolio risk	Beta coefficient for the industry of company
Supplementary charge for size	Profit required by investors depending on the size of the company	0.8 times the capital market premium (according to methodology)
Additional charge	Evaluation of additional risks of the company	Additional charge of 15.00% because of: - commercial risk = 5.0%, - financial risk = 5.0%, - risks of non-compliance with the financial plan = 2.5% - Preventive charge = 2.5%.

Source: (Damodaran, A.: (2017)

The value of  $\beta$  was determined according to sectoral beta coefficients, which are published in the literature. We set the value of the unlevered beta coefficient at 0.54 (source: www.damodaran.com). The corporate income tax rate valid on the valuation date (31 December 2019) is 21%. Calculation of the cost of equity according to:

Results of government bond issues = ŠD 232 C according to www.ardal.sk

Risk-free rate = 1.6326%

Capital market premium = 6.06%

Non-indebted Beta = 0.54

Surcharge for size = 4.848%

Additional surcharge = 15%.

$$C_e = R_f + \beta * (R_m - R_f) + SCP + AP = 1,6326 + 0,54 * 6,06 + 4,848 + 15,00 = 24,75 \%$$

The rate of capitalization is one of the important factors influencing the final value. It is used to pay interests on future income, i.e. future resources. In Slovakia, in accordance with the applicable legislation, the calculation of the capitalization rate using the Weighted Average

Cost of Capital (hereinafter WACC) method is currently used, i.e. the weighted average costs for individual capital components. We work with a valid tax rate and not an effective tax rate, i.e. when evaluating we will apply a rate of 21%. Using the valid income tax rate for PO for 2018 the rate of capitalization is one of the important factors influencing the final value. It is used to pay interests on future income, i.e. future resources. The calculation of the capitalization rate is then as follows:

$$i = (1 - 0,21) * 0,00 * 0,00 + 24,75 * 1,00 = 24,75 \%$$

The third step in this process is calculation of the sustainable growth rate, because we want to implement to calculate the principle going concern. To formula, we have to know the projected inflation rate for 2019, which was set by National Bank of Slovakia on level is 2.40%. Next, we proceeded to the analysis of the historical development of sales for the period 2014 – 2018.

Table 4 Development of sales of XY

Item	31.12.2014	31.12.2015	31.12.2016	31.12.2017	31.12.2018	Average
Revenues from own products and services	309 071	394 453	284 239	293 762	337 249	1,0446
Year-on-year change		1,2763	0,7206	1,0335	1,1480	

Source: own processing according to Tax returns of XY for the period 2014 to 2018

According to analysis of the historical development of sales, we found that sales for the previous period grew by an average of 4.46%.

The fourth step in our calculation will be to proceed to the analysis of the forecast

development of sales from the financial plan for the next 7 future years, it means on the period 2019 to 2025.

Table 5 Forecast of sales development of the company XY:

Item	2019	2020	2021	2022	2023	2024	2025	Average
Sales of own products and services	343 993	350 873	357 891	365 049	372 350	379 797	387 393	1,0200
Year-on-year change		1,0200	1,0200	1,0200	1,0200	1,0200	1,0200	

Source: own processing according to financial plan XY for period 2019 till 2025

According to the results the expected development of sales is a growth of 2.00% per year. Given the precautionary principle, we set a sustainable growth rate of 1.50%.

The fifth step is the calculation of cash flow by the indirect method.

6<sup>th</sup> step: Earnings Before Interests of Taxes (hereinafter EBIT) for the calculation of

withdrawable sources for the years 2019 to 2025, we will be based on the profit after tax specified in the financial plan, with applying the current income tax rate (21%).

7<sup>th</sup> step: Depreciation and investments for the years 2019 to 2025 will be taken from the financial plan and their value are showed in next table.

Table 6 Depreciation forecast and investments of XY

Item	2019	2020	2021	2022	2023	2024	2025
Depreciation	29 919	32 845	34 236	34 479	34 687	34 865	35 018
Investments	0	26 793	40 167	35 513	35 574	35 626	35 671

Source: own processing according financial plan XY for period 2019 till 2025

8<sup>th</sup> step: For applying this method is necessary to calculate the increment of working capital increase (investments within working capital). Increment of working capital for the years 2018 to 2025 we were taken from the financial plan. The increment of Net Working Capital is sum of (Financial accounts + Short - term receivables

+Inventories +Accruals (assets)) minus Short - term liabilities. For example, in year 2019 it's equals  $(157\ 039 + 60\ 169 + 2\ 700 + 17) - 11\ 546 = 208\ 380$ . The Increment of NWC is differential  $NWC(2019) - NWC(2018) = 208\ 380 - 45\ 271 = 163\ 109$ .

Table 7 Increase in working capital of XY

Item	2018	2019	2020	2021	2022	2023	2024	2025
	Reality	Estimate						
Financial accounts	104 741	157 039	159 305	152 494	152 730	153 211	153 907	154 794
Short - term receivables	41 383	60 169	61 373	62 600	63 852	65 129	66 432	67 761
Inventories	923	2 700	2 700	2 700	2 700	2 700	2 700	2 700
Accruals (assets)	17	17	17	17	17	17	17	17
Short - term liabilities	101 793	11 546	11 651	11 846	12 106	12 373	12 648	12 930
Accruals and deferrals	0	0	0	0	0	0	0	0
Net working capital (NWC)	45 271	208 380	211 743	205 966	207 193	208 684	210 408	212 342
Increment of NWC		163 109	3 363	-5 778	1 228	1 490	1 724	1 934

Source: own processing according financial plan XY for period 2019 till 2025

Table 8 Forecast of withdrawable resources of XY

Item	2019	2020	2021	2022	2023	2024	2025
Profit after tax	97 738	97 811	99 187	101 520	103 930	106 416	108 974
Depreciation	29 919	32 845	34 236	34 749	34 687	34 865	35 018
Investments	0	26 793	40 167	35 513	35 574	35 626	35 671
Increment of NWC	163 109	3 363	-5 778	1 228	1 490	1 724	1 934
<b>Withdrawable sources</b>	<b>-35 452</b>	<b>100 499</b>	<b>99 034</b>	<b>99 258</b>	<b>101 553</b>	<b>103 930</b>	<b>106 387</b>

Source: own processing according financial plan XY for period 2019 till 2025

9<sup>th</sup> step: Withdrawable sources in 2020 equal= SUM (Profit after tax + Depreciation) – SUM (Investments + Increment of NWC) = (97 811 +32 845) – (26 793+ 3 363) = **100 499**.

The general value of withdrawable sources for the period 2019 - 2025 with the calculated capitalization rate mentioned above (24, 75%) and its calculation is as follows:

Table 9 Calculation of the general value of withdrawable sources of XY

Item	2019	2020	2021	2022	2023	2024	2025
Years from the valuation date	1	2	3	4	5	6	7
Discount factor	0,802	0,643	0,515	0,413	0,331	0,265	0,212
Withdrawable sources	-35 452	100 499	99 034	99 258	101 553	103 930	106 387
<b>Present value of withdrawable sources</b>	<b>-28 417</b>	<b>64 575</b>	<b>50 976</b>	<b>40 954</b>	<b>33 587</b>	<b>27 553</b>	<b>22 595</b>

Source: Own processing above mentioned data

10<sup>th</sup> step: Calculation of the general value of Continuing value (hereinafter Cv) for the period 2019 - 2025 is, with considered rate of

capitalization 24.75%, in the amount of 97 286 EUR (calculated as the sum of current values for the analysed period 2019 to 2025).

$$\begin{aligned}
 Cv &= \frac{OZ_{t+1}}{i - g} * \frac{1}{(1 + i)^n} \\
 &= \frac{106\,387 \text{ (Withdrawable sources 2026)}}{0,2475 \text{ (rate of capitalization)} - 0,015 \text{ (from table Basis for calculation)}} * 0,2127 \\
 &= \mathbf{97\,286\,EUR}
 \end{aligned}$$

Where **i** is the sustainable growth rate = 24,75%, then in formula=  $\frac{1}{(1+0,2475)^7} = 0,21267 \approx 0,2127$

Finally, the general value of withdrawable sources for the period 2019 - 2025 is, with the calculated rate of capitalization 24.75%, for EUR

211,823 EUR (calculated as the sum of current values for the analysed period 2019 to 2025).

$$V_{c_T} = \frac{WS_{t+1}}{i - g} * \frac{1}{(1 + i)^n} = \frac{106\ 387}{0,2475 - 0,015(\text{Additional surcharge})} * 0,2127 = \mathbf{211\ 823\ EUR}$$

Table 10 Calculation of the general value of XY

Item	General Value
The general value of withdrawable sources ( $V_{c_T}$ )	211 823
Continuing value ( $Cv$ )	97 286
The general value XY using going concern principle ( $V_{c_T} + Cv$ )	309 109
The general value of XY using the going concern principle rounded *	<b>309 000</b>

Source: own procession according above calculations and (Sivák a kol. (2019)).

\*Rounding is in accordance with Annex no. 5 to Decree no. 490/2004 Coll., Which implements Act no. 382/2004 Coll. on experts, interpreters and translators and on the amendment of regulations no. 500/2005 Coll., No. 534/2008 Coll., No. 33/2009 Coll.

The general value of XY using the principle of continuous operation is 309 000 EUR.

### Conclusion

The main goal of our paper was to determine the value of the company by the business method using the principle of going concern. In the calculation, we used the procedure in accordance with Setting value in Slovakia is determined by the Decree on the Determination of the General Value of Assets (605/2008 Coll.), which regulates the specific method and methods of determining the value of assets. The resulting price is affected by a basnumber of factors that have a significant effect on it. These can be, for example, psychological factors, time constraints, personal relationships or skill of assessor in negotiation. In addition to the concept of "going concern", one factor is usually used, namely "stand-alone basis". In practice, this means the assumption that the company will continue to have the same subject of activity and will continue to do so. Before performing the evaluation, we found that the company has the prerequisites to operate in the future, because it achieves a positive value of withdrawable sources, which allowed us to use the business method with an unlimited life of the company - using the principle of going concern. According to Vernimmen, it is thus possible to distinguish between two evaluation methods - direct and indirect. In the case of direct, as the name implies, the company's equity is valued directly

as a whole. When using the indirect method, the enterprise as a whole is first valued first and then the net debt value is deducted.

In the current literature, however, it is also possible to find a somewhat more technical view of the matter presented by Damodaran. He divides the valuation methods into 3 ways. The first is valuation based on discounted cash flow, which combines the value of an asset with its current value of cash flow that the asset will generate in the future. The second way is the so-called relative valuation, where the value of assets is estimated on the basis of comparison with the value of other assets (mostly companies) and their relationship to accounting variables such as. profit, cash-flow, book value or turnover.

The last, third way, according to Damodaran, is the so-called contingent claim valuation, which uses option models to value assets. This method is based on the idea that some assets (such as an enterprise) carry certain features that have options.

However, Damodaran himself points out that different valuation techniques also bring different results, and therefore have their risks, negatives, positives, or limitations. We can only agree with this consideration and due these facts we also pointed out some of the risks associated with the evaluation process.

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riziká a ich vplyv na úverový cyklus a ich finančnú stabilitu ekonomiky v SR) registered by the Ministry of Education of SR under the registration number : 1/0688/20.

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Web sites of analysed company

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## IMPACT OF THE SHARING ECONOMY ON FUTURE BUSINESS MODELS

Vilma KAROBLIENE, Vaida PILINKIENE, Anna FERUŠ

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### Abstract

*The growth of the sharing economy is probably one of the most meaningful global socio-economic evolution in the past ten years (Koen Franken, 2017). The definition “sharing economy” is mostly used to describe the business model with digitized platforms for peer-to-peer exchanges (Geissinger et al., 2019; Belk, 2014; Juho et al., 2016). This article presents an approach to research that estimates the sharing economy and principally the main factors and conditions, what stimulates and drives the development of sharing economy as a perspective business model. Firstly, we define the understanding of sharing economy as one of the most engaging business models in nowadays according to economic literature study. Secondly, we conduct the analysis of the perspective and sustainable evolution of sharing economy mostly in the past decade. Furthermore, we identify forces which are driving the sharing economy for economic development. Thus, we design the conceptual framework of the sharing economy as a perspective and digitally based business model.*

### Key words:

*international business, business dynamics, economic development, sharing economy, business models, digitalization*

**JEL classification:** O10, O11, O12

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### INTRODUCTION

The growth of the sharing economy and its importance on economic development stimulates questioning, what factors and conditions are encouraging the sharing economy as a perspective business model. In the recent ten years the definition “sharing economy” is constantly analyzed as one of the business models where digitized platforms operate in the process of peer-to-peer exchanges (Geissinger et al., 2019, Hamari et. al., 2016, Belk, 2014). However, Mi and Coffman (2019), Wilson (2014) highlight importance of a community-based online platform in the sharing economy, while others (Kathan et. al. 2016, Barhdi and Eckhardt, 2012), characterize this economic model as case with non-ownership and temporary access-based type of economy. Our research studies, mainly based on surveys done by Acquier et. al (2017), Richardson (2015), Frenken (2017), Srineck (2017), demonstrate the sharing economy as an umbrella conception with its main cores – access-based, community-based and platform-based economies.

Therefore, the economic research studies and statistical data presents that the

sharing economy is creating considerably amounts of economic value to different types of sectors and especially it makes an influence on hospitality and transport sectors. In 2014, Airbnb received about 425,000 guests per night and it was generally 22% larger amount than Hilton Worldwide (PwC, 2015). Hereinafter, the sharing economy is developing rapidly and 105 million of U.S. inhabitants or 51% of U.S. adult population, were consumers of the sharing economy platforms as the users of the providers of goods and services in 2015 (Godelnik, 2017).

The aim of this article is to clarify the main factors and conditions what stimulates and drives the development of the sharing economy as a perspective business model and to put it into interpretation by designing a conceptual framework. Thus, we presented the main driving forces principally based on research studies of Hodkinson et. al (2017), Owyang (2013), Goudin (2016), Bocker and Meelen (2016), Frenken and Schor (2017), Curtis and Lehner (2018), Mi and Coffman (2019), and further, we conceptualized the framework of the sharing economy as perspective business model.

Yet, in economic research papers there are limited insights how the sharing economy

has directly changed the traditional business models and what are the future reflections of the sharing economy versus the traditional business models, thus this could be the future economic research.

### Understanding of the Sharing Economy

The prompt progress of the sharing economy over the last decade has significantly risen the usage of the definition “sharing economy” in research literature, but still there are a lot of discrepancies among researchers explaining this business model.

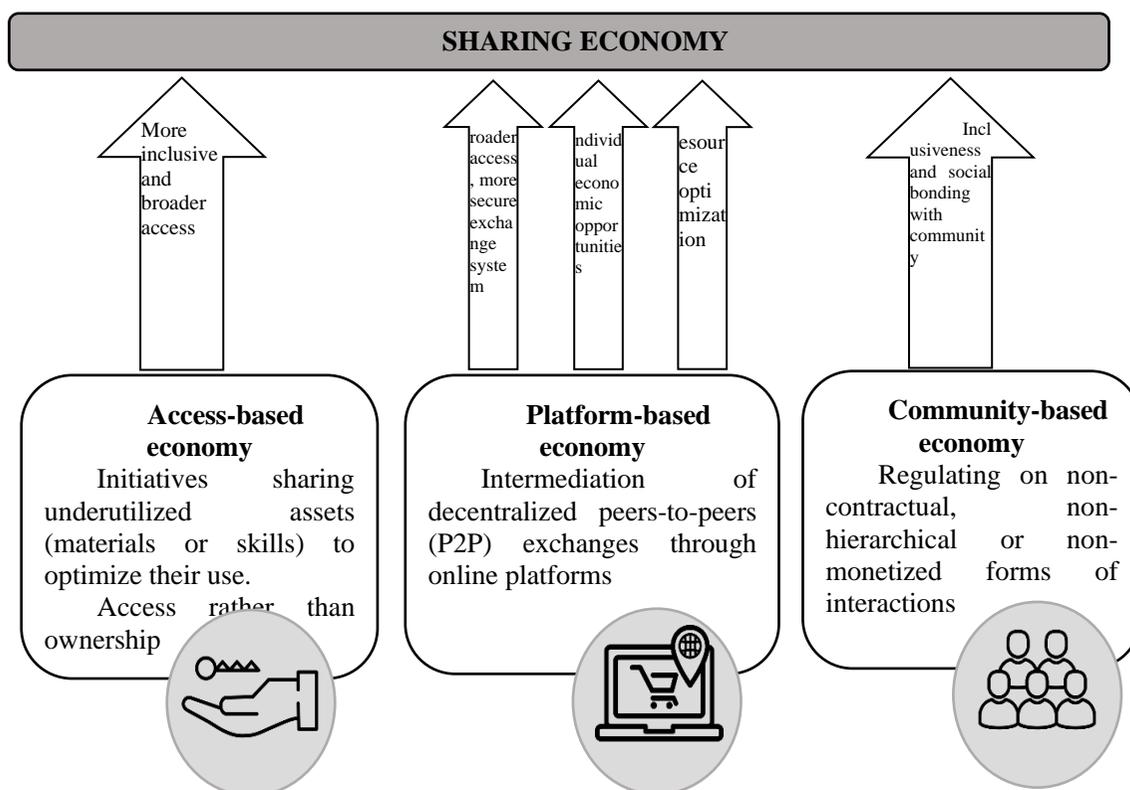
As highlighted by the European Economic and Social Committee (2016), the concept of the sharing economy has been trying to link a number of activities over the past couple of decades, and this business model that has become the subject of scientific discussion, covering a wide range of different activities, services and goods and recently has so far not had a single concept. In addition to the concepts of the sharing economy used in the scientific literature by researchers, there are considerable amount of its synonyms: “collaborative consumption” (Bostman and Rogers, 2010), “commercial sharing systems” (Lamberton and Rose, 2012), “co-production” (Humphreys and Grayson, 2008), “the mesh” (Gansky, 2010), “access-based consumption” (Bardhi and Eckhardt, 2012), “non-ownership form of consumption” (Habibi et. Al., 2017), “in web platforms facilitated peer-to-peer exchanges” (Aloni, 2016), “access-based consumption of products and services that can be online and offline” (Barnes, Mattsson, 2016) and so on. All these concepts have been suggested by different authors to avoid inaccuracies and ambiguities. Although, this term has recently become widespread among researchers, there is no common determination of sharing economy meaning. Thus, sharing economy interests substantially many different disciplinary issues including economy, marketing, customer performance, law, innovation, sociology,

geography and anthropology (Acquier et al., 2017). This leads to the situation that it is difficult to characterize sharing economy in common and acceptable definition by different research audiences and this contributes to the sharing economy as an umbrella construct. According to our research study, definition “sharing economy” could be explained as an umbrella term not only for sharing of items, but also second-hand markets, exchange platforms, peer-to-peer lending, engagement economy (Frenken, 2017, Acquier et al., 2017) which operates through online platforms (Hamari et al., 2016). Examples of such kind of business models are Zipcar, Airbnb, Uber, Freecycle, Facebook, YouTube, Twitter and other business models where customers can online access and use item corresponding to their needs.

Based on economic literature review, sharing economy conceivably could be described as model, acting on these essential cores: access economy, platform economy and community-based economy (Acquier et al., 2017, Figure 1). Considerably, corresponding aspect about the sharing economy, presented by Richardson (2015), is that this business model operates through three performances: community, access and collaboration.

In the access -based economy consumers make transactions, who are built not on the ownership of the goods, but on the accession to them, and this promotes to the optimization of the use of different items. The access-based transactions have been long existed in for-profit business models (for examples leasing furniture, or rental equipment) and in non-profit business models (for example taking books for reading in public libraries). Consequently, the access economy has been transformed into the model offering services as an alternative to the products, and a lot of items are shared now rather than being purchased, and this kind of economy could be non-profit, or for profit, public – private collaboration, or cooperative case (Acquier, 2017).

Figure 1. The main cores of the sharing economy



Source – adapted model, based on Acquier et. al (2017), icons sourced from “The Noun Project”.

Research conducted to Acquier (2017) study, shows that the access-based economy gives advantages for customers to achieve wider and cheaper services in short period. This makes an impact on environmental issues, because the access-based economy promotes sustainable solutions instead of irrepressible purchasing of products.

The platform-based economy is another essential core of the sharing economy. In economic literature it is defined that the platform economy is a package of performances that intermediately acts in a decentralized way between peers through Web-based platforms. Based on Srineck (2017) research study, digital platforms arguably are gaining significant weight in contemporary capitalism. This idea supports Evans and Gawer’s (2016) global survey resulting that about 70% of unicorns (private start-up company with a value upper than \$1 billion) are platform based companies. The total value of such kind of companies was more than \$4.3 trillion in 2016, so this demonstrates the

importance of platform-based economy, which is also one of the core elements of the sharing economy. Such platforms generate economic value by linking and arranging transactions instead of producing themselves and create potent network effects on the whole ecosystem joining users and suppliers.

### Evolution of the Sharing Economy

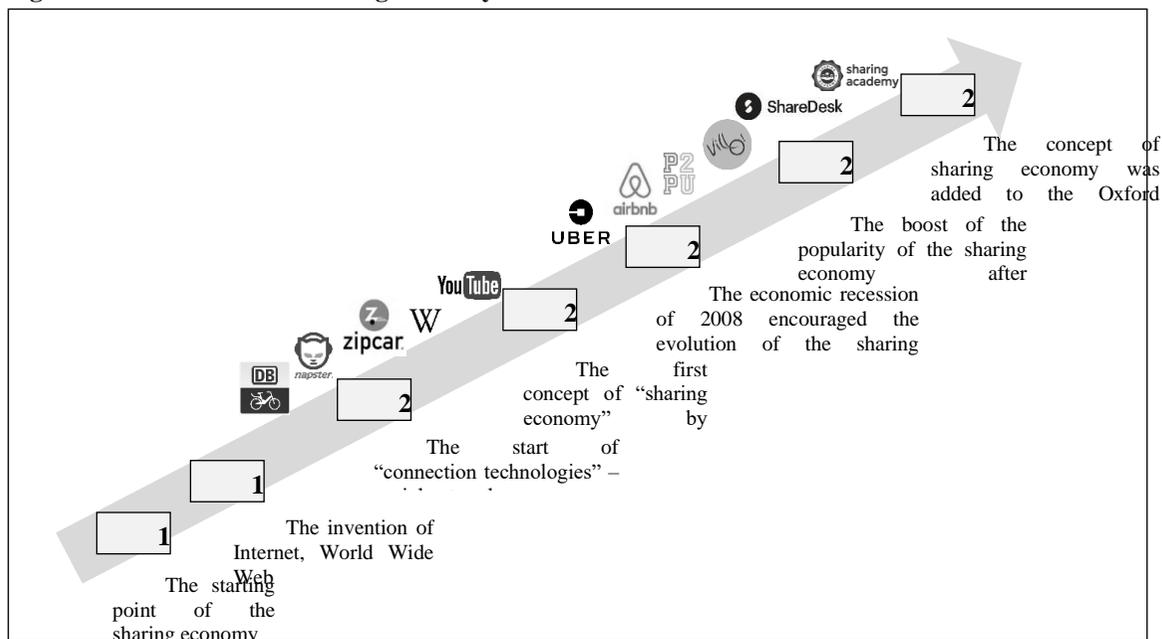
The interpretation of sharing as “consumers granting each other temporary access to their underutilized physical assets, possibly for money” (Frenken and Schor, 2017: 4-5), points that the business model of the sharing economy exists as long as humanity itself. Such kind of collaboration was common among groups of relatives, families, friends or neighbours, but the scope of collaboration was limited because of trustworthiness of unknown customers (Frenken, 2017). The book “Community Structure and Collaborative Consumption: A routine activity approach”

written by Marcus Felson and Joe L. Spaeth in 1978 is principally committed as the starting-point of the sharing economy (Dudek and Salek, 2016). Although the content of collaboration consumption described in this book was far from the definition of the sharing economy used during this decade, but the idea of the sharing provided interest from the academy and business sides. The development of information communication technologies and expansion of Web 2.0 has enabled the progress of online platforms development generating user content and item sharing collaboration (Hamari et al., 2016) or as other researchers (Zhang et al., 2018) stated, expansion of the ways “for sharing underused resources and skills” (Figure 2). According to Marshall (2019) 1990 was the starting point of the modern sharing economy, when Berners - Lee, together with the team, created an innovative technology for public purposes, such as e-mail and user friendly Web. Initially, the Internet was mainly used mostly by the communities of researchers, but in 1995 it was already used for commercial purposes, too. The examples of such businesses are Book Stacks Unlimited, who started e-commerce in 1992 and Amazon, who was launched two years later. Ebay was established in 1995 by founder Pierre Omdyar with an aim to sell goods and services online and had an ambition to make a collaboration between individual sellers and as well as buyers (Marshall, 2015).

The development of modern technology was one of the key factors enabling evolution of the sharing economy in the early 21st century. Social networks and exchanging of data establishes trust among individuals who didn't know each other and promoted rapidly expanding sharing of underused items and experiences or skills. Such an example is Napster, allowing free of charge peer-to-peer sharing of digital audio and media files, and it is called the pioneering player in the role of the sharing, using information communication technologies. Another example is Call a Bike – German bike hire system established in 1998 and is operated since 2000. Subsequently, the exchanging of digital content, such as self-made video materials or photography included open

source software storage (for example, GitHub, SourceForge), content sharing platforms (for example, YouTube, Facebook, Instagram), online encyclopedias (for example, Wikipedia) and peer-to-peer sharing (for example, The Pirate bay), became more and more popular (Zhang et al., 2019). The progress of social networks, or as Sunjoo Oh and Moon (2016) calls “connection technologies”, enabled the boost of social relations, and this resulted the trust among the sharing items providers and users, and the development of the sharing economy. Furthermore, because of the advantages of social network technologies, product sharing became not forced by location and time. The era of social networking and data or item sharing platforms between consumer communities engaged the establishment of the first sharing economy-based companies offering car rentals (Zipcar, Greenwheels, GoGet), bike rental (Call a bike, City Rader), peer-to-peer money lending (Zopa, Lending club, Prosper), accommodation (Couchsurfing) and other services. Sunjoo Oh and Moon (2016), Hamari (2016) and others stated that two of the main reasons, that encouraged the evaluation of the sharing economy, are the global economic recession in 2008 and prompt development of communication technologies. Marshall (2015) points out that the boom in the sharing economy growth has been recorded in late 2008 after the global economic crisis. Declining consumer confidence in business, rising unemployment, falling consumer purchasing power have forced people to cut their expenses and explore new ways for earning money. The global economic recession influenced changings in habits of the individuals and for example one survey shows that Americans are reducing their consumption and are assuming about a simpler living by giving priority to sharing, but not owning (Sunjoo Oh and Moon, 2016). Goudin (2016) near the below listed two main reasons that forces the evaluation of sharing economy, lists factor of underused resources of skills. Particularly, during the economic recession, there were established sharing economy platforms such as Airbnb and Uber the world leading international business models.

Figure 2. Evolution of the sharing economy



Source – created by authors with logos from respective company websites.

After 2010, then Botsman and Rogers published the book “What's Mine is Yours: The Rise of Collaborative Consumption”, the definition “sharing economy” has become considerably popular among researchers and business players (Cheng, 2016). Authors Bostman and Rogers were the first authors, who pointed the differences between the sharing economy and collaborative consumption. They marked that the main characteristic of the sharing economy is the usage of the platform, in which persons are sharing underused items. Nowadays the possibility to share a home, a car or a food became tangible with technology platforms like Airbnb, Uber, EatWith and others (Belk, 2014).

Thus, among researchers still there are a lot of discussions in explanation of definition “sharing economy”, but despite of all these disagreements the concept of sharing economy was included to the Oxford dictionary in 2015 and it is clarified as “An economic system in which assets or services are shared between private individuals, either for free or for a fee, typically by means of the Internet”.

### Driving Forces of the Sharing Economy

According to the report made by PwC (2015), the sharing economy produced \$15 billion in revenue in the whole world in 2015, and it is forecasted that it will produce \$335 billion in revenue within upcoming ten years. Based on Campbell (2018), in China, corresponding to official figures, the sharing economy should generate approximately 10% of China’s gross domestic product (GDP) by 2020 and it should even give rise to 20% by 2025. The same author reports that this model of economy operates \$500 billion in transactions between around 600 million individuals in 2017. Thus, it is important to clarify, what are the most relevant forces, leading to such a significant role in the economic development with the perspective of the sharing economy.

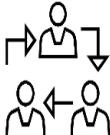
Research studies based on works of Goudin (2016), Bocker and Meelen (2016), Hodkinson et al. (2017), Owyang (2013), argue that the sharing economy reveals on the various forces that are related to economic, social and

societal, environmental and technological factors that affect users and providers of the sharing economy in various approaches (Figure 3).

The **economic, social and societal, environmental and technological efforts** that are encouraging development of the sharing economy and drives forward providers and of this business model – users and providers. A survey, made by Bocker and Meelen (2016) in Amsterdam, showed that sharing in accommodation sector is more economically stimulated, and sharing in such sectors like car

and meal sharing, are mostly forced by social factors. This study also displayed that young, low-income owned persons are more economically oriented, and young, higher-income owned and obtained higher education persons are more socially and societally motivated; besides female are more environmentally reasoned than man. Study of Bocker also showed, that the sharing economy users are more economically motivated than the providers.

Figure 3. The main sharing economy’s driving forces according different actors

	 Economic	 Social and societal	 Environmental	 Technological
 OR U S E R S	<p>Economic crisis driving people with financial difficulties to revisit consumption style.</p> <p>Access to high quality goods that are too expensive to purchase.</p>	<p>Expanding users’ social networks with like-minded new connections.</p> <p>Altruistic reasons.</p> <p>Anticipation of reciprocation.</p>	<p>Oriented to a healthy life style.</p> <p>Appealing the environmental friendly, sustainable consumption.</p>	<p>Lower transaction costs influenced by advantages of connection technologies.</p>
 OR P R O V I D E R S	<p>Monetary benefits from capitalizing on idle capacity or unused asset.</p> <p>Self-employment or freelancing opportunities with flexible working hours.</p> <p>Business’ productivity because of better utilize of shared goods.</p>	<p>Establishing networks of loyal customers for continuous transactions.</p> <p>Access wider markets with higher transactions volumes through user recommendations.</p>	<p>Increased environmental consciousness, where not utilizing spare capacity is perceived as counterproductive to sustainability.</p>	<p>Possibility to share items with unknown persons in the possibly safer way.</p> <p>Lower transaction costs influenced by advantages of connection technologies.</p> <p>Advantages of electronic commerce enabled worldwide transactions</p>

Source – adapted based on Hodkinson et. al (2017) and Owyang (2013), icons sourced from “The Noun Project”.

The global economic recession and decline in economy has resulted the allocation of the financial resources of people. After crisis 8 out of 10 American inhabitants were purchasing less, and 9 out of 10 were looking for an easier life in the perspective of items using, but not owning. Thus, the sharing economy gave such an advantage for users, even for the access to prime quality goods that were too expensive to own (Oh and Moon, 2016). The **economic forces** driving the sharing economy as a perspective model of economy are indisputably positive. The economic dimension of the sharing economy is reflected with maximization of goods and services productivity. The sharing of the specific item, that its owner would use only a few times, is exhausted to the maximum, as access with economic added value is granted to every user of the sharing economy and as the result of such collaboration users save time, money and other resources, and providers earn extra income. As Oh and Moon (2016) claims, the sharing economy generates transactions “that value social relations over monetary benefits”. Frenken (2017), Mi and Coffman (2019) predicate that lower transaction costs between providers and users are one of the main impact. Ewans and Gawer (2016) point that the sharing economy drives productivity of economy through eminently efficient matching of goods or services providers and users.

The expanding usage of the smartphones, the decreased information data's costs, big population of people in urban cities, also stimulated the development of the sharing platforms. This excess capacity generates perfect conditions for collaborations that match supply and demand. As Hodkinson and others (2017) pointed in their white paper: “with uncertainty around pension systems across the world, sharing assets has the potential to augment pension income and can help prevent old-age poverty”. This statement authors explained with the possibility of the advantages of the sharing economy, for example, the older person living in the big city and owning a car with the possibility of the car sharing platform could earn periodical income with the feasibility of ride sharing. This would generate economic added value as for the sharing economy provider, as well for the user, and as the result creates conditions for financial flexibility (Owyang, 2013).

Recent studies done by Frenken and Schor (2017), Curtis and Lehner (2018) proposes that the sharing economy is directed by **the social and societal factors**, or as the researchers commit is economically gained over altruism. Furthermore, users of the sharing economy lists that social issue is significantly meaningful and more valuable in the societal perspective than traditional business model. Frenken and Schor (2017) argues that sharing platforms gives an advantage for users with possibility to build new social connection, and even new relationships between participants of the sharing economy. In the sociological review Ladegaard (2018), based on Boston sample, argues, that hosting service providers are keen to make the collaborations with services users from foreign countries, who could be called “comfortably exotic”, this means contrasting enough to be impressive, but comparable enough to be appropriate. Thus, the sharing economy reduces social inequality by enabling more equivalent distribution of goods and services.

Based on PwC study (2015) 78% of the sharing economy users comply, that the sharing economy scales down irrelevant waste. Mi and Coffman (2019) also point that this model of economy makes confident **environmental impact** by reducing the amount of recourses used for the customers' needs and helps to reduce pollution, promotes sustainable community. Zhang and Mi (2018) stated, that bike sharing reduced carbon dioxide (CO<sub>2</sub>) emission by 25.000 tons, and nitrogen oxide (NO<sub>x</sub>) emission by 64 tons in Shanghai, and saved 8.358 tons of petrol.

Recently, the platforms of the sharing economy deliver exceptionally opportunities for sharing for inhabitants of urban cities. The assets of goods, skills or knowledge give a profitable basis for sharing using **communication technologies in exchanging platforms**. Frenken (2017), Mi and Coffman (2019) predicate that lower transaction costs between providers and users are one of the main impact encouraging the economic progress of the sharing economy. Nowadays the financial transactions are possible in the easier and cheaper way than it was operated in the past, so this advantage is based on the opportunity of communication technologies.

All these factors might argue, the emergence and development of the phenomenon of the sharing economy during the past decade and this business model is substantially prevalent in cities (Hodkinson et al., 2017). Sharing can augment supply during the peak seasons and correspond to the needs of high demand: for example, the touristic places can gain from the sharing economy with the support of the sharing platform, which allows owners or the hosting services providers make accommodation feasible during peak moments, rather than starting building new constructions. On the other hand, the sharing economy sometimes results abundance of supply: for illustration, in China, such businesses like MoBike (bike-sharing), or Molisan (umbrella-sharing) have designed an overflow of bicycles and umbrellas at sharing stores, instead of elaborating the use of current recourses (Hodkinson et al., 2017). The amount of the sharing economy has been significantly increased since 2010: a global survey, made by Ewans and Gawer (2016), points that the sharing economy's companies had a total market amount of \$4.3 trillion achieved in 2015 and had directly employed 1.3 million persons all globally. This study stated that the sharing economy is one of the considerable catalyst of innovation during recent periods and this corresponds to the fact that in 2014 9 sharing economy platforms were owners of 11.585 patents in the USA. Thus, a lot of start-up companies uses the sharing economy business model and has been directly funded by venture capitals, incubators, accelerators or other investment resources (Ewans and Gawer, 2016). However, the regional allocation and the value of sharing economy platforms vary considerably across the globe. In 2015 Asia had 82 sharing economy platforms, North America 64, Europe 27, Africa and Latin America 3, but if analyzing the global market value of this innovative

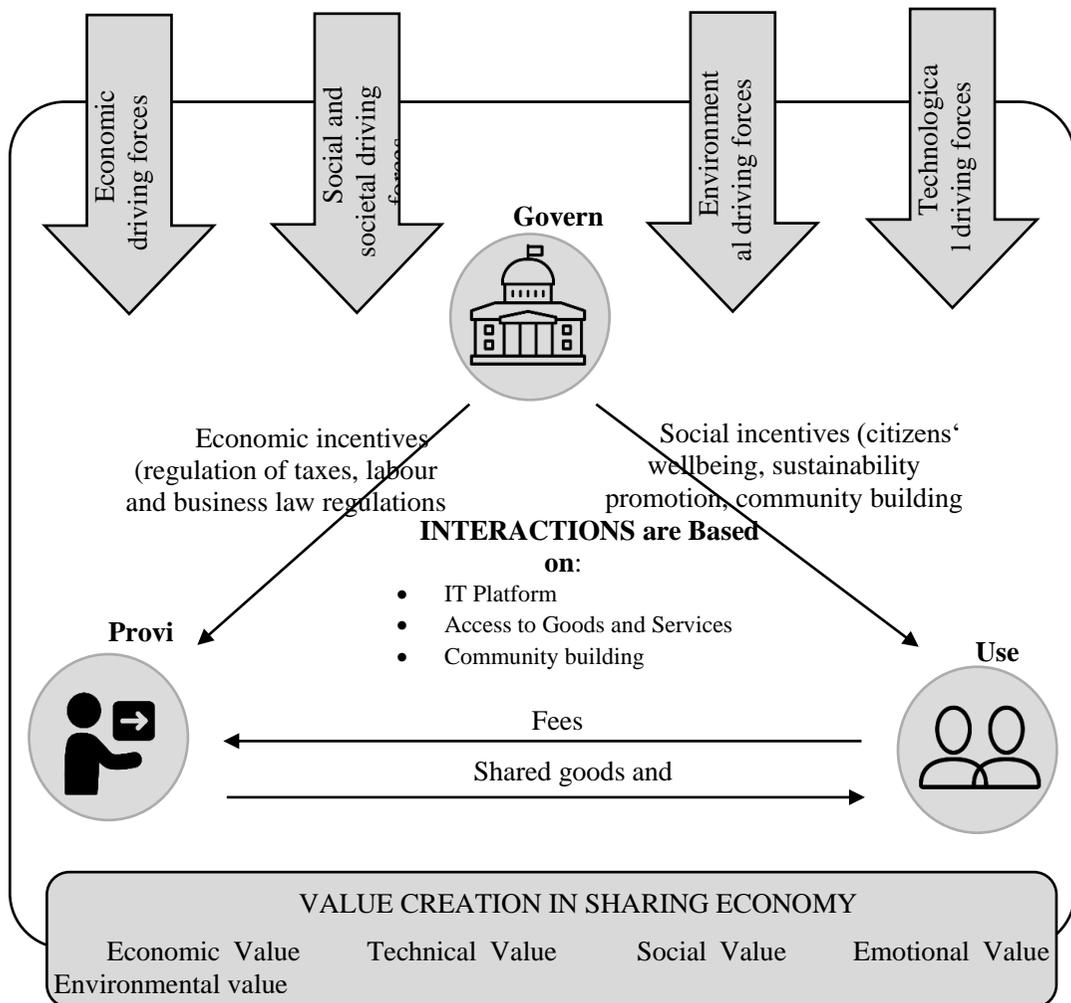
business platforms, the leader is North America with generating 72,6% (\$3,123 billion), and Asia 21,6% (\$930 billion), and Europe 4,2% (\$181 billion), and Africa and Latin America 1,6% (\$69 billion) in 2015 (Ewans and Gawer (2016)). This corresponds, that the sharing economy contributes particularly to the development of global economy.

### **The Conceptual Framework of the Sharing Economy as a Perspective Business Model**

Our research study shows that the sharing economy is a perspective business model, which commits considerable impact on regional and global economies, and gives the opportunities for more sustainable world by giving users, who do not have enough financial recourses or do not want to buy new items, the access to underutilized items for a cost or for free; and for providers, owning such underutilized goods to earn more income or to benefit from social perspective. The sharing economy in economic research papers is constantly describing as a measure solving such challenges like overconsumption and income inequality. Sharing based business model with the advantages of communication technologies in exchanging platforms promotes for the collective use of remaining or new goods and services.

The narrow analysis of the researchers, who studied the sharing economy phenomenon, gives the scientific scope to present the main outcome of this study – the conceptual framework of the sharing economy driving ahead as a perspective business model (Figure 4). This model was developed based on the main cores of the sharing economy, the main actors of the sharing economy, the essential factors driving this innovative business model.

Figure 4. Conceptual framework of the sharing economy



Source – created by authors, icons sourced from “The Noun Project”.

The main driving forces of the sharing economy, as a perspective business model, correlate with each other and result the developing collaboration via digital platforms between main actors of the sharing economy – the providers, the users and governance. Thus, the sharing economy, as an innovative and promising business model, is based on digital platforms, accessed to underutilized goods, and serviced in the most efficient ways, and built on the sustainable communities. Significant amount of goods and services are nowadays shared instead of owned, and this method is enabled with the usage of decentralized exchanges

between the providers and the users within digital platforms. Dakhli et al. (2016) such platforms call “club goods”, characterizes as assets with lower transactions charges which could be sometimes near zero. The sharing economy interactions are based on community building between the main actors of this business model, because it promotes a community conception, creates social engagement, captures values of social missions via collective scheme. The users of the sharing economy gain the advantages as lower expenses on wider assortment of goods and services, progress of individual competences and entrepreneurship,

flexible capital flows and etc. This business model has affirmative impacts via reduction in the complete and compulsory resources, enables reduce carbon footprint, emissions and redundant waste. Speaking about transport sector, car sharing action can condition environmental impact by decreasing the amount of kilometers drove. Such behaviors could lead to better human life by moving persons' practice from car ownership to sharing. Services and goods providers perform a critical economic part in controlling and decreasing transaction costs. The providers as well as users mainly have an aim to maximize the economic profit, whilst governments principally strive for wellbeing of citizens. However, this business model causes significantly impact on the evolution of innovative economies and growth of GDP in the countries, regions and all around the globe. The sharing economy will develop sustainable economic growth through bilateral cooperation between government, users and providers of underutilized goods and services.

### Conclusion

The concept of sharing is used for a long time, but the sharing economy, as a perspective business model was encouraged with the development of digital innovation, Internet, social, communication technologies which committed sharing conceivable with all its' advantages. Together, these processes have created changing methods of the traditional business models with innovative ones, and the attractiveness of the sharing economy mostly concentrates on the exceptional speed in which persons can operate with goods or services. As Martin et al. (2015) pointed that the sharing

economy becomes "more commercially-oriented over time". The online platforms enhanced the productivity of transactions, corresponding to lower transactions costs and increased underutilized assets exchanging between peers. Some researchers argue, that the sharing economy is an alternative to market capitalism and it might certainly sustain capitalism instead (Acquier et al., 2017).

This paper, from an academic perspective, points the understanding of the sharing economy as an innovative and perspective business model, presents principally the main factors driving to approaching economy's development and demonstrates the conceptual framework of the sharing economy. The framework, created by authors of this research study, supplements the research works done by Acquier et al. (2019), Mi and Coffman (2019), Petropoulos (2017), Acquier et al. (2017), Belk (2014), and others, and states that the sharing economy mainly generates significant impacts on economy and creates economic, technical, social, emotional, environmental values for all the participants of this business model – providers, users and government. Thus, this business model gives a challenges and perspective economic impact mostly on urban places and these insights should be illustrated in future research. This research study analyzes perspectives of the sharing economy and value creation for the whole individuals participating in this business model, so future study should include not only advantages of the sharing economy, but also the economic disadvantages of such business model too.

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## LIFELONG LEARNING OF SENIORS AND THE IMPORTANCE OF THE UNIVERSITY OF THE THIRD AGE IN TNUAD AS A TOOL OF EDUCATION

Jaroslav VYHNIČKA

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### Abstract

*Every modern society is aware of the importance of knowledge and education that can be used not only for their own benefit. Due to the growing number of seniors and the phenomenon of population aging, this issue is more relevant than ever before. However, there is a stereotypical view of the senior as an individual who is passive and dependent on society. What seniors really are and what influence and importance does the University of the Third Age have on the lives of seniors, what it offers them as a tool to support their education is the main goal of the following article.*

### Key words

*lifelong learning, education of seniors, University of the third age*

**JEL Classification:** : I2, I24, O1.

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### Introduction

Education and the need for education is a traditional value, the importance and essence of which plays an irreplaceable role today. Every modern society is aware of the importance of knowledge and education that can be used not only for their own benefit. Due to the growing number of seniors and the phenomenon of population aging, this issue is more relevant than ever before. The author of the article wants to change the stereotypical view of the senior as an individual who is passive and dependent on society. He also wants to point out the lack of information of seniors. At the same time, the need to learn, socialize, work and participate in social events is increasingly becoming known to seniors. The role of the company is to create these opportunities for them, but also to provide new opportunities for various target groups of seniors. These should be as accessible as possible, clear and easy to use for every age group. Education is one of the ways to make it easier for seniors to see life in other dimensions than they have perceived it so far. It is obvious that seniors have their specific needs, which is very important for us to know and respect. And it is seniors who are the bearers of values and traditions, they have a lot of individual experience and knowledge. These need to be preserved and properly appreciated when working with them.

### Literature overview

In general, education is given great importance. It is an important and necessary part of our lives, even if we do not realize it, we are educating our whole lives. From birth, when a child learns the first steps and life lessons and experiences, to the very end of our existence. VanGerpen (2016) understands education as the process of passing on or acquiring general knowledge. It also develops the power of reasoning, judgment, and in general, education prepares us for an intellectually mature life. Sagberg (2015) adds that education is interconnected with the development of a modern state and liberal democracy. His idea is based on the fact that the educated population is not so easily influenced. He has his own opinion, the attitudes behind which he stands. According to Littke and Grabelle (2012), the main essence of education is to learn:

- be a lifelong student,
- be inflamed,
- be prepared to take risks,
- be able to solve problems and think critically,
- be able to look at things differently,
- be able to work independently and with others,
- be creative,

- be careful and leave something behind for others,
- be persistent,
- be moral and have self-esteem,
- be able to see the world around you,
- be able to communicate, write, read and work with numbers,
- really love your life and your work.

Education could be characterized by a short but concise idea according to Samuel (2011), who argues that education is not a preparation for life, but life itself. There are a large number of definitions of the meaning of lifelong learning, and at the same time each of us can imagine something different under this term. For some people it is the mission and meaning of life, for others it is an educational character or personal growth. According to Keith (2014), each individual has educational potential, but has several obstacles. However, most of these barriers are not based on biology or physical incapacity. The biggest limitation is man himself and his lack of confidence in himself. It is important to take a general optimistic view of your abilities, of yourself in order to achieve effective lifelong learning. In contrast, Zhang (2013) sees the importance of lifelong learning in social and organizational improvement, social change and transformation with the main emphasis on economic efficiency. Dave (2014) has a general view of the issue. It is expressed that lifelong learning includes formal, non-formal and informal learning patterns, throughout the life cycle of an individual. And for the conscious and continuous improvement of the quality of life of his own, but also of society, such education has a much deeper meaning in the society and life of the individual. Marsh (2011) complements this statement with the life experiences that the individual absorbs throughout life. However, the amount of experience depends on the potential itself, but above all on the determination to learn (develop).

Likewise, aging is a lifelong and natural process. According to Lambert (2010), we all have certain genetically predetermined changes that affect all our cells, organs, system in the body, regardless of gender, race, religion

or place of origin. Although these changes occur in our lives, there is great individual variability in how quickly they occur. Klentze et al. (2011) complement these claims by the fact that the aging process slows down and changes due to evolution. People are living to an older age, healthcare and technology are more advanced. The relationship to work, position in the work process and work relationships change in individual life stages and thus reflect on the course of life. Sak and Kolesárová (2012) claim that after the culmination in the work process, however, there will be a situation where a person leaves the work process and everything connected with it, ie socio-economic changes. This means a change in the relationships that saturated him socially and emotionally, a change in the rhythm of life, a change in identity. There is a situation where the job role and position become a thing of the past. The transition from full workload to quiet retirement takes place in various ways, from the complete abandonment of all work activity on the day of reaching retirement age through partial employment, or long-term or short-term jobs even in retirement age. According to Dvořáčková (2012), active aging is a concept based on the principles of the United Nations for the Elderly. It can be summarized by the following names: independence, participation in the life of society, dignity, care and self-realization. The concept of active aging also includes respect for the right of older people to equal opportunities, their responsibility, participation in public decision-making and other aspects of community life. At the same time, this concept respects that older people are not a homogeneous group and that this diversity increases with age. Therefore, it is very important to create an environment that will allow them to live as independently as possible with the growing age of the population. Šerák, Tomczyk and Krystoň (2014) add that active aging is currently perceived as a long-term process based primarily on changing people's thinking. However, it is not possible to change aging to active aging without the willingness of people to accept such a lifestyle, the natural part of which will be purposeful preparation for life in old age.

One of the possibilities of education in the transition period at retirement, but also in old age is the University of the Third Age (UTV). It

provides various educational as well as creative activities for its students in universities. According to the Electronic Platform for Adult Education in Europe (2017), this type of education helps seniors to seek new certainties and meaning in life, to prevent premature aging of soul and body. The first such university was founded in 1972 in Toulouse, France at the University of the Social Sciences. Pierre Vellas was behind the birth of the University of the Third Age, as the founder and creator of new educational methods. At the same time, he saw the roles of universities of the third age, especially in solving problems related to health, economic status, law, psychology and social care for the elderly. Subsequently, this type of program for seniors has spread around the world. The European Union itself and UNESCO have also become involved in this concept of lifelong learning. At Slovak universities, the establishment is associated with the activities of the Slovak Red Cross in 1986. According to Hrabková, the realization of such interests and activities for older people is beneficial for seniors, but also for society itself. He sees a positive effect in that:

- universities of the third age slow down aging,
- thanks to the broadening of horizons, they create the possibility of equal intergenerational communication,
- suppress conservatism and dogmatism,
- strengthen and create new interpersonal relationships,
- also maintain physical health,
- raise awareness of the value of education,
- a source of life force for the elderly.

Assessment at such a university does not take place in the form of marks, only after the end of the teaching part of the semester is the control and assessment. Students will write a semester work, make a presentation, paper, project, or write a written exam or didactic test. The evaluation itself is consequently passed or failed. A new trend is the so-called virtual

university of the third age. According to Janiš and Skopalová (2016), it enables the involvement of a much wider circle of people interested in education, including people with certain limitations (disability, health status, distance). At the same time, there is no age restriction, so lower age groups can be involved in this form of education. All you need to have is a device connected to the internet and a base of skills in operating this technique. We will take a closer look at the possibilities and advantages of this form of education on specific examples in the results of the article.

### Goal and Methodology

We consider education and the need for education to be a traditional value, the importance and essence of which has an irreplaceable role today. Every modern society is therefore aware of the importance of knowledge and education, at the same time these skills can be used not only for their own benefit. Due to the growing number of seniors and the phenomenon of population aging, this issue is more relevant than ever before. The author's goal is to find out and justify the influence and significance of the university of the third age on the life of seniors on the basis of available information and a structured interview. The object of the research and the research sample is the University of the Third Age (UTV) at the Alexander Dubček University of Trenčín in Trenčín. It is an institution of hobby education for senior citizens of the Slovak Republic, which is carried out in accordance with the concept of lifelong learning and follows up on the UNESCO gerontological program. The basic mission of this institution is to make available to its interested parties new knowledge, knowledge but also skills aimed at developing their personality and for the benefit of society itself. For the first time, seniors settled in school desks in it in the academic year 2002/2003, and subsequently provides these opportunities for hobby studies on a continuous basis. The questions asked on a sample of 7 students of the university of the third age were as follows:

- How do you perceive the present and the past from your point of view? What was your childhood like and what do you see as the pros and cons of today?

- How do you spend your free time?
- Since your life is very active, what is your recipe for vitality?
- How do you perceive institutionalized education through the University of the Third Age at TnUAD? What changed your life?

At the same time, the author wants to answer 12 questions concerning research and practice of 21st century lifelong learning asked by Talmage, Hansen, Knopf and Thaxton (2018) and then apply them to the institutionalized learning environment through the University of the Third Age at TnUAD. The findings of the research then make it possible to formulate the direction of the paper and its problems.

### Findings

In general, education is an important part of human life, this also applies to the nature and importance of lifelong learning for seniors. Based on the materials obtained from a structured interview from students of the University of the Third Age at the Alexander Dubček University in Trenčín, it was possible to observe what this institution means to them and what it gave them in life. But also at the same time an evaluation of the view of the present and the past from their personal point of view, how they spend their free time and what is their recipe for a vital and full life. The evaluation of individual questions of the respondents is as follows.

#### How do seniors perceive institutionalized education through the University of the Third Age at TnUAD? What changed their lives?

Table 1 Respondents' answers to question 1

Student	Answer to question 1
1	Was looking for a change in her life and she had just found it thanks to this place, it was in the form of new experiences, expanded education and finding new friendships. It speaks of this institution as a place that helps people with different life stories, whether they want a challenge or find the meaning of life.
2	Uses this form of education in her recipe for vitality and active lifestyle. She could develop and load her brain cells to the fullest, in her eyes it is a place that covers the needs of all students
3	Studying at UTV motivated many people to further study the activities that interested them (eg they started painting, creating ceramics, learning foreign languages, traveling, working on a PC ...).
4	He sees the biggest positive as returning to school grounds and participating in the teaching process, ie in systematic education. As people become interested in what is happening around them, their positive aspects become more apparent and they cease to be negative.
5	Perceives the positive precisely in the active use of free time and the expansion of his horizons with new knowledge. He recommends current and future seniors to sign up and try something new that might interest them.
6	This institution covers all the important elements necessary for a person to live a full life and not become isolated
7	If we use our memory on a daily basis, we don't have to wonder how to improve it.

Source: own research

**How do seniors perceive the present and the past from their point of view? What was their childhood like and what do they see as the pros and cons of today?**

Table 2 Respondents' answers to question 2

Student	Answer to question 2
1	Compared to today, they lived freer and happier. They spent most of their free time outdoors, playing various games and so they also played sports. He claims that it was this healthy lifestyle that prepared them for the period when they would be seniors.
2	Her beautiful memories are also from the high school period. They often went to joint brigades, which greatly united the team and at the same time traveled a lot in the Czechoslovak Republic.
3	Says that the holidays were more experienced in families and that families were more cohesive. It is therefore possible to claim that in the past, intergenerational education was naturally used, which played a significant role in education. At the same time, this student adds that the whole family took care of the old and the sick, the abandoned people were even the few they had.
4	The past is calmer than today. Well, he thinks everything depends only on us. From how we can protect ourselves from the pressure of public opinion on social networks, how not to succumb to the panic of various alarms, how to balance each activity.
5	People communicate very little with each other. This causes various problems that we can see in children as well as in intergenerational relationships in general. In her eyes, happy children are the ones who have grandparents who care for them, because parents try to provide for the family, so they don't have much time.
6	Man becomes a part of society not only by his birth, but above all by integration into it.
7	The most valuable thing a family can give children today is no longer property, but upbringing and education.

Source: own research

### How do seniors spend their free time?

Table 3 Respondents' answers to question 3

Student	Answer to question 3
1	Her family perceives her as a vital "grandmother" who masters and enjoys modern technology, which she studies and regularly travels for tourism several times a year.
2	Despite a small pension, she can save for a holiday in exotic Asia, which is her heart.
3	She devotes her free time to studying and started attending not only UTV but also Bc. and later also Mgr. studied political science at the Alexander Dubček University of Trenčín in Trenčín.
4	She devotes several years to space (exterior, interior). It tries to simplify everything, to make it clear so that each space serves what it is intended for.
5	She sees her idea of free time mainly in nature, she likes to collect herbs and visit various historical places in our country, but also in the world. Her hobbies are also lectures from various areas of social life, but also creative creation and painting.
6	Thinks that people grow old only when the joy of life leaves them.
7	Tries to carry out every activity with joy and vigor. At the same time, however, he realizes that even today we can meet forty-year-old "old men" who are not interested in anything, criticize everything around them and have no respect for themselves.

Source: own research

### Since the life of seniors is very active, we wanted to know what their recipe for vitality is.

Table 4 Respondents' answers to question 4

Student	Answer to question 4
1	Vitality in a person develops from an early age, ie if a person was active in his youth, then he will be in retirement age.
2	It is important to engage in activities that do not let brain cells sleep, to exercise, to be socialized, and to eat healthily.
3	It is necessary to prepare intensively and with sufficient reserve for the period of senior age. It presents its concept for vital aging in 3 phases - the 1st departure of children, the 2nd phase of preparation for retirement and the 3rd phase of retirement. At each of these stages, it is important to overcome certain situations and therefore it is necessary to prepare for them with reservations.
4	The most valuable is our own time and what we do in it as we spend it. He says there are so many options, just start at least start in small pieces. Suddenly we find that we are tempted to add to the demands and we are happy about it.
5	It is important for vital life to live fully within its means.
6	Only a prepared senior, who deals with news, pays attention to the surroundings, joins the team, is pleasant, wanted and continues to live his life intensively.
7	It also attaches great value to health as a factor that affects our entire lives.

Source: own research

Based on the following answers to a structured interview with students of the University of the Third Age at the University of Trenčín Alexander Dubček in Trenčín, it is also possible to answer 12 questions concerning research and practice of 21st century lifelong learning asked by Talmage, Hansen, Knopf and Thaxton (2018) and subsequently apply them to the environment of institutionalized education through the University of the Third Age at TnUAD.

**1. What are effective lifelong learning strategies to help older people achieve the highest potential for physical and cognitive health?**

The biggest problem in general is human individuality and uniqueness. A strategy that applies to one population group may not appeal to another. At the same time, perhaps the most important factor is our own conviction, it serves as a driving force for the performance of any activities and thanks to it we are able to achieve the just mentioned "highest potential". The older we are, the more our personality traits manifest and the generally older people are less trusting. It is important to arouse interest in them, we can also see it in the case of UTV students, who are united by a desire to change lives and expand their knowledge horizons. However, such institutions do not only serve educational purposes, their significance is much deeper. For someone who has lost a very close person or feels lonely, this place can restore the meaning of life. Cognitive health greatly affects physical health as well. In general, therefore, the basic strategy is to provide older people with a wide range of programs in which to find themselves, but their very availability is also a decisive factor. There are a large number of people who depend on the help of others, or their health condition does not allow them to travel and visit these institutions. A possible solution lies in the achievements of new technologies in the form of a virtual university of the third age, as well as other virtual educational programs. Virtual reality can also be an interesting element of education and conversation for older people. In it, they could meet, converse, visit favorite places, play games, regardless of their health status.

**2. How does lifelong learning change the lives of older people?**

In general, every

education changes a person. If we dedicate our time and effort to something meaningful, our lives get meaningful and gain in value. Thanks to the lifelong learning of older people, it is possible for such people to be able to work again or to be involved at least in part in the work process. Where appropriate, they have learned new skills and knowledge in areas that will help them keep or get a job. At the same time, we can also talk about education, which is primarily aimed at people who are about to retire or are already retired. Here, lifelong learning plays an important role in preparing for this condition, but at the same time it seeks to keep such people physically and cognitively healthy. Time is constantly advancing and often even ordinary tasks in offices can complicate a senior's life. Education teaches him to use new technologies at least for basic tasks that are important for his life and make it easier for him. At the same time, thanks to education, we train our brains and slow down the aging process, find new friendships and devote ourselves to things that entertain and fill us with happiness.

**3. How can lifelong learning institutions make effective use of current and emerging technologies in their programs?**

Training can take various forms, including interactive devices. In the age of the Internet, access to information is, so to speak, at your fingertips, and it is also possible to use the achievements of modern technology. For example, virtual reality is not just for entertainment for the younger generations, but is commonly used in medicine for complicated surgeries. It is also an important means of educating students and provides completely new forms of experiences for seniors. Thanks to these means, there are no boundaries and barriers, even if the student is fully dependent on the bed or wheelchair. He can dive in the deepest sea, walk through the forest, explore the universe, return to history. At the same time, these technologies are available and their price is the same as e.g. mobile phone price. In the case of UTV, students learn to use modern technologies and work with them, they want to show them that these technologies do not only hide the negative aspects, but they can use them in their interests and everyday needs. Thanks to this, they can keep up with the times and understand, but also use intergenerational

education (their children, grandchildren, but also the environment). To be a closer part of the world of young people and to make life easier (travel, administrative work, communication, ...).

#### **4. How can lifelong learning institutions effectively promote creative thinking?**

Creative thinking can be supported through the various activities and activities that are carried out in these institutions. For example, UTV students choose subjects (areas of interest), which they then attend and complete. These are subjects that focus on their motor skills, creative thinking but also language skills. The whole course of teaching is conducted as fun, relaxation and making new friendships. The great advantage of these institutions is that they can bring together people with common interests, which they can then develop outside the facility. As a result, creative thinking is encouraged and acquired skills are developed, or hidden talents and talents are discovered.

#### **5. How do lifelong learning institutions have to adapt so that older people, but also the part of the population that is not currently involved in lifelong learning, have access to them?**

In general, it is very difficult to persuade anyone, not just an elderly person, to engage in activities of which he is not intrinsically convinced. The greatest advertising is made by the participants in lifelong learning (UTV students), who then disseminate information about such opportunities. Of course, it is necessary to make a certain enlightenment, to create interesting programs that will address an indecisive part of the population. As older people travel worse and for some the movement itself is a complication, accessibility is paramount for them. Lifelong learning institutions tend to be concentrated in larger cities to fill their capacities. But what about people who live in remote villages and towns, or those who live somewhere alone? This includes the possibilities of certain educational and sightseeing camps, where older people would spend more time and have food, accommodation and an all-day program. Thanks to this, it would be possible to pick up students by bus and then take them home. The second option is provided by modern technologies themselves, ie education via the Internet. The study itself will take place online and older people can watch lectures and participate from the comfort of home. The

disadvantage is the loss of personal contact and interaction that is gained through personal contact.

#### **6. What is the place and benefits of intergenerational learning in lifelong learning programs?**

Although intergenerational relations are and should be natural, we are still witnessing an increase in distance and certain barriers between generations. The society thus becomes more incomplete with regard to age categories. This is a reality today, despite the fact that there should be greater solidarity and cooperation between the generations. Intergenerational programs are implemented to improve relations between children and grandparents, to enrich the lives of retired people and to strengthen the educational system. Elements of intergenerational education can also be observed in teaching at UTV. The teachers themselves in this institutionalized education represent different age groups of the population. In this way, seniors are introduced to new technologies, worldviews and various issues. At the same time, this form of education supports the persistence of valuable cultural traditions and awakens the responsibility and care for the environment for children as well as the elderly. They create a space for people of different generations to meet.

#### **7. What role does community creation play in lifelong learning?**

"Man is a social creature", Aristotle. This idea probably best describes the essence and importance of community building in lifelong learning. Often people who attend lifelong learning institutions are lonely, have lost a loved one, or are looking for the meaning of life. Thanks to the community, new friendships are formed, life experiences and advice are exchanged. People with similar interests, life stories and values meet here. Therefore, it can be stated that the role of community building in lifelong learning is essential and important.

#### **8. What role do community relations play in lifelong learning?**

Good relationships generally create an environment for easier collaboration and communication. If the atmosphere is relaxed, people help each other, there are no tense situations and the overall result is effective. As mentioned in the role played by community building, lifelong learning

often changes people's lives in a positive way. No one should be left out of the community and alone, this is the worst situation that can happen. Lifelong learning tries to avoid this situation, but ultimately only she decides whether a person wants to attend such an institution, to devote herself to lifelong learning. If he is not interested, even the best advertising and motivation will not change.

**9. How can lifelong learning institutions continue to serve their current population while being prepared and diverse for the needs of future generations?** It is necessary to constantly advance and monitor the needs of society, but also the market itself. Based on the issue of prolonging retirement, it will be necessary for residents to have the opportunity to be educated and thus ensure the maintenance of their job position, or they could grow their careers or find a new job. At the same time, these institutions must follow current trends in education, use modern technologies to reach as many applicants as possible. This can be achieved thanks to a comprehensive program and availability. Availability can be achieved through online programs and social networks. In the case of UTV, it is possible to see constant adaptation to the current needs of the current population, but also preparation for future generations. For example, subjects such as the Internet in human life, the use of computers, communication and presentation skills, or communication in foreign languages are a clear example of the diversity and relevance of the needs of the population.

**10. How will the programs of lifelong learning institutions that have a long-term impact on lifelong learners be created and structured?** The design and breakdown of the programs themselves should be based on the expected goal. They could be broken down as follows:

- programs aimed at retraining and integrating the population into the work process,
- programs focused on the physical and cognitive health of the population,
- educational programs,

- combined programs (here we can also advise, for example, the University of the Third Age).

Thanks to these programs, it will be possible to provide a workforce, a vital person both physically and mentally, to educate him and, last but not least, to keep him independent and active. It is therefore important that they are created but also that they are meaningful and attractive to the population.

**11. What are the effective methods of evaluating lifelong learning institutions?** It is very difficult to talk about what are the effective methods of evaluating such institutions. In general, graduates and students should speak for the institution. In the case of UTV, it is the spread of a good name, both by the students themselves and by the teachers. This creates advertising and the good name of the institution. A good example is the unstructured interviews with UTV students in Trenčín, who evaluate this institution very positively in their opinions. It is much more important to them than just education, but in general they form a strong community that will be cohesive and leave them with a long-term impact after graduation.

**12. What are the effective education strategies for older people?**

The basis of an effective strategy for educating older people is to understand them, because they have their individual needs, which are common to us and can cause them complications. Patience, kindness and determination are needed. The educational strategy at UTV is also focused on fun and learning through play. Although students attend and complete individual subjects, as we assume in the interviews, we have noticed that this teaching is very effective, because students do what they enjoy. They are equal and help each other, cohesion and community are created. We find that the most effective strategy is to listen to older people, their opinions often point to shortcomings and possible improvements. At the same time, there is a great need for the younger generations to present to older people the positive aspects of new technologies and things they have feared or avoided in the past. Conversely, older people have passed on their wisdom and knowledge,

which they have enough of. Thanks to this, it is possible for individual generations to operate in society as one harmonious and strong whole.

## Conclusion

It is clear that education and the need for education is a traditional value, the importance and essence of which plays an irreplaceable role today. However, the stereotypical view of the senior as an individual who is passive and dependent on society persists to a large extent. The author of the article tried to refute this statement thanks to the cooperation with the students of the University of the Third Age at the Alexander Dubček University of Trenčín in Trenčín. Students are surrounded by a number of stimuli, they learn to master new technologies and playfully manage the work with them. Energy and zeal could often be an example to younger generations. The author encountered a problem in the form of differences between the past and the present from the perspective of seniors. Relationships between people but also within families themselves were more integrated in the past, but nowadays people communicate little with each other and isolation often occurs. The result is a decline in respect and esteem not only for the elderly but also for society as a whole. Based on the following statements, it can be stated that the biggest problem in the future in the lifelong education of seniors will be the great isolation of the population. Therefore, the question arises as to how lifelong learning institutions will be formed. As a certain solution, there are modern and innovative forms of intergenerational education, with which the author identifies. Lifelong

learning changes the lives of seniors to a great extent, slows down the aging process, socializes, finds new friendships and loves, and is generally active. However, it is also necessary to focus on seniors whose state of health, remote residence or other reasons do not allow them to take an active part in education. The solution lies in the use of modern technologies, we are talking about education through the Internet, the so-called online University of the Third Age. A new and interesting experience is the use of virtual reality and game consoles. Thus, seniors can actively play sports even in bad weather (tennis, golf, fishing, ...) or, thanks to virtual reality, dive in the sea, discover the secrets of the forest and travel around the world. The basic knowledge for the practice lies in the opinions of seniors, because they know best what can help them in life and what is important to focus on. You need to listen to them. The author also perceives as positively the positive and touching evaluation of the University of the Third Age at the Alexander Dubček University of Trenčín in Trenčín. He chooses the following statement from his opinions: "I was looking for a change in life and had just found it thanks to this place, it was in the form of new experiences, expanded education and finding new friendships. It speaks of this institution as a place that helps people with different life stories, whether they want a challenge or find the meaning of life." Which captures the whole essence and meaning of such an institution. The contribution of the paper is to evaluate and inform about the connections between the lifelong education of seniors and the University of the Third Age.

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