

Studia commercialia Bratislavensia

Vedecký časopis Obchodnej fakulty Ekonomickej univerzity v Bratislave

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Total quality management and organisational performance in the nigerian beverage firm

Sulaimon Olanrewaju Adebisi¹ – Martins Eromose Odigie²
– Jonathan Ehimen Ekpudu³

Abstract

The study examines the effect of Total Quality Management (TQM) practices on organisational performance in the Nigerian beverage industry. The study's target population was 343 employees of Nigeria Bottling company in Lagos, Nigeria, from where 185 employees were selected and used as sample through purposive sampling technique. Data were collected through the administration of copies of questionnaire on the respondents. A pool Confirmatory Factor Analysis (CFA) in structural equation modeling was conducted to assess the validity and reliability of the study's instrument. The data collected were further subjected to descriptive and inferential statistical test through Amos graphics and SPSS packages. The result reveals that TQM practices (Customer focus, employee empowerment, continuous improvement, quality focus and top management) have significant and positive effect on organisational performance measures (Customer satisfaction, productivity, quality conformance brand preference and competitive advantage). The study therefore recommends that management should strengthen its efforts on the TQM practices to engendered sustainable non-financial performance that will ultimately have positive effect on the financial performance of beverages' firms in Nigeria.

Key words

Beverage Industry; Management; Organizational; Performance; Total Quality

JEL Classification:

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Introduction

Food and beverage industry is one of the most internationally competitive industries, with global dominance and importance to every economy, including Nigeria. The value and importance of the participants in this industry to the Nigerian economy has increased in recent years (Adewumi, Ayinde, Ajewole & Oladejo, 2014). The industry accounts for 22.5 percent of the manufacturing industry's value and 4.6 percent of the Nigeria's GDP. Nigerians spend an average of 73 percent of their income on food and beverages (Flander Investment and Trade Market Survey, 2020). The survey's results showed that if given opportunity, the great majority of Nigerians' customers will prefer

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beverages manufactured outside of Nigeria. Nonetheless, more indigenous businesses have emerged in the last five years to satisfy the quality requirements of consumers in Nigeria who prefer local flavour.

In today's global competitive business environment, quality is viewed as one of the fundamental components to increasing market share and enhancing competitive advantage. For a firm to increase its customer base and retain existing ones, offering high quality products or services is quite essential, as low-quality products and services increase the cost of wastage and often lead to customers' dissatisfaction, which by implication can lead to loss of future sales and exit of a firm from an industry. In addition, there has been diffusion of technological innovations across geographical boundaries, which makes it possible for customers to have more information regarding product quality (Hardeep and Bikrampal, 2014). The major aim of a unified and well-designed programme of Total Quality Management (TQM) consists of zero defect, process improvements, causal relationships development, system capacity measurement, and observation of variations in behavior over a given time horizon. Therefore, the basic subject matter within which the TQM concept revolves remains to attain a substantial decrease in the cost of quality, greater employees' satisfaction, enhanced customer-supplier association, improved lead time, as well as improvements in production/operation process (Motwani, 2001).

The basic axiom that underpins TQM concept remains the assumption of maintaining and continuously stimulating products and processes quality. Aized (2012) posits that TQM entails the management of suppliers, workforce as well as consumers/customers, with the aim of meeting or surpassing the expectations and requirements of customer. Therefore, the practices of total quality management consist of top management commitment, strategic planning, employee participation, cross-functional product design, quality assurance, customer relationship management, customer focus, continuous improvement, process management and supplier quality management. The major purpose of the approaches of modern operations management is to forestall performance in service and manufacturing sectors. Providing high-quality goods and services will reduce cost of production and serves as a strategic mechanism for business entities to create and maintain their competitiveness in their industry. Therefore, quality has become a strategic approach for firms' performance management in this present dynamic business environment (Hassan, Malik, and Faizt et al., 2012).

It was observed in the studies of Shafiq et al. (2019); Salome and Shadrack (2019); Ezenyilimba, Ezejiofor, and Afodigbueokwu (2019); Rateb, Nida, and Nadia (2019); Garcia-Bernal and Ramirez-Aleson (2015); O'Neill, Sohal, and Teng (2016); Vedant, Akshay, and Tej (2018) that TQM is a significant instrument that every firm both in the manufacturing and service sectors can employ to strengthen their competitiveness with a view to achieving set goals and objectives. There was a consensus by the aforementioned studies that the application of TQM practices can be used to optimise both the financial and non-financial performance of firms, and that total quality management should be given adequate consideration in decision making process to ensuring the survival of firms in a complex business environment. On the other hand, the studies of Benner and Veloso (2008); Corredor and Goni (2010); Psomas and Jaca (2016) concluded that TQM practices involved a lot of cost, which impact on the profitability of firms adversely. Also, the findings of Prajogo and Brown (2004) concluded that TQM programmes has no significant effect on quality performance. Hence, this study seeks to provide answer to the

fundamental questions of whether total quality management practices affect organisational performance in the Nigerian beverage industry or not. In an attempt to fill the gap of previous studies and contribute to existing knowledge in total quality management and organisational performance, this study adopted Structural Equation Modelling (SEM) technique, using the Nigeria Bottling Company Plc as case study.

The major objective of the study is to investigate the effect of TQM practices on organisation performance. However, the Specific objectives are to: assess the effect of customer focus on customer satisfaction; examine the impact of employee empowerment on productivity; determine the effect of continuous improvement on quality conformance; ascertain the effect of quality focus on brand preference; and evaluate the effect of top management commitment on competitive advantage.

Quality Management of Nigeria Bottling Company Plc

Nigerian Bottling Company (NBC) Plc was established in Nigeria in November 1951 as a subsidiary of A.G. Leventis. It was awarded a license to bottle and distribute Coca-Cola and other allied beverage goods. NBC began as a small family firm and has since grown to become a market leader and significant bottler in the Nigerian non-alcoholic beverage sector. The bottling factory was established in 1953, and the production process began at the company's headquarter. Its production/operation capacity has grown substantially over the years, and it now controls more than thirteen bottling plants spread across Nigeria's major cities. To service its many consumers/customers, the company has over eighty distribution facilities around the country. Coca-Cola, Fanta, Schweppes, Sprite, Eva water, and the newly launched Burn energy drink are among the brands manufactured by the Nigerian Bottling Company.

Total quality management practice is adopted by the Nigerian bottling company. This includes the process of controlling quality in all elements of the company, including its supply base, production, and clients' communities, among others. As a result, the NBC is able to create and maintain competitive advantages over its competitors in order to achieve and maintain higher levels of customer satisfaction. This management concept was established in order to ensure that the quality of the company's products is continually improved upon. The importance of collaboration was never overstated, as the firm actively engaged all its employees in the manufacturing process, indicating that each employee has a thorough grasp of his or her task. A strategy for boosting employees' morale and productivity. The TQM practices adopted includes customer participation in the operation process. This is because most companies, including Coca-Cola, value opportunity for feedback and information on quality of their goods and services from their numerous consumers/customers. Through this, the company created and maintained competitive edge by eliminating waste and decrease expenses, which has made it the market leader in the industry (Muirhead, 2011).

1 Literature review

Since the work of Deming and the early quality gurus, total quality management has been the most prominent and visible approach of quality growth. It first appeared in the 1980s as a Japanese management technique to improve quality, and it gained popularity in the 1990s (Zakuan, 2010). TQM is a management concept that strives to enhance a firm product's quality performance in order to fulfill consumers' demands and expectations, while also achieving long-term success. TQM needs active engagement, collaboration and cooperation of employees in an organisation, or it will fall short of its goal of exceeding consumer's expectations (Hung, Lien, Yang, Wu & Kuo, 2011). A variety of prior research are evaluated and reviewed below to have a 'bird view' of the concepts and theories in this important area of study.

In a study of the TQM of 90 textile businesses in Pakistan, Mahmood, Qadeer, and Ahmed (2014) found that employee participation and continuous improvement are the most essential TQM elements that enhances organizational performance. However, in the same study, there was no statistical significance for top management support and customer focus on organisational success. Abusa and Gibson (2013) conducted same study across 56 Libyan industrial businesses. The findings revealed that all TQM variables, with the exception of supplier quality management, were highly associated with organisational success. They listed top management commitment and process management as the most successful elements, followed by people management and customers' focus. They concluded that continuous improvement had significant impact on organisational performance, but opine that it affected only one component of organisational performance, customer satisfaction, without substantial link with financial performance.

In Nigeria, Osotimehin, Ekpudu, and Agorzie (2016) on a study of the effect of quality management practices on the performance of selected downstream oil firms in Nigeria, found that quality management practices had positive and significant effect on the performance of firms in the sector. In addition, Ghazi, Bandar, Fathi, Metri, and Manar (2018) investigated the extent to which private service businesses use TQM methods and their influence on organisational excellence. Their Finding showed that TQM is highly applied and had a significant and favorable influence on organisational excellence.

In Jordanian private airlines, Adnan (2018) examined the association between overall quality management and firm performance. The findings demonstrate that overall quality management methods had a favorable and significant influence on Jordanian private airlines' quality, business, and firm performance. Specifically, the study's result revealed that successful adoption of comprehensive quality management methods improved the Jordanian private airlines performance. Ehsan and Najla (2019) in their study of Malaysian hotels and performance, found that Malaysian hotels had an adequate degree of TQM adoption. Furthermore, the regression analysis revealed that all of the selected TQM practices (customer focus, continuous improvement, and staff participation) had substantially linked with firm performance in Malaysian hotels. It was however observed from the result that the most significant TQM components in terms of its effect on business performance was continuous improvement.

Mudassar, Paul, Umair, Junaid, Rizwan, and Nosheen (2020) in their study examined the influence of TQM application on financial growth of small hotels. They developed

an effective and practicable quality system for managers to incorporate the best TQM strategies to maximize profitability via quality improvement and attainment of desired outcomes. By recruiting 141 people, the researcher was able to achieve the study's general aim and goals using a quantitative approach. The findings revealed that several TQM practices, such as quality improvement, continuous improvement, the involvement of top management, training and education, technological innovation, and employee empowerment had a beneficial influence on the profitability of small hotels. Empirical data from a developing South Asian country was provided and used for a study by Shafiq, Lasrado, and Hafeez (2019). The study was carried out in Pakistani textile firms. Questionnaire was used to gather data from members of the All-Pakistan Textile Mills Association, which was administered on 210 textile firms, with quality and production managers serving as respondents. Data gathered were used to examine the connection between TQM procedures and organisational performance using structural equation modelling (SEM). The findings showed that TQM had a strong beneficial impact on organisational performance.

Using structural equation modeling, Farish, Anu, and Satish (2017) investigated the direct and indirect impacts of TQM procedures on financial and innovation performance. The data were analysed and hypotheses tested using. The result of the survey showed that TQM practices had a direct and considerable impact on both financial and innovative performance. The findings also demonstrated that TQM techniques had an indirect and significant impact on financial performance via innovation performance. Continuous improvement, supplier quality management, quality information analysis, knowledge management, and quality assurance were also identified as the most prevalent TQM techniques linked to both financial and innovative success in the study. Deka and Muslim (2018) using employee and management perception, empirically explore the nexus between TQM's Critical Success factors (CSF) and performance results in Indonesian public service sector. A literature study yielded twenty-four hypotheses on the relationship between TQM's CSF and performance results, which were then examined using the Structural Equation Modeling (SEM) approach. A total of 310 people (employees and managers) took part in the survey. The findings showed that leadership is an important component of improved performance. The study also showed that continuous improvement, customer attention, and operational performance were the other important success elements that could be used to promote service quality.

Faris (2018) investigated the nexus between TQM and organisational performance. In the study, organisational culture was used as a moderating factor. A total of 163 managers from all levels of government participated in the survey. The result showed that TQM and organisational performance had a favorable and statistically significant link. The hierarchical regression analysis and structural equation modeling revealed that TQM and organisational culture interaction was statistically significant and favorably connected to firm performance. In a similar vein, Alfred, Reuben, and James (2018) in their study of Kenya Revenue Authority, found a link among staff training, continuous improvement, and system automation and operational performance in Kenya Revenue Authority. The study indicated that attaining operational excellence was challenging until Kenya Revenue Authority embraced TQM techniques through staff training, system automation, and continuous improvement in the changing and challenging business environment.

Research hypotheses and conceptual model

Based on the objectives of the study, the following hypotheses were developed and tested in the course of the study:

H₁: Customer focus has a significant and positive effect on customer satisfaction.

H₂: Employee empowerment has a significant and positive effect on productivity.

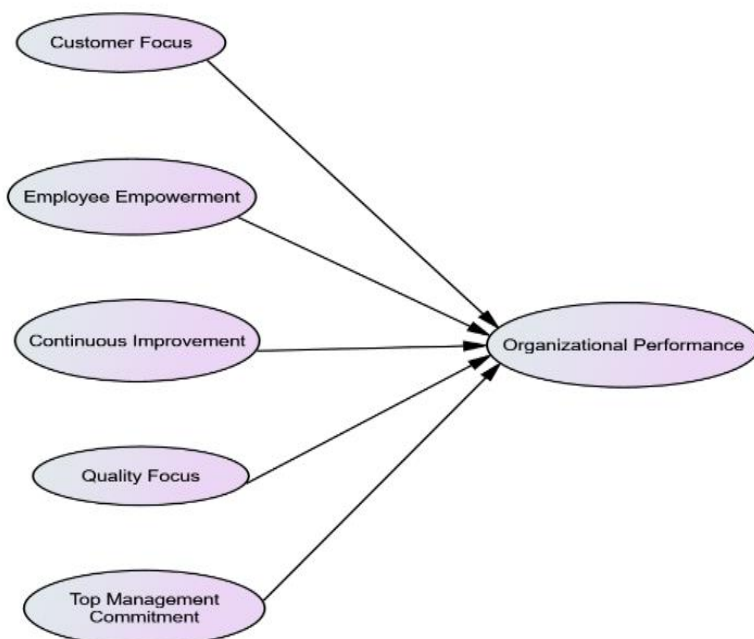
H₃: Continuous improvement has a significant and positive effect on quality conformance.

H₄: Quality focus has a significant and positive effect on brand preference.

H₅: Top management commitment has a significant and positive effect on competitive advantage.

Based on the hypotheses of the study, a research conceptual model was developed as shown in figure 1. The independent sub-variables include: customer focus, employee empowerment, continuous improvement, quality focus, and top management commitment; while the dependent sub-variables include: customer satisfaction, productivity, quality conformance, brand preference, and competitive advantage.

Figure 1 A conceptual Framework for the study on the effect of total quality management on organisational performance



2 Methodology

The study adopted a descriptive survey design to examine the effect of total quality management on organisational performance. The choice of the research design was necessary because primary data required for the study were collected from the respondent directly. It helps in utilising the method of data collection that yield reports concerning the measures of central tendency, variance analysis, correlation as well as structuring investigations aimed at identifying variables effect on the others and their relationship to one another. The target population of the study were employees of Nigerian Bottling Company Ikeja, Lagos State which was three hundred and thirty-four (334). To determine the sample size for the study, the formula of Yamane (1967) was adopted thus:

$$n = \frac{N}{1 + N(e)^2} = \frac{343}{1 + 343(0.05)^2} = 185$$

Hence, the sample size based on the above formula was one hundred and eighty-five (185).

Based on the nature of the observed variables in the study, primary data were collected using self-administered structured copies of the questionnaire that were administered on respondents. The study used questionnaire as the research instrument due to the fact that it provides avenue for systematic collection of data and aid analysis for managerial decision-making. The questionnaire was segmented into sections; sections A, B, C, D, E, F, and G. Section A addressed social demographic characteristics of the respondents, such as gender, age, marital status, qualification, years of services and rank/position. Section B addressed questions on customer focus as adapted from the study of Ehsan and Najla (2019); Section C addressed questions on employee empowerment in line with Nyaga and Gakobo (2017); section D addressed questions on continuous improvement as adapted in the study of Alfred *et al.* (2018); Section E covers questions on quality focus; Section F addressed questions on top management commitment as adapted from the study of Hilmy (2016); while section G includes questions on organisational performance measures, which was adapted from the study of Arawati, Muhammad, and Jaafar (2009). The questions from sections B to G were based on a five-point-Likert scale: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD).

Tab. 1 Questions Adapted from Various Authors

VARIABLES	ITEMS
Customer Focus	My company has increased its customer patronage through effective customer relationship.
	My company has increased its customer satisfaction rate through a sound quality function deployment.
	My company has expanded its customer base through effective customer management.

	My company has increased the sales of its products through effective marketing relationship.
	My company is highly committed to satisfy the needs of its customers through a robust market research.
Employee Empowerment	There is high employee participation in quality management program in my company.
	Employee training enhances effective and efficient production process in my company.
	My company has enhanced its employees' productivity through effective development programs.
	Employees are highly committed to production and quality improvement in my company.
	Employees are highly involved in continuous improvement efforts in my company.
Continuous improvement	My company encourages products innovation through effective process management.
	My company has facilitated the quality of its products through process improvement
	My company has taken advantage of market opportunities through quality improvement to boost sales.
	My company has high continuous flow of production through effective process innovation.
	My company is able to adapt to the changing taste of the customers through production flexibility.
Quality Focus	The quality of my company products conformed to customers' specification.
	My company has improved its market share through high performance quality.
	We emphasis on quality delivery rather than price in selecting suppliers.
	Customer complaints are used as input to improve production processes and quality.
Top Management Commitment	Leadership proactively pursues continuous improvement
	The unit managers accept responsibility for quality of goods.
	Top management clearly understands the fundamental spirits and principles of quality management
	The company's plan always incorporates external customers, suppliers and other stakeholders
Customer Satisfaction	The customer loyalty rate in my firm is high.
	There is high rate of customer patronage of my company's products.
	Customer grievances against my firm have decreased
Productivity	Production improvement is excellent in my firm.
	There is high rate of efficient production in my company
	Employee productivity rate is high in my firm.
Quality Conformance	The rate of quality conformity of our products is high.
	Quality innovation is high in my firm.
Brand Preference	Customer retention rate has improved in my firm
	Repeat purchase rate is high in my firm
Competitive Advantage	The technological competitiveness of my firm is high
	We are able to compete based on quality products.

Data collected were analysed and tested using descriptive and inferential statistics. the descriptive statistic (frequency distribution, mean and percentage) was used to present and analysed respondents' profiles. On the other hand, the inferential statistical tool used was multiple regression test through structural equation modelling technique with the aid of Amos Graphics to ascertain the causal effect of the latent independent variables "TQM practices" represented by customer focus, employee empowerment, continuous improvement, quality focus, and top management commitment; on the latent dependent variables "organisational performance" represented by customer satisfaction, productivity, quality compliance, brand preference, and competitive advantage. Therefore, the five hypotheses developed by the study were tested using SEM (path analysis) in a bid to achieve the objectives of the study. For reliability and validity of the measurement model, the study adopted a composite reliability test using Confirmatory Factor Analysis (CFA) to show the shared variance amongst the predictor variables of the latent constructs adapted and assess the internal accuracy and consistency of the research instrument. For validity of the research instrument, construct validity was evaluated, where convergent and discriminant validity of the measurement model were assessed to ascertain whether the research instrument accurately measure what it intends to measure and to ensure that there is complete absent of measurement error. The results of the reliability and validity is as shown in Table 3.2 and Table 3.3.

A statistical model was developed to measure the impact of selected independent variables on the dependent variables. Thus, in order to account for the effect of total quality management on organisational performance, a multiple regression model relating each of the indicators of TQM and organisational performance investigated in the study is specified and analysed using structural equation modelling technique with the aim of estimating the coefficients of the predictor variables in the model. The regression model is as specified:

$$DY = f (CF, EE, CI, QF, TMC) \dots\dots\dots (i)$$

The above function is hereby written in linear mathematical form as:

$$DY = \beta_0 + \beta_1 CF + \beta_2 EE + \beta_3 CI + \beta_4 QF + \beta_5 TMC + E \dots\dots\dots (ii)$$

Where:

DY: Dependent variable measured by (customer satisfaction, productivity, innovation performance, brand preference, and competitive advantage)

CF: Customer Focus, EE: Employee Empowerment, CI: Continuous Improvement, QF: Quality Focus, TMC: Top Management Commitment, E: Error terms, $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Parameters.

The linear regression model produces a regression equation where the coefficients denote the effect of each predictor variable (customer focus, employee empowerment, continuous improvement, quality focus, top management commitment) on the dependent variable (customer satisfaction, productivity, innovation performance, brand preference, and competitive advantage).

3 Results

This section covers analysis of respondents' profiles, first order factor analysis for assessment of reliability and validity; and test of hypotheses using structural equation modelling.

Tab. 2 Respondents' Profile

Characteristics of Respondents		Frequency	Percentage (%)
Gender	Male	131	72.4
	Female	50	27.6
	Total	181	100.0
Age	22-32yrs	49	27.1
	33-43yrs	82	45.3
	44-54yrs	36	19.9
	55yrs and above	14	7.7
	Total	181	100.0
Marital status	Single	74	40.9
	Married	107	59.1
	Total	181	100.0
Qualification	ND/Equivalent	45	24.9
	HND/B.Sc	85	47.0
	PGD/M.Sc	51	28.2
	Total	181	100.0
Years of Service	0-5yrs	72	39.8
	6-10yrs	76	42.0
	11yrs and above	33	18.2
	Total	181	100.0
Rank Position	Senior staff	110	60.8
	Junior staff	71	39.2
	Total	181	100.0

Source: Field Survey, 2021

First order Factor Analysis

A pooled Confirmatory Factor Analysis (CFA) was conducted to estimate the adequacy of the measurement model for Structural Equation Modelling (SEM), by assessing

the validity and reliability of the research instrument. The standardized factor loadings from the CFA were used to compute the Composite Reliability (CR) and Average Variance Extracted (AVE) to determine the reliability and internal validity of the measurement model. The convergent validity was substantiated by computing the average variance extracted for each of the latent construct adopted in the study and the threshold for convergent validity is that the value of AVE of the latent constructs should be ≥ 0.5 (Bagozzi & Yi, 1998). The threshold for composite reliability is that the value of the composite reliability of a latent construct should be 0.7 or higher (Nunnally & Bernstein, 1994).

Tab. 3 Construct Reliability and Convergent Validity Coefficients

Latent Variables	No of Items	SFL (min-max)	CR	AVE
Customer Focus	5	0.658 – 0.787	0.840	0.5149
Employees Empowerment	5	0.726 – 0.881	0.883	0.6028
Continuous Improvement	5	0.753 – 0.830	0.898	0.6402
Quality Focus	4	0.761 – 0.849	0.875	0.6407
Top Management Commitment	4	0.738 – 0.826	0.857	0.60
Customer Satisfaction	3	0.676 – 0.831	0.802	0.5766
Productivity	3	0.741 – 0.842	0.849	0.6529
Quality Conformance	2	0.777 – 0.811	0.773	0.6307
Brand Preference	2	0.714 – 0.771	0.711	0.5521
Competitive Advantage	2	0.686 – 0.859	0.750	0.6042

Note: SFL, standardized factor loading; CR is composite reliability; AVE is average variance extracted.

As shown in the above table, the CR of all the constructs is acceptable, being > 0.7 . The AVE of each construct is > 0.5 of the variances. Hence, the internal consistency and validity of the measurement instrument is adequate.

Tab. 4 Discriminant Validity

Latent Variables	CF	EE	CI	QF	TMC	CS	Pr	QC	BP	CA
CF	0.7727									
EE	0.475	0.776								
CI	0.475	0.336	0.801							
QF	0.565	0.392	0.341	0.800						
TMC	0.169	0.479	0.527	0.476	0.775					
CS	0.587	0.154	0.014	0.601	0.540	0.7648				
Pr	0.417	0.681	0.011	0.411	0.626	0.497	0.7762			
QC	0.405	0.553	0.390	0.702	0.541	0.600	0.326	0.8353		
BP	0.623	0.207	0.268	0.223	0.421	0.573	0.636	0.765	0.743	
CA	0.424	0.233	0.682	0.591	0.516	0.722	0.302	0.690	0.501	0.778

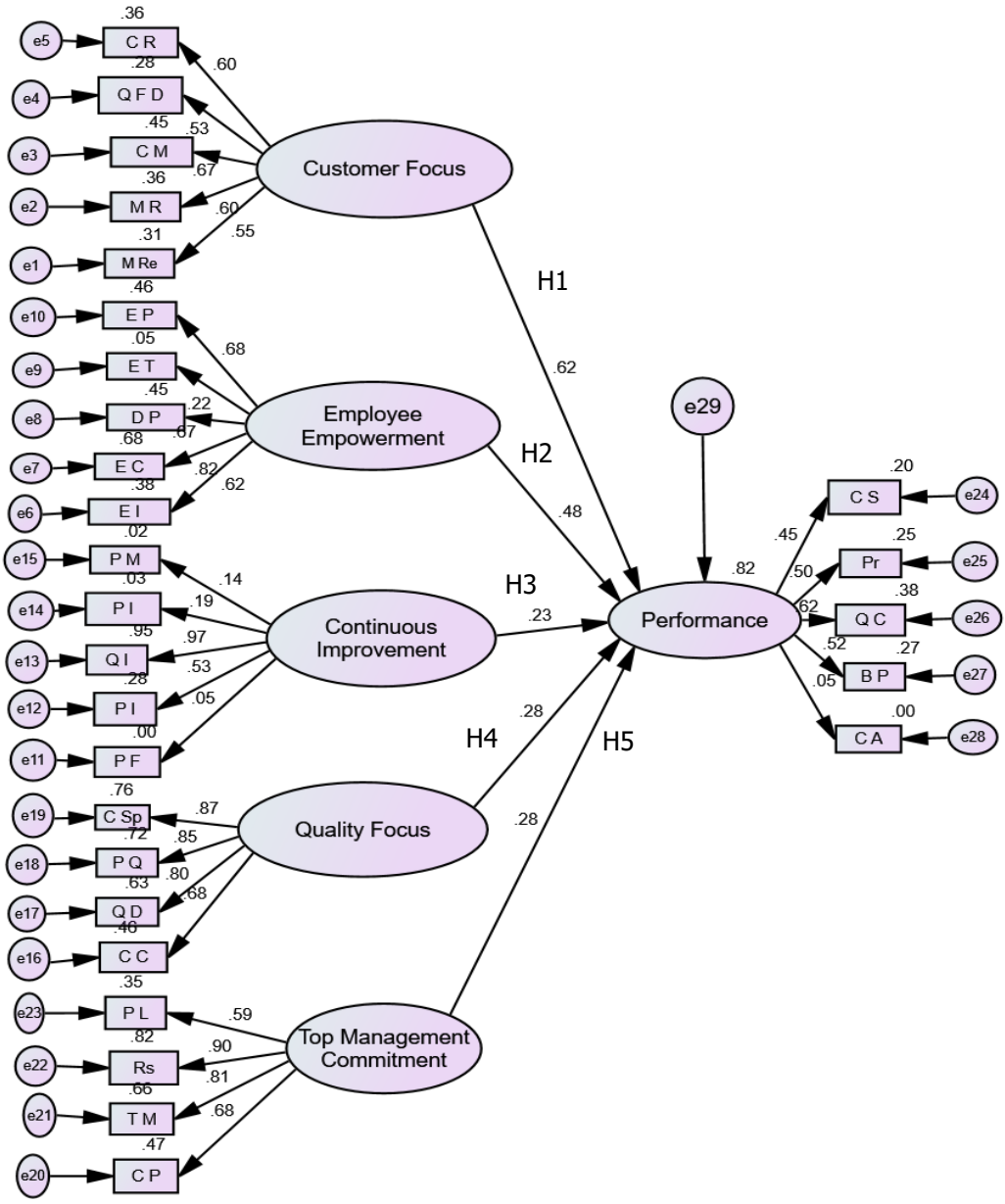
a Diagonal element (bold) are the square root of AVE between the latent constructs and their measures. Off-diagonal elements are correlations between constructs

The discriminant validity of the latent constructs was computed by obtaining the square root of AVE for each of the latent construct. The threshold for discriminant validity is that the value of the square root of AVE of the latent constructs should be higher than the correlation of the latent/exogenous constructs and the correlation between the latent constructs should be less than 0.85. In Table 4.3, It shows that the latent constructs satisfied the threshold of discriminant validity, as the values of the square root of AVE, that is, the diagonal values (in bold) for each of the construct is more than the inter-correlation values of the latent constructs and the correlation between the latent constructs is < 0.85 . In view of the reliability and validity analysis' result, the scale for the constructs seems to have display satisfactory measurement qualities and it is adequate. Hence, the research instrument was considered valid for data collection.

Testing the research hypotheses

The study adopted structural equation modelling technique for test of hypotheses of the proposed model, and path analysis was conducted to assess the causal relationship that exists among the constructs of the study. The condition for testing each hypothesis is that when critical value (CR) is > 1.96 and P value is less than 0.05 ($p < 0.05$) level of significance, the null hypothesis is rejected and when critical value (CR) is < 1.96 and P value is greater than 0.05 ($p > 0.05$) level of significance, the null hypothesis is accepted.

Figure 2 Structural Model for TQM Practices and Organisational Performance



In the above figure, a single-headed arrow (path) is used to represent the causal effect in the structural model. The path is drawn from the latent independent variables pointing to the latent dependent variable and the position of the arrows show that customer focus, employee empowerment, continuous improvement, quality focus, and top management commitments are hypothesised to have significant effect on performance.

Tab. 5 Test Result of the SEM Model

<i>Goodness of fit</i> Statistic	<i>Structural Model Val- ues</i>	<i>Recommended * values for good fit</i>
χ^2/df	2.908	< 3.00
NFI	0.937	> 0.9
TLI	0.921	> 0.9
CFI	0.910	> 0.90
RMSEA	0.075	< 0.08

By adopting SEM, it is expedient for the structural model developed to fit the data generated for analysis. Thus, the study assessed the fitness of the structural model via the goodness of fit indices adopted: Chi-square/degree of freedom (χ^2/df), normed fit index (NFI), Tucker-Lewis's coefficient (TLI), comparative fit index (CFI), and root mean square error of approximation (RMSEA). Table 3.5, shows that the SEM model for the latent constructs (customer focus, employee empowerment, continuous improvement, quality focus, top management commitment, and performance) satisfies the required level of model fitness. This is because the results are within the acceptable limit for measuring model fitness. On the strength of the above results, the study inferred that the model is fit for the study.

Tab. 6 Construct Structural Model (TQM Practices and Performance)

Link in the model	Hypothesis	Path Coefficient	Critical Ratio (CA)	p-value	Result
P <-- CF	H ₁	0.62	4.062	0.000	Supported
P <-- EE	H ₂	0.48	3.959	0.000	Supported
P <-- CI	H ₃	0.23	2.602	0.009	Supported
P <-- QF	H ₄	0.28	3.048	0.002	Supported
P <-- TMC	H ₅	0.28	3.004	0.003	Supported

Based on the results of path coefficient, critical ratio and p-value, it is observed that all independent constructs (customer focus, employee empowerment, continuous improvement, quality focus, and top management commitment) had significant and positive effect on the dependent construct (organisational performance). Hence, all hypotheses are confirmed. For instance, in hypothesis one, a unit change in customer focus accounted for 0.62 (62%) change in performance, proxied by customer satisfaction.

Discussion of Findings

The study examined the effect of total quality management on organisational performance in the Nigerian beverage industry. TQM was measured by five constructs,

which were customer focus, employee empowerment, continuous improvement, quality focus, and top management commitment, while organisation performance was measured by customer satisfaction, productivity, quality conformance, brand preference, and competitive advantage. Questionnaire was employed to elicit required data, while structural equation modelling (Path Analysis) was deployed for data analysis and test of hypotheses in a bid to achieve the objectives of the study. The findings were in line with some previous studies. All the null hypotheses tested were rejected with p-value less than the significant level of 5% ($p < 0.05$).

The findings from the SEM (path analysis) revealed that customer focus had significant and positive effect on performance, proxied by customer satisfaction. This is confirmed by the path coefficient (0.62) of customer focus to performance with $p < 0.05$. This implies that customer focus has significant effect on customer satisfaction. This finding corroborates with the outcomes of previous studies such as Farish *et al.* (2017); Ezenyilimba *et al.* (2019); Salome and Shadrack (2019) and Ghazi *et al.* (2018) which revealed that customer focus has significant and positive effect on customer satisfaction. By this, top management should ensure effective customer orientation to achieve customers satisfaction. Quality should not be viewed from the predetermined internal specifications, but it should be viewed from external perspective of customer expectations. Building and sustaining competitive advantage required firms to constantly monitor and respond quickly to change in customer expectations. The studied firm have been able to assess the needs and wants of its customers via extensive market and marketing research and made a robust customer relationship that has enhanced customer patronage.

The analysis also shows that employee empowerment had significant and positive effect on performance, proxied by productivity. This is confirmed by the path coefficient (0.48) of employee empowerment to performance with $p < 0.05$. The move towards achieving quality performance in the firm has been extensively upheld through effective training and education of employees. Through this, employees are motivated to assume higher responsibility, use their initiative and creativity to communicate effectively. Employee involvement is simply a polite means of seeking their opinion on matter that affect them. This implies that if employees are to be affected by decisions to be made by management, they should be consulted so long as they have the capacity to make useful and intelligent contribution. This strategy of management-employees relationship will be strengthened and create conducive and favourable atmosphere for improved performance.

It is no doubt that when employees are empowered and equipped with necessary skills to get the work done, the level of their productivity will be optimized. The findings further reveals that by empowering employees within the firm, a friendly environment would be created, where employees could have the confidence and capability to initiate necessary procedures to meet the expectations and requirements of customers, so as to attain the goals and improve the value of the firm. The finding supports the Kanter's Structural Empowerment theory which emphasises that employees must be provided with the necessary resources to support opportunities for continuous learning in order to develop their core competencies and skills. By implication, employees will be motivated and be willing to deliver quality customer service. This finding is also in line with the findings of Ahmed (2018); Alfred *et al.* (2018); Victor and Rosemarie (2017) and Yaser (2015) which concluded that employee empowerment has positive impact on the performance of firm's operations.

Findings further revealed that continuous improvement has significant and positive effect on performance, proxied by quality conformance. This was confirmed by the path coefficient (0.23) of continuous improvement on performance, with $p < 0.05$. The application of continual improvement in the studied firm focuses on the audit of existing process and management review of quality performance to ensure conformity with quality standard. The result further shows that the improvements in the studied firm was properly planned and well implemented. It is viewed that continuous improvement is a significant aspect of products/services and the means for developing and improving production/operations processes. This finding upholds the quality improvement theory, which claimed that quality performance of firms should be optimised on a daily basis in order to curb the discrepancy between customer expectations and organisational performance. This finding is consistent with the findings of Vedant *et al.* (2018); Wilson and Doreen (2017) which claimed that continuous improvement has positive effect on the quality performance of firms.

The structural equations modelling's results revealed the existence of causal effect of quality focus on performance, proxied by brand preference. This is confirmed by the path coefficient (0.28) of quality focus on performance with $p < 0.05$. This implies that quality focus has significant effect on brand preference. The studied firm emphasises more on quality delivery, rather than price in selecting suppliers which has impacted greatly on the quality of products delivered to the consumers/customers. By implication, the firm has been able to position its products in the mind of the customers to create strong preference for its products. This finding is in line with the study of Hilmy (2016), which divulged the positive association between quality focus and firm competitiveness.

Finally, the findings divulged that top management commitment had significant and positive effect on firm performance, proxied by competitive advantage. This was confirmed by the path coefficient (0.28) of top management commitment on performance, with $p < 0.05$. This shows that top management of the studied firm believe in TQM and had demonstrated high commitment to the successful application of TQM, with a view to achieving competitive advantage. The policies and strategies of the firm are well spelt out and communicated to the employees to better comprehend, as well as embrace process change within the firm. Top executive considers the firm as a system where a stream of communication is established, employee empowerment is supported, and information is used effectively and efficiently optimised towards quality performance. It further shows that top executives proactively assumed full responsibility for continuous improvement on quality, and incorporate external customers, suppliers and other stakeholders in its plans, which have given the firm a competitive advantage over rivals in the industry. This outcome corroborates the findings of Simranjeet and Syed (2020) and Mudassar *et al.* (2020). It also upholds Deming's theory of quality improvement, which claimed that top management is responsible for creating and communicating the vision and aspiration of the firm to employees to gain their commitment toward improving the firm's performance and enhancing competitiveness.

Conclusion

Arising from the findings, the study concludes that TQM has positive and significant effect on the performance of organisations in the Nigerian beverage industry. The study

focuses on the effect of total quality management on organisational performance. The need to proffer solution to the problem of low quality and how production/operations efficiency can be fostered in the Nigerian beverage industry has necessitated the need to examine how firms can effectively implement sound practices of TQM in a bid to optimise quality performance and satisfy the expectation and needs of customers. It is inferred that TQM practices has harmonious relationship with organisation performance. The studied firm provides a holistic, as well as systematic approach to create a work environment that gives room for employee development, continuous process/quality improvement, proactive leadership and focuses on quality and satisfy the needs of customers, which ultimately enhances firm's performance. It is evident that TQM is an effective tool that can be employed by firms in the manufacturing and service sectors to offer quality products/services to customer and optimise productivity and profitability level. The study's findings lend credence to the findings of previous studies that TQM has positive and significant effect on organisation performance.

Implication and Contributions to Knowledge

It behooves on firms' managers to view quality from both predetermined internal specifications and external perspective of customer expectations. The implication of the study's findings is that firm is viewed as a system, where a stream of communication is established, employee empowerment is supported, and information is used effectively and efficiently to optimise productivity and quality performance. Also, top management has implicit belief in TQM and display high level of commitment to the successful application of TQM with a view to enhance competitive advantage. This study has made a significant contribution to the theoretical foundation and understanding of the influence of overall quality management practices on firms' performance in the Nigerian beverage sector. The study's empirical findings contributed to the conception that the business environment is dynamically complex and that consumers' tastes are constantly changing, necessitating the need for food and beverage companies to constantly invest in continuous quality and process improvement in response to technological changes in order to improve the quality of their products and meet market demands. The study also contributes to knowledge for academics and would be researchers because it has added to existing literature in this area of study. Finally, the study delivers a unique contribution to the academic and practitioners by adding to their knowledge on the effect of TQM on performance of their firms.

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Index of the cycle of money - The case of Slovakia

Constantinos Challoumis¹

Abstract

This paper studies the cycle of money works in an actual case scenario like this of the economic system of Slovakia. Prior works have examined the case of Latvia, Serbia, Greece, Thailand, and Bulgaria, following the concept of the theory of cycle of money. The index of the cycle of money suggests how an economic system ought to counteract a monetary crisis and examines how well-structured is Slovakia's economy. The estimations of the index of the cycle of money of Slovakia are compared with the global average index of the cycle of money. The estimations reveal that Slovakia is over to the average global value. Then, Slovakia has a well-structured economy and can overpass an economic crisis. The applied methodology uses the analysis of the theory, mathematical, statistical, and econometrical results. The current work presents the strength of Slovakia's economy to a potential crisis. This means that a tax policy should consider that companies with big capital should have tax privileges to invest in manufacturing and high technology services and goods; leaving the rest of the companies to act to better free-market conditions. Otherwise, companies that substitute activities of smaller ones should be taxed higher. The applied period is that of economic crisis, 2012 - 2017, as this period is considered critical because of the economic crisis in the EU.

Key words

the cycle of money, Slovakia, general index of the cycle of money, reuse of money, distribution of money

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Introduction

This paper examines the dynamic of the economy, of Slovakia, using the concept of the cycle of money. The prior results of Latvia's, Serbia's, Greece's, Thailand's, and Bulgaria's results revealed the behavior of these countries to a potential crisis (Constantinos Challoumis, 2021f, 2021b, 2021c, 2021e, 2021d). Then, following similar logic, it is examined the case of Slovakia. The theoretical background of the cycle of money supports that the dynamic of an economy is based on the idea of the number of times that money is used in an economy. An economy should be considered not as a closed system, but as a system with fragments. An economy with fragments means that the economy interacts with other economies but simultaneously protects its money. An amount of money in many cases is getting out from an economy to external banks, or other economies. The mainstream is that the bigger companies and the international companies in most cases are saving their money to external banks and economic heavens. Using this theory, the tax authorities should put an additional tax on these kinds

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of companies to decline the losses to the economy. Moreover, the smaller companies and the freelancers should be taxed with lower tax rates. Then, it would be plausible to increase the dynamic of the economy. Also, the factories, the know-how services of big companies, the health care system, and the educational system comprise a special case for the economy, as belong to those cases where the taxes improve the quality of the economy (Z. Acs, Åstebro, Audretsch, & Robinson, 2016; Bakaki & Bernauer, 2018; Campos, Braga, & Correia, 2019; Rashid, Warsame, & Khan, 2020; Rumayya, Rammohan, Purwono, & Harymawan, 2020). The factories and the big know-how companies increase the cycle of money, as they do not substitute the activities of the small-medium companies and the freelancers. The educational and health care systems improve the quality of the economy, making the whole economy better. The cycle of money of Slovakia should be over or close to the worldwide general index of the cycle of money, to be able to counteract a potential depression. The applied approach is based totally on mathematical estimations from the relevant theory. The results confirmed that Slovakia's economic system is properly established, as it follows the general international index of the cycle of money (the value of 0.5) which represents the average global case (Campos et al., 2019; Forson, 2020; Lajas & Macário, 2020; Rumayya et al., 2020).

The countries near 0.5 and above it have an appropriate distribution of money to their financial system. Consequently, Slovakia's economic system is considered as well established, standing on the results of this paper. The question about the way that works the index of the cycle of money to the case of Slovakia is answered from the structure of its economy and the way that distributed the money to its economy. Besides, it needs some improvements to have an even better index cycle of money. Therefore, Slovakia should decrease taxes for small and medium enterprises, to achieve better reuse of money in the country's economic system, and to increase taxes to big and international. The taxes return to the economy, in the case of the education and the health care system (these are exclusions from the mainstream where taxes support the economy). But, the mainstream is that the tax authorities should maintain the taxes to the lowest level. For small and medium companies, the government should protect them with very low taxes and contemporaneously should put greater taxes on the larger companies. But, there is a type of big and international companies that should have low tax rates, as these types of companies are not substituting the activities of smaller companies (Arabyan, 2016; Jeon, Kim, & Kwon, 2020; Jia, Liu, Lieske, & Chen, 2020; Mialhe, 2017; Wu, Yu, Wei, & Yang, 2019).

These types of big enterprises are factories and know-how technology companies. The mainstream idea is to have an economic system, with the best allocation of production. Larger companies should not provide similar products and services, like that of smaller companies, as they can make investments in economic fields that smaller companies cannot support. Thus, an economic system achieves its best level. The concept of the cycle of money shows that with the appropriate allocation of production units and of taxes the money is cycled inside the economy achieving the maximum dynamic of the economy. This paper is about Slovakia's index of the cycle of money. The research is based on an actual case scenario of a country's economic system. Therefore, the principal hypothesis of this paper aims to estimate the index of the cycle of money of Slovakia and to answer the question of it's near the worldwide general index of the cycle of money, according to the simple index or the general index of the cycle of money.

The main objective of this research is to determine the index of the cycle of money for the case of Slovakia. The clarification of the cycle of money of the country will reveal its economic structure. In general, countries with values over 0.2 can counteract an economic crisis. The world general index of the cycle of money is 0.5. The countries with a value close to 0.5 counteract depression or economic crisis fast. In the case of Slovakia, is expected to have a value over 0.5. Moreover, the general index of the cycle of money, defines how well-structured countries' economy is. As high values indicate that country has high distribution and reuse of money, meaning that the small and medium enterprises make profits, ameliorating the country's bank system and the country's society. Thus, the companies with high capital spinning to economic sections which do not substitute the smaller ones spinning. The high capital investments should be done to factories and know-how technology companies because the smaller companies cannot offer the same product and services.

1 Literature Review

The case of Latvia presented the condition of the country's economy and how to react to an economic crisis, according to the index of the cycle of money. These results are formed on the theoretical approach of the theory of the cycle of money, where this theory presents that to an economy the taxes return to the society, basically to the case of the education and the health system. But, the main rule is that the authorities should keep the taxes as low as is plausible, for the medium or small economic units (meaning any kind of economic unit e.g. freelancers), and companies. Moreover, the cases of Serbia and Bulgaria revealed that are above the limit of 0.2 and in general close the average rate of 0.5, concluding that these countries can counteract a potential crisis. The fix length principle can enforce the cycle of money The A.L.P. (Arm's Length Principle) is the principle where the authorities use to apply the taxes to international and to groups of companies. The arm's length principle is the method that the tax authorities estimate the tax obligations of the companies, which participate in international transactions.

The authorities using the arm's length principle are tough to obtain the controlled transactions, as the international companies offer similar data with that of the uncontrolled transactions and they are hiding with a purpose to avoid paying taxes. Therefore, the government needs to apply the fixed-length principle. The fixed-length principle indicates that the companies of controlled transactions manage transactions and achieve to avoid tax paying. Then, according to the fixed-length principle, international companies should pay plus a fixed amount of tax. In that way, the cycle of money is enhanced, because the larger companies generally receive the money out the society and the economy and save them to international banks. Therefore, that money is lost from society, diminishing consumption (Abdelkafi, 2018; Z. Acs et al., 2016; Z. J. Acs & Szerb, 2007; Arai, Naito, & Ono, 2018; Cai, 2017; Castaño, Méndez, & Galindo, 2016; Forson, 2020; 'Income taxes, public fiscal policy and economic growth', 2014; 'The East Asian miracle: economic growth and public policy', 1994; Ladvoat & Lucas, 2019; Lajas & Macário, 2020; Oueslati, 2015; Pircher, 2020; Tvaronavičienė, Tarkhanova, & Durglishvili, 2018; Ud Din, Mangla, & Jamil, 2016). Then, according to the fixed-length

principle, the local companies which save their money to local banks should have lower tax rates.

Concluding, the fixed-length principle serves the theory of the cycle of money, where the small and medium companies are paying lower taxes than the larger companies, which substitute their commercial activities. On the other hand, the arm's length principle estimates the taxes standing on methodologies provided by the companies that make international transactions. In that way, the large companies cover the activities of the smaller companies. Finally, the mainstream is that small and medium companies robust the distribution of money to a country's economy as usually they don't save their money out of the country's economic system, and reuse the money inside the economy. Therefore, the money distributed inside the economy many times increases the cycle of money. The reason where the money increases the cycle of money is obvious according to eq. (4) of the general index of the cycle of money (Constantinos Challoumis, 2021a).

2 Methodology

The methodology is that used in the case of Greece, Latvia, Serbia, Bulgaria, and Thailand. Thus, "The calculations of the cycle of money are clarified by the following mathematical types of the work "Mathematical background of the theory of cycle of money":

$$c_y = c_m - c_a \tag{1}$$

$$c_y = \frac{dx_m}{dm} - \frac{dx_m}{da} \tag{2}$$

$$i_{cy} = Y * b_d \tag{3}$$

$$g_{cy\ Country} = \frac{c_y\ country's}{c_y\ Average + c_y\ country's} \text{ or } \frac{i_{cy\ country's}}{i_{cy\ Average} + i_{cy\ country's}} \tag{4}$$

$$g_{cy\ Average} = \frac{c_y\ Average}{c_y\ Average + c_y\ Average} \text{ or } \frac{i_{cy\ Average}}{i_{cy\ Average} + i_{cy\ Average}} = 0.5 \tag{5}$$

The c_m is the velocity of financial liquidity, c_a is the velocity of escaped savings and c_y is the cycle of money. The i_{cy} is the index of the cycle of money, Y is the national income or GDP, and b_d is the bank deposits of the country. In addition, $g_{cy\ Country}$ symbolizes the general index of c_y of the country, $i_{cy\ country's}$ or $c_y\ country's$ is the index of

c_y of the country, and i_{cy} Average or c_y Average is the global index of i_{cy} . Finally, g_{cy} Average is the general global index of c_y , and is obtained as a global constant (Constantinos Challoumis, 2021g).

The proper hypothesis is to establish the connection between the index of global average c_y , the bank deposits and the GDP per capita, with an econometric approach. Then is confirmed the initial hypothesis that the cycle of money of Greece is above the global average index of the cycle of money. The eq. (4) and (5) mean that an economy close to the value of 0.5 can face immediately an economic crisis. Results close to this value represent an appropriate index of the cycle of money, revealing an adequate economic structure of the society and then the fine distribution of money between the citizens - consumers. Eq. (1) is the term of the cycle of money which used to define the c_y countries and c_y Average of eq. (2). The cycle of money to a quantity value is expressed by GDP, basically is an expression of $\frac{\partial(GDP)}{\partial(S+I+X)}$, according to $\frac{dx_m}{dm}$ and $-\frac{\partial(GDP)}{\partial(S'+I'+M)}$ hinged on $\frac{dx_m}{da}$. Then, $c_y = d(GDP) = \frac{\partial(GDP)}{\partial(S+I+X)} d(S + I + X) - \frac{\partial(GDP)}{\partial(S'+I'+M)} d(S' + I' + M)$, formed on $c_y = \frac{dx_m}{dm} - \frac{dx_m}{da}$, of eq. (2). Then, S is the savings, I is the investments and X is the exports. Then, S', is about the savings which are oriented to banks out of the country's economy, I', is about the investments which oriented to banks out of the country's economy, and M are the imports. Therefore, the cycle of money expresses the GDP as the following one: $Y = S_T + I_T + (X - M)$, or $Y = (S - S') + (I - I') + (X - M)$ or $Y = \Delta S + \Delta I + (X - M)$. According to the theoretical background, for the lost money from the economies, the problem of controlled transactions could be administrated, if an organization could identify the money transitions between the economies, by a comparison of the global economies, by ΔS , ΔI , and $(X-M)$. Then, $c_{ytotal} = \sum_{i=1}^n \sum_{t=1}^m c_{y,i,t} = \sum_{i=1}^n \sum_{t=1}^m [\frac{\partial(GDP)}{\partial(S+I+X)} d(S + I + X) - \frac{\partial(GDP)}{\partial(S'+I'+M)} d(S' + I' + M)]_{i,t}$. But, because data from an organization for these activities don't exist follows the application of the index of the cycle of money. The cycle of money is an expression of the minus between the differential equations of the volume of money that is used in an economy and the volume of money that are lost from the economy. This is the reason why the theory of the cycle of money supports the higher tax of companies that make controlled transactions and the bigger companies because with that way the smaller companies are using an amount of money multiple times. An exemption is for the high technology companies and the factories, where their activities cannot substitute by smaller companies." (Constantinos Challoumis, 2021c)

3 Results - The case of Slovakia

Standing on the prior methodology extracted the following results. This table includes the parameters of bank deposits, GDPs, and the indexes of the cycle of money. This section reveals the dependence of Slovakia's index of the cycle of money using the bank deposits of Slovakia's economy and the GDP per capita of Slovakia's economy. The bank deposits of the global average case and the global GDP per capita are used for the comparison of Slovakia's economy, its GDP, and the country's bank deposits.

The same conclusions come up and from an econometric point of view, with the dependent variable to be the index of the cycle of money:

Tab. 1 Slovakia's OLS analysis

Variable	Coefficient	std. error	p-value
Constant	- 1.29162e+06	69368.5	0.0029 ***
Slovakia's bank deposits	31091.2	2667.72	0.0073 ***
Slovakia's GDP per capita	44.5938	5.02037	0.0124 **
Global index of the cycle of money	-0.115125	0.0650536	0.2188

Source: Challoumis, 2021, author's compilation

In the prior table, the values with two asterisks symbolize the cases that the coefficients are below the 0.05 significant level, and accordingly, the three asterisks in the case of 0.01 significant level.

The indexes reveal Slovakia's distribution of money and the form of its economic structure (see Table 2). The first three rows of the table reveal that the p-value is important, therefore the initial hypothesis was rejected and the model is accurate. The fourth row is expected to be above the 0.1 p-value as the global index of the cycle of money is independent of any country's rate, as in most cases, a country has a very small amount to the aggregate value. Based on those estimations and the theoretical background is determined the condition of the economic structure of the country and if Slovakia belongs to the group of very enhanced economies. According to these results, it's plausible to clarify the condition of the cycle of money in Slovakia:

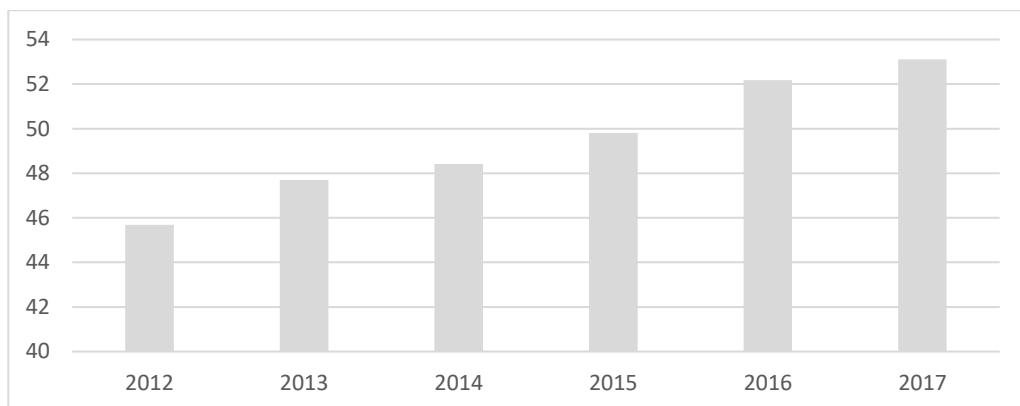
Tab. 2 Slovakia's index of the cycle of money

Year	Bank Deposits Global Average (%)	Bank Deposits Slovakia (%)	Global GDP per Capita (\$)	Slovakia's GDP per Capita (\$)	Index of Global Average Cy (\$)	Index of Slovakia's Cy (\$)
2012	52.48	45.69	16,653.01	26,642.48	873,949.96	1,217,294.91
2013	53.96	47.7	17,266.62	26,791.16	931,706.82	1,277,938.33
2014	55.81	48.42	17,159.02	27,472.2	957,644.91	1,330,203.92
2015	59.38	49.81	15,295.71	28,767.6	908,259.26	1,432,914.16
2016	60.77	52.18	15,330.03	29,343.28	931,605.92	1,531,132.35
2017	60.07	53.11	15,082.49	30,189.4	906,005.17	1,603,359.03
RE-SULTS					5,509,172.04	8,392,842.71

Source: Globaleconomy.com and Challoumis, 2021, author's compilation

To the next figure is presented Slovakia's bank deposits:

Figure 1 Slovakia's bank deposits

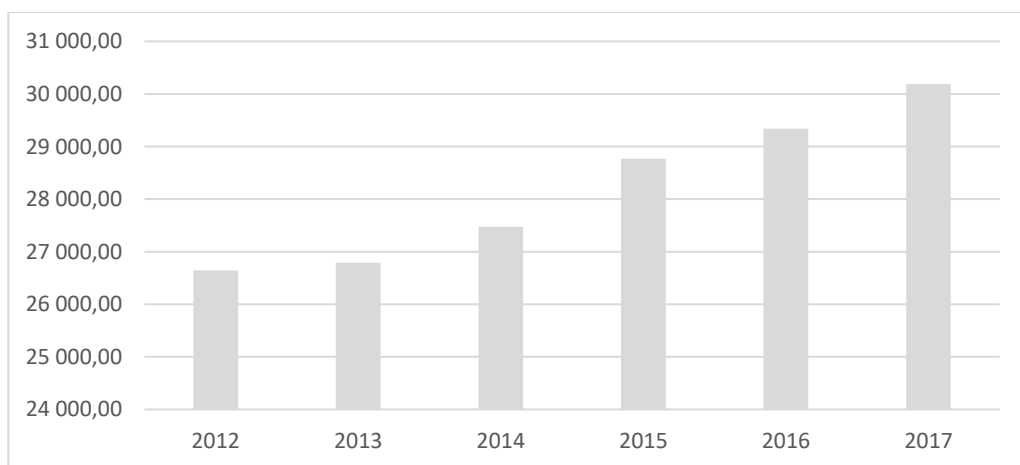


Source: Challoumis, 2021, Globaleconomy.com

To figure 1 shows the situation of bank deposits of Slovakia's financial system, as a percent of GDP, for the period from 2012 to 2017.

The bank deposits are significant for the estimations of the index of the cycle of money, as reflect the distribution and the reuse of money. Then, in the prior scheme, it is obvious that for this period the country bank deposits have increased showing that the distribution and reuse of money have also increased. Then it is expected to have a high general index of the cycle of money. Moreover, the next scheme presented the GDPs of Slovakia:

Figure 2 Slovakia's GDPs per capita



Source: Challoumis, 2021, Globaleconomy.com

Figure 2 presents the condition of GDPs of Slovakia's economy for the period from 2012 to 2017. The GDP per capita of a country's economy is increased for this period. Thus, the amount of money distributed and reused is high.

The expounding of the condition is that both GDP per capita and bank deposits are increased. Hence, the general index of the cycle of money is expected to be high. Also, the next scheme presents the GDPs of Slovakia, for the same period.

According to prior results, the index of Slovakia's c_y is 8,392,842.71 \$

We obtain from the prior results that:

The index of global average c_y is 5,509,172.04 \$

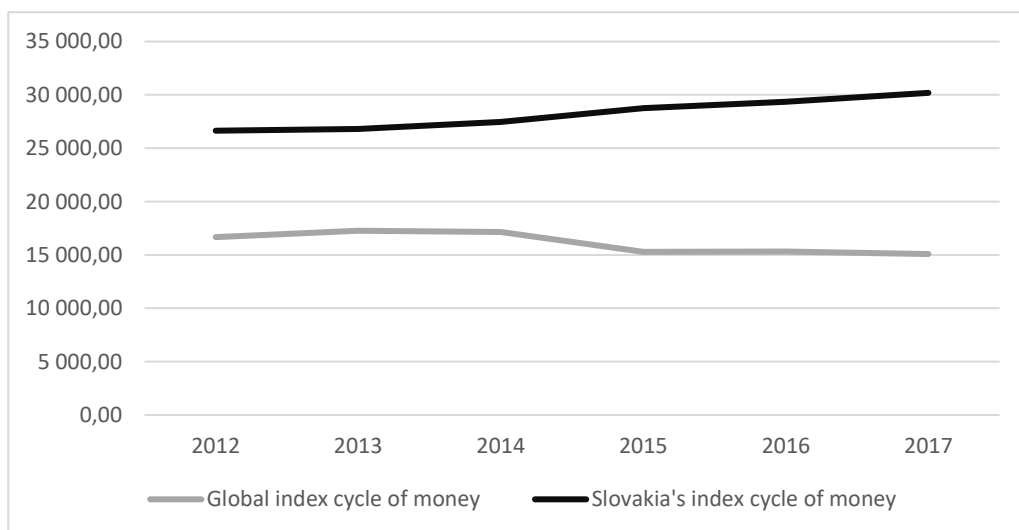
Calculating the general index of the cycle of money for the case of Slovakia and of global view we have that:

The general index of c_y for Slovakia is $g_{cy\ Slovakia} = 0.604$

The general index of c_y of global view is $g_{cy\ Average} = 0.5$

It is defined that Slovakia's index cycle of money is close to the global average cycle of money. Then, the dynamic of Slovakia's economy complies with the global average and its structure is near to the initial hypothesis. Then we receive the next scheme:

Figure 3 Graph of the index of the cycle of money

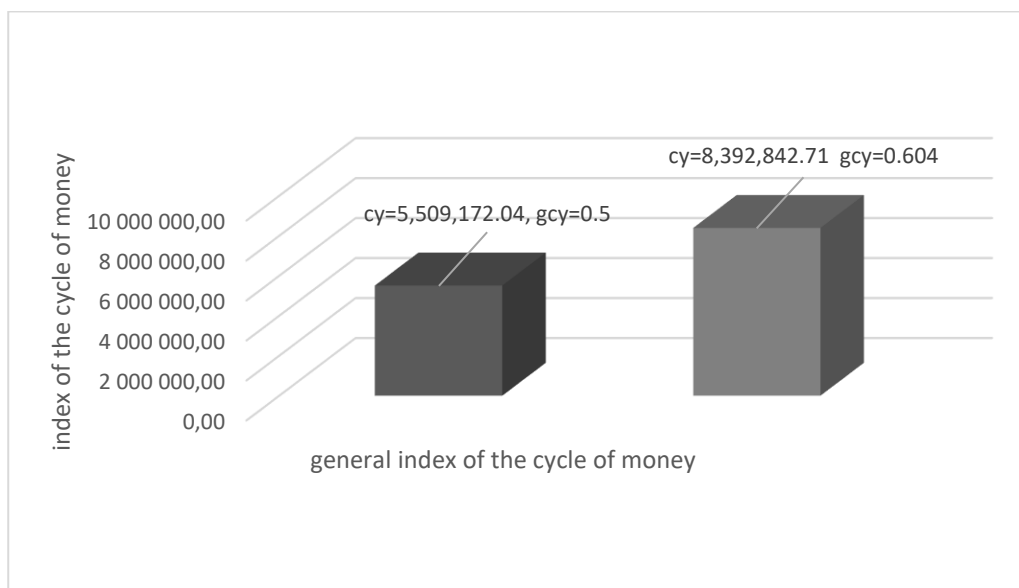


Source: Challoumis, 2021, author's compilation

In pursuance of the prior scheme, it is concluded that the index of the cycle of money of Slovakia's economy is above the global average of the index of the cycle of money, which is 0.5 (considered as a global constant). Slovakia's index of the cycle of money is 0.604. The countries that are near 0.5 have a well-structured economy - standing on eq. (5), according to the theoretical background of the cycle of money. This conclusion means that the economic structure of Slovakia has an upper distribution of money to its economy. Besides, Slovakia could proceed to more reforms, as the international and the bigger companies still substitute the local medium and small enterprises (Challoumis, 2020). The authorities should apply the fixed-length principle, then higher taxes should be put on the bigger companies. In that way, the distribution of money inside the economy will be increased, and social welfare will be boosted. The government should protect more the small and medium enterprises to avoid losing money from transactions of bigger companies (Abate, Christidis, & Purwanto, 2020; Corti, Roldán, & Benito, 2020; Sikka, 2018; Tvaronavičienė et al., 2018).

The general index of the cycle of money appears to the following figure:

Figure 4 The cycle of money indexes



Source: Challoumis, 2021, author's compilation

The prior scheme has presented the combination of the index of the cycle of money with the case of the general index of the cycle of money. It is represented the affiliation between the global average indexes and Slovakia's index. Slovakia is part of the countries which are above the global average index of the cycle of money, both for the simple index and general index. The country's index of the cycle of money, and general index of the cycle of money, is at a very good level, expounding that has a well-formed economic system, with appropriate economic distribution and reuse of money.

4 Discussion

The elucidation of the current results is that Slovakia's financial system belongs to the upper level of the cycle of money, then there has an upper dynamic. But, Slovakia's economy could be improved more. Then, the structure of the economy may be improved, with decrease taxes to the small and the medium companies, and increase of taxes to the bigger companies. In addition, the bigger companies have to provide economic activities that smaller businesses can't support, then the authorities ought to imply low taxes to know-how companies and factories. Consequently, big companies must no longer replace smaller businesses' activities.

The investments of a country are boosted by the increase in the distribution of money. A country with a well-based economic system is a country with a good cycle of money and therefore it can face an economic crisis. Slovakia's economic system is above the index of common GDP per capita (meaning the value of 0.5), from 2012 to 2017 using the index of average GDP per capita.

The theory of the cycle of money is in the same line with the free competition and the tax policy of the F.L.P. (Fixed Length Principle) among economies. Then enterprises with big capital must invest in factories and know-how goods and services. According to the theoretical background, big capital enterprises substitute products and services that can offer smaller companies. Small and Medium enterprises are the most accurate and quick way to develop the economy of a country, making wider the tax bureau and minimizing allowing in that way to minimize the taxes.

Conclusion

According to the outcomes of the table, Slovakia is above the worldwide average index of the cycle of money. From figure 2 and figure 3 the index of the cycle of money it is revealed Slovakia's distribution of money is to an upper rate. The cycle of money of the country permits a very good distribution of money. The losses of the local banks are to an upper degree. But, the country's economy could be better due to the fact an amount of money is not excluded from the local financial system by worldwide transactions (see table 2). The current model complies with the initial assumption, indicates the distribution of money to Slovakia's economy. Slovakia's economic system has a tendency in the last years to have better reuse of money in the economic system than in the past, as tends to have much better characteristics to a financial system that complies with the idea of the cycle of money. Finally, Slovakia's financial dynamic is over the worldwide average cycle of money, as the value is 0.604 shows that Slovakia's economy tends to have a better distribution of money.

The country's economy is well-formed, then can face any type of economic crisis, in general quickly. But, it is plausible to happen more improvements by an appropriate tax policy. The current decision of G7 for the global minimum tax of 15 % is in that direction, complying with the theory of cycle of money. Along these lines, the companies

which proceed to controlled transactions at least will be taxed by a minimum tax, diminishing thusly the lower tax income of the countries, by the reduced spinning of smaller companies by their substitution of the big capital and the international companies.

The condition of the A.L.P. follows the concept that companies of controlled transactions can determine the method where they will be taxed. The F.L.P. guarantees that a minimum tax will be paid by companies that proceed to controlled transactions. The F.L.P. of the theory of the cycle of money can be applied also to the tax policy of the country's authorities to the bigger companies which substitute activities of smaller ones, succeeding in that way higher reuse and distribution of money.

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Next generations expectations in the housing quality and the main affecting factors in the Slovak Republic¹

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Abstract

Understanding consumer behaviour has become one of the most important tasks of marketing itself. Without understanding consumer behaviour, affecting factors, expectations or current moods are created by a threat of failure. The paper focuses on factors and expectations affecting the next generation on housing in the Slovak Republic. Hypotheses and research questions were used in the paper to explore observed phenomena. Within this paper was used standardized questionnaire. The questionnaire was created and distributed in electronic form with Google Form. The research was attended by 115 respondents. Respondents' replies were subsequently extracted and processed by variance analysis (ANOVA – one-way-test). In the final part of the authors evaluated the examined hypotheses and research questions. The output of the paper is the formulated responses of the results of the chosen hypotheses and research questions to evaluate factors, impact intensity expectations affecting the next generation in solving housing questions from the perspective of gender structures.

Keywords

Consumer Behaviour, Generation Z, Impact factors, Quality of housing, Housing

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Introduction

The natural development of the society come new questions and the challenges that stand for the following developments and directions of the current and future society. We can divide the society with fragmentation to the number of cohorts. Based on historical events, common characteristics of behaviour and time, we know the society to divide into certain groups, which also refer to as generations (Meredith & Schewe, 1994; Rentz & Reynolds, 1991; Rentz et. al., 1983; Riley, 1973). By generation we refer to people who were born in a certain period that certainly have historical events have similar memories, they are influenced by a given time and way of life (Richterová et. al., 2015). On this basis, we can create separate cohorts in which we can increase the general consumer behaviour of the cohort members to the greater (Lewison, 1997). It creates a target for marketers who can reach a larger number of people based on general characteristics (Motta et. al, 2002). However, due to the specificity of an individual, we

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cannot cover the whole cohort whether the whole generation. Based on the research of Shuman and Scott from 1989, previous expectations were confirmed that within the generation, it will affect the group of people who have experienced it the most. From that point of view, the cohort is closely linked to the event, which creates a natural target group for marketers. (Schewe & Meredith, 2004). We are currently seeing the beginning of a new economic generation. We refer to the next generation as Generation Z. Generation Z is a group of people born between 1994 and 2010 (Bassiouni & Hackley, 2014), and the time limit may vary due to a lack of agreement in the scientific society. This Generation Z is characterized by high connectivity to information and new technologies (Van den Bergh & Behrer, 2016), financial literacy (Wood, 2013), greater job opportunities (Addor, 2011), high virtual integration (Daukseviciute, 2016; Rothman, 2016), materialistic behaviour (Singh & Dangmei, 2016), as well as an overall lower rate of brand loyalty (Schlossberg, 2016). In the given generation, we also notice a high rate of imagination and the will to achieve its personal aims. In the strong scope of information technology, the generation is strongly influenced by values demonstrating success. A significantly affecting factors in consumer behaviour in each cohort is Influence Marketing. The most widely used marketing tool in communicating marketers with a selected target group is digital marketing using social networks (Duffett, 2020). The specificity of the generation is its adaptability for many trends and will create new mainly virtual relationships. In the correct choice of a communication channel within digital marketing, the marketer can greater successfully address the selected cohort of the generation. They create new trends in consumer behaviour and marketing challenges. By defining and satisfaction of the needs of this group of people, the necessary causality is created for closer examination.

The current aspect of success for the next generation is the provision of their housing. Even though housing is one of the social rights and the basic human need, its availability and quality may not be adequate. The changing society and market are creating new challenges to meet housing needs. Satisfying the need for housing creates a set of acceptable attributes that have a positive effect on a personality. Wang and Li (2006) argued that: *„... purchasing a house is a multi-elements effort, involving tenure options, housing types, neighbourhood, location etc. As housing preferences will thereafter be determined a set of various attributes of the housing households will search for“* (Wang & Li, 2006). Understanding consumer needs and expectations have become an attribute of current growth and urban development and municipalities. Service providers must be held with emphasis on factors that affect housing needs that affect the quality of consumer life itself. Authors such as Almquist took this idea and created The Elements of Value. The Elements of Value perceives person as a consumer. This creates the necessary causality when expressing human needs in consumer behaviour (Almquist et al., 2016). The act of housing acts characterizes the authors Haurin et al. (2002) as: *„The decision to own a house might be affected by a desire to have a property of one´s own, a desire for stability and pride of ownership, things that cannot be easily captured by age or income“* (Haurin, Parcel, & Haurin, 2002). Housing and household are generally known as environmental and social determinants of health, while housing quality is associated with intellectual, physical, and general health (Thomson, et al., 2013). Housing quality characterizes Sidi as: *„Quality housing is housing that fulfils human needs. There are three types of needs which housing fulfils - the need for shelter, human needs, not culturally-induced such as recognition, affection, respect, and so forth and the culturally-induced needs, also termed as housing norms“* (Sidi, 2011). In increasing claims and

expectations of the society, a needed motivator creates a space to improve household conditions. A direct range is created to improve housing quality.

The expected demand for housing depends not only on the ability of individuals, but also on various additional attributes, or factors associated with the appropriate housing. These factors must satisfy the needs of the given consumer. For economic and some social reasons, it is often happening those consumers define the most important factors that expect from their housing. It creates sufficient space for understanding consumer behaviour. In general, people prefer living in a better-structured house that provides smaller interventions and risks and creates better opportunities for the growth of their overall satisfaction. It provides a friendly environment for life with availability to different desired aims that are available from a particular house (De & Vupru, 2017). Among the factors, socio-economic conditions play a dominant role in housing decisions, with increasing demand for location and civic amenities (Akinyodeet et. al., 2015). Other affecting factors, such as the current economic conditions, are also possible. On the other hand, in addition to the structural characteristics of the house, local and neighbourhood conditions are expected to influence housing preferences, with these conditions sometimes dominating other factors (De & Vupru, 2017).

We must also consider demographic or cultural conditions in the country. Demographic and cultural conditions have a high impact on the development of the individual's preferential behaviour. These factors play a very important role in shaping perception, evaluation, preferences, or housing requirements. Individual development itself by place of birth such as a city, a small town or village affects its future housing perception as well as the very quality of housing. In the given conditions, their consumer behaviour was affected by certain factors but absent factors that come from social, technological, or demographic development.

Understanding the factors and expectations affecting housing decisions requires a comprehensive approach and cooperation between a wide range of social sciences. A more comprehensive understanding of consumers' housing needs is required. The decision-making process in housing is influenced by internal and external factors, personal preferences, or the expectations of the consumer himself. A strong attribute affecting housing decisions is the development of cities, culture and the tradition of a given country. Urban development brings the necessary value and experience for the inhabitants. This creates an effect of "interest" for investors, companies, the state administration as well as for the residents themselves. With the application of this effect, a strong causality is created linked to the migration of the population. Improving the conditions of cities and strong migration creates space for the very development of the city in terms of its urbanization, infrastructure, or services themselves. Generation Z is known for its strong interaction with social networks or values proving a success. The city, which meets the attributes of interest, offers enough jobs, has strong cultural conditions, a long tradition or provides a wide range of services, is becoming the most common reason for population migration. The perception of the value of housing by the new generation has become an important part of the development of society and therefore it is necessary to have more attention to this research.

1 Methodology

The paper aims to examine and define the factors and expectations in the housing, as well as the intensity of the impact of expectations in the housing by the current rising generation. To achieve the aim of the paper, it was necessary to use various background materials consisting mainly of the study of appropriately selected scientific domestic and foreign literature. We summarized the acquired knowledge using the following methods and logically arranged it. The paper also used selected methods using the principles of logical thinking such as abstraction, comparison, analysis, synthesis. To process the knowledge base, which consists of domestic and foreign sources, we used the method of abstraction to single out the most important facts. The method of synthesis revealed the interrelationships between the individual areas of research. Using the method of comparison, individual data were evaluated together with the respective genders. Mathematical and statistical methods were used to process the results of the questionnaire. In this paper, the authors used the method of analysis and synthesis to obtain and process the necessary statistical data. For better understanding, these statistics were presented graphically in the form of tables and graphs. The paper contains 5 tables and 2 graphs.

An important part of the paper consists of primary data we have obtained based on the implementation of survey made by the research instrument - a standardized questionnaire. The questionnaire was divided into five separate parts. The questionnaire itself consisted of 44 questions, of which 20 scales, 7 polynomial questions, 6 dichotomic, 6 classification questions, 2 selective questions, 2 dialogue questions and 1 multiple-choice questions. The questionnaire was created and distributed in electronic form with Google Form for getting respondents in this pandemic time. The research was attended by 115 respondents during March and April 2021. Respondents were graduates whether the currently studying at the University of Economics in Bratislava in the defined cohort of the Generation of the questionnaire were also the classification questions under which we could determine the individual demographic characteristics of respondents. We have shown an overview of demographic variables in Table 1.

Tab. 1 Demographic variables of respondents

Gender:		Age:		Residence:		Working status:	
Female	64.3%	19	0.9%	Bratislava Region	35.7%	student (unemployment)	25.2%
Male	35.7%	20	10.4%	Trnava Region	13%	student (full-time job)	7%
		21	37.4%	Trenčín Region	4.3%	student (part-time job)	38.3%
		22	10.4%	Nitra Region	11.3%	student (internship)	3.5%
		23	3.5%	Bánska Bystrica Region	11.3%	student (half time job)	4.3%

	24	20.9%	Žilina Region	11.3%	student (self-employed)	7%
	25	13%	Prešov Region	10.4%	graduated (employment)	13%
	26	3.5%	Košice Region	2.6%	graduated (unemployment)	1.7%
Educational attainment:				Average monthly income:		
secondary education with the graduation		62.6%	0 - 400, - Eur		54.8%	
secondary education without graduation		3.5%	401 – 800, - Eur		20%	
higher education i. degree		21.7%	801 - 1200, - Eur		13.9%	
higher education ii. degree		12.2%	1201 - 1600, - Eur		5.2%	
			1601 – 2000, - Eur		3.5%	
			over 2001, - Eur		2.6%	

Source: Own processing based on data from primary research (2021)

In the first part, respondents were asked by selective, with multiple selections and polynomial questions on defined factors affecting deciding on housing. These examined factors have been defined based on analysis and synthesis by the authors of the paper. Scaling questions were used to measure the significance of factors. The scale consisted of selected factors that respond to the respondent by agreement/disagreement, while the affecting intensity is distributed in a 5-point Likert scale. At the same time, respondents were queried to their mutual preferences of selected factors that decide to a greater extent under the housing question. In simplicity, it can be stated that higher scores indicate a higher intensity of factor impact when deciding on housing. Analysis was processed in Microsoft Excel. Average values, standard deviations, and Cronbach´s alpha for each factor we recorded in Table 2.

Tab. 2 Statistical parameters of selected factors

	Average measured value	Standard deviation	Cronbach´s alpha**
Real estate price	4.391	0.661	0.849
Property location	4.122	0.722	0.825
Object condition (apartment house, dormitory ...)	3.565	0.897	0.748
Property condition (specific housing unit, or room ...)	3.730	0.707	0.810
Property aesthetics	3.200	0.933	0.708
Property facility (TV, wardrobe ...)	3.122	1.073	0.656
Property equipment (balcony ...)	3.409	1.051	0.692
Residents of the building (neighbours)	2.765	1.269	0.541

Civic amenities	3.217	1.347	0.581
Recommendation of loved ones	2.513	1.182	0.530
Human factor (roommate, partner, parents, siblings ...)	3.296	1.438	0.564
Personal Reasons (wage ...)	3.539	1.444	0.592
Economic situation in the country	2.348	1.053	0.551
Environmental of real estate	2.252	0.874	0.612

Legend: * Used 5-point Likert scale (1 = strongly disagree, 5 = strongly agree)

**Total Cronbach's alpha = 0,977

Source: Own calculations based on data from primary research (2021)

As part of the first part, we also dealt with the evaluation of the perception of housing quality in demanded respondents. We used a 5-point Likert scale to detect the housing quality assessment. We are based on demographic criteria - gender, graphically shown in Table 3.

Tab. 3 Assessment of the quality of housing respondents by structure of gender

Factors / Gender	Female Σ 74 respondents	Male Σ 41 respondents
Strongly positive	55.41%	34.19%
Positive	25.68%	48.8%
Neutral	13.51%	17.01%
Negative	4.05%	
Strongly negative	1.35%	

Source: Own processing based on data from primary research (2021)

In the second part, respondents were demanding using selective, dialogue and polynomial questions on defined expectations affecting deciding on housing. These examined expectations affecting consumer decision-making were defined based on the author's analysis. Scaling questions were used to measure significance expectations. The scale consisted of selected factors that respond to the respondent by agreement/disagreement, while the affecting intensity is distributed in a 5-point Likert scale. At the same time, it was also in these case respondents in question to their mutual preferences of selected expectations, which are more likely to decide in the housing question. In simplicity, it can be stated that higher scores indicate a higher intensity of expectation in decision-making on housing. Analysis was processed in Microsoft Excel. Average values, standard deviations, and Cronbach's alpha for individual expectations we recorded in Table 4.

Tab. 4 Statistical parameters of selected expectations

	Average measured value	Standard deviation	Cronbach's alpha**
Real estate investment potential	3.426	1.615	0.529
Satisfying the psychological need of a "favourite location"	3.417	0.807	0.764
Expected development of the site	3.270	0.672	0.794

Psychological satisfaction with the need for safety	3.748	0.980	0.739
Personal reasons	3.609	0.942	0.739
Satisfying the common need for housing for the period	3.530	1.427	0.596

Legend: * Used 5-point Likert scale (1 = strongly disagree, 5 = strongly agree)

**Total Cronbach's alpha = 0,665

Source: Own calculations based on data from primary research (2021)

In the primary research, we examined the factors and expectations affecting of respondents in the process of decision-making in housing. As part of the standardized questionnaire, we dealt with the factors and intensity of the impact on the perspective of the subjective evaluation of individual respondents by gender structure. To achieve the aim of the paper, the authors also used an analysis of variance ANOVA one-way-test. The results are graphically described in Table 5. ANOVA one-way-test was processed in Microsoft Excel. These confrontations have created the necessary basis to fulfil the aim of the paper. We graphically described the intensity of the impact of the examined expectations according to the gender structure in Graphs 1 and 2.

The authors of the paper focused to answer the chosen hypotheses (H) and research questions (RQ) we verified by the ANOVA one-way-test:

H1: There is a relationship between housing quality assessment and affecting factors in deciding on housing.

H2: There is a relationship between the quality assessment of housing and expectations in deciding on housing.

RQ1: What decision-making factors are predominant on housing based on gender structure at respondents?

RQ2: What intensity of expectations are predominant on housing based on gender structure at respondents?

The output of the paper is formulated answers to the results of the chosen hypotheses and research questions to evaluate factors and expectations affecting the next generation in solving housing question from the perspective of gender structure.

All acquired knowledge encouraged the authors to a deeper analysis of the measurement of consumer behaviour of generations in housing questions by comparative, systemic analysis of scientific literature and statistical data to determine mutual relations examined questions.

2 Results and discussions

2.1 Evaluation of examined hypotheses and research questions

The authors of the paper were focused on solving of hypotheses and research questions that will help them achieve the aim of the paper. Using the standardized questionnaire, the authors of the paper evaluated the factors that prevailed for the examined generation from the housing question from the perspective of demographic data. The

standardized questionnaire participated in 115 respondents from the University of Economics in Bratislava. The authors of the paper stated in the standardized questionnaire the most famous affecting factors and the intensity of the impact of the selected affecting factors. In the standardized questionnaire, the authors also focused on the expectations that affecting consumer behaviour in the question of housing for the next generation. Subsequently, these factors and impact intensities were analysed within the following hypotheses and research questions. Based on theoretical knowledge, we have created two hypotheses we have then tested. The results of the hypothesis verification based on ANOVA one-way-test analysis, we graphically described in Table 5. Table 5 are recorded only the key values of ANOVA one-way-test analysis. Selected values represent F-value, F-critical value, Alpha, and P-value, as well as differentials of measured values, such as F-value, F-critical value, Alpha, and P-value.

Tab. 5 Results of assessment of chosen hypotheses using ANOVA one-way test

	F- Value	F-Critical	F> F-Critical	Al- pha	P- Value	Alpha > P- Value
H1	48.415	1.698	F> F-Critical	0.05	3.1E-113	Alpha > P- Value
H2	11.64625	2.109924	F> F-Critical	0.05	1.57E-12	Alpha > P- Value

Source: Own calculations based on data from primary research (2021)

Based on the results from Table 5, we will evaluate the hypotheses together with the relevant research questions in the context of the perception of the quality of housing and consumer behaviour of the next generation in solving housing questions.

H1: There is a relationship between housing quality assessment and affecting factors in deciding on housing.

Based on the above results in Table 5 (F> F-Critical), hypothesis may be confirmed. The hypothesis confirmation also supports the fact that Alpha> P-value. This can be rejected as a possible random factor and confirm the relationship between the quality assessment rate and affecting factors in deciding on housing.

RQ1: What decision-making factors are predominant on housing based on gender structure at respondents?

Using a standardized questionnaire, the authors examined the defined factors that affecting the consumer's decision-making in solving housing questions. In the perspective of the standardized questionnaire results, we recorded the following phenomena at participating respondents at the defined factors. Only factors that have received more than 50% support for both genders at the same time we have described.

- The most frequently marked factor was a factor of the property location. It marked up to 111 respondents, consisting of 96.52% of the total number of respondents. From the perspective of gender structure, this factor was marked with 95.94% of women and 97.56% of men.
- Expected strong representation had a factor price that has been marked with 108 respondents, including 93.91% of the total number of respondents. From

the point of view of gender structure, this factor was marked with 93.24% of women and 95.12% of men.

- Object condition was marked with 80 respondents, which forms 69.56% of the total number of respondents. From the perspective of gender structure, this factor was marked with 59.46% of women and 87.80% of men. We recorded a significant difference between genders by 28.34%.
- The factor of the property condition was marked with 75 respondents, including 65.22% of the total number of respondents. From the point of view of gender structure, this factor was marked with 79.73% of women and 60.97% of men. The difference between genders is 18.76%.
- The specified factor of property equipment was marked with 69 respondents, which is 60% of the total number of respondents. Looking for a gender structure, we record almost identical results. In women's respondents, this factor has been 59.46% and gained a marking of a label to 60.97% in male respondents.
- The last strong recorded factor in respondents was a human factor. This factor was marked with 62 respondents, which is 53.91% of the representation. From the point of view of gender structure, this factor was marked with 52.70% of women and 56.10% of men.

We have recorded the greatest differences from the point of view of the gender structure with the factor of object condition, where the difference between genders has been recorded by 28.34%. We can assume that this phenomenon will influence the boarding male generation in solving housing questions. We also recorded great differences in the factor of residents of the building (neighbours). In that case, gender difference was 16.05% for male gender. An interesting, recorded difference was equipped with the factor of civic amenities. In this case, gender difference was 10.15% for female gender.

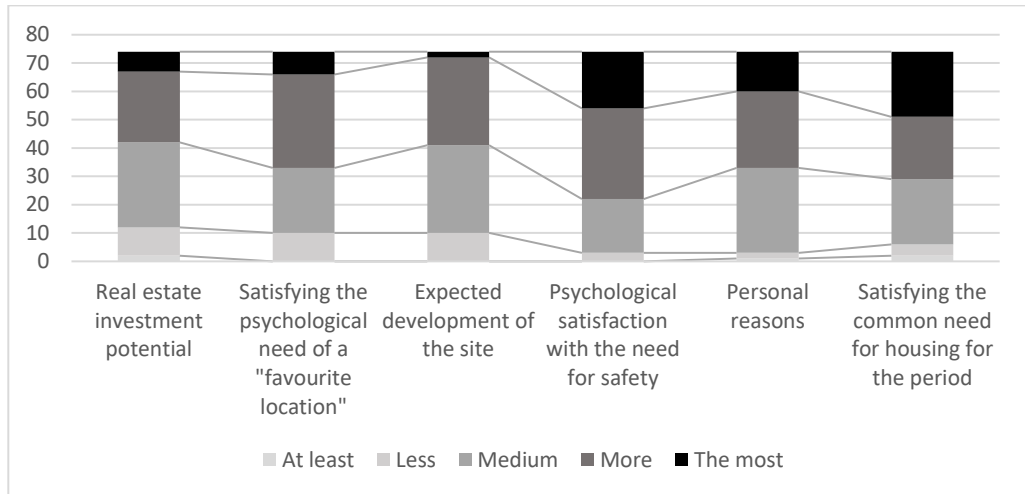
H2: There is a relationship between the quality assessment of housing and expectations in deciding on housing.

Based on the above results in Table 5 ($F > F\text{-Critical}$), hypothesis 2 may be confirmed. The hypothesis confirmation also supports the fact that $\text{Alpha} > P\text{-value}$. This can be rejected, a possible random factor and confirm the relationship between the quality of housing and expectations in deciding on housing.

RQ2: What intensity of expectations are predominant on housing based on gender structure at respondents?

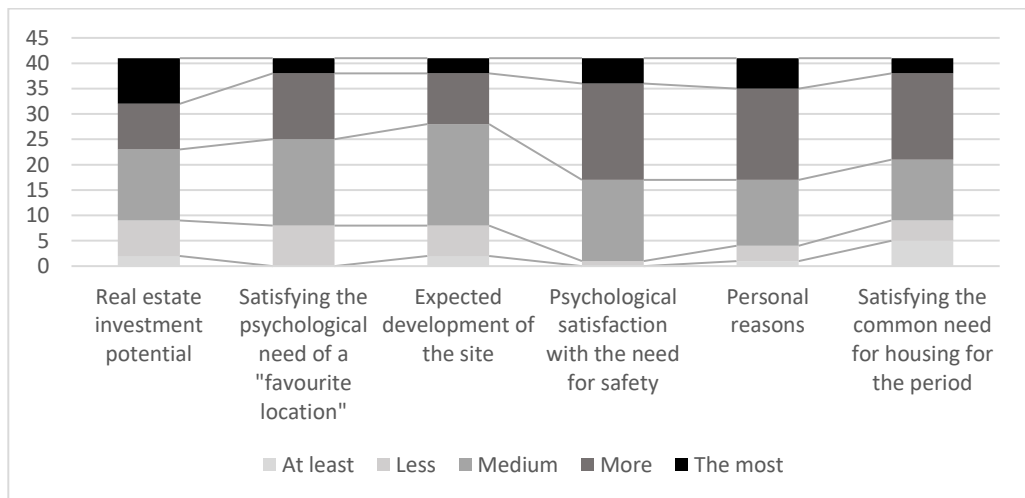
In the context of the questionnaire in question, research was conducted and focusing on identifying the impact of the defined expectations on the sample of people examined in solving housing questions. Using the method of questioning, we interviewed respondents in the standardized questionnaire on the intensity of the impact of expectations using a 5-point Likert scale as part of the standardized questionnaire. Due to the perverse results, these data will be shown in Graphs 1 and 2, divided by gender structure. In the perspective of the standardized questionnaire results, we recorded the following phenomena at participating respondents at the expectations defined.

Graph 1 Impact intensity rate for female respondents



Source: Own processing based on data from primary research (2021)

Graph 2 Impact intensity rate for male respondents



Source: Own processing based on data from primary research (2021)

Only those expectations have obtained more than 50% support for both genders at the same time.

- The most frequent expectation of psychological satisfaction with a need for safety (safe quarter). This expectation was marked with 66 respondents. From the total number of respondents, it is 66.09% representation. Looking at the gender structure we record different results. In female respondents, this expectation was marked with 70.27% and the male respondents obtained a marking rate of 58.54%.

- We also record a strong representation for the expectations of personal reasons (self-realization, better job opportunities etc.). The expectation marked a total of 65 respondents, which is 56.52% of the total number. From the point of view of the gender structure, this expectation was marked with 55.41% of female respondents and 58.54% of male respondents.

We noticed the biggest differences in terms of gender structure in the expectation of psychological satisfaction of the need of a "favourite location". We recorded a gender difference of 16.39% for female respondents. We also recorded larger differences in the parameter Expected development of the locality (new playgrounds, construction of roads, etc.). We noticed differences of 12.90%. In terms of gender structure, this expectation was marked by 44.60% for female respondents and 31.70% for male respondents. The given parameter was more often marked in the female respondents of the survey in the value of 55.41% than in the male respondents, where the value was at the level of 39.02%. On the contrary, we recorded minimal differences in the expectations Investment potential of real estate (real estate appreciation). A difference of 0.66% was recorded in this parameter. This parameter was marked at the level of 43.24% for female respondents and the level of 43.90% for male respondents.

Conclusion

Understanding consumer behaviour is a complex process of examination and evaluation. However, when a proper understanding of consumer behaviour is created the necessary causality to succeed the marketing strategy. Achieving the greatest rate of fulfilment affecting factors creates the necessary effect to satisfy the needs of participating persons. The paper aims to explore and define factors and expectations on housing, as well as intensity impact expectations in solving housing questions by the current next generation. To achieve the aim of the paper we used standardized questionnaire. Using the questionnaire has been approached 115 respondents that we include in the Generation of Z. In the first part of the questionnaire, respondents were asked selective and polynomial questions on defined factors affecting housing decisions. These examined factors have been defined based on analysis and synthesis by the authors of the paper. Scaling questions were used to measure the significance of factors. At the same time, respondents were queried to their mutual preferences of selected factors that decide to a greater extent under the housing question. Within the first part of the questionnaire, we asked for the respondents to evaluate the current perception of housing quality. In the second part of the questionnaire, respondents were asked polynomial questions for defined expectations affecting the decision-making on housing. These examined expectations affecting consumer decision-making were defined based on the author's analysis. Scaling questions were used to measure significance expectations.

Two hypotheses and two research questions were used to achieve the aim of the paper. Data from the primary research were used to answer the selected hypotheses and research questions. These data were processed by theoretical research methods and analysis of variance by ANOVA one-way-test. We processed the ANOVA one-way-test in Microsoft Excel. Using ANOVA one-way-test, the selected hypotheses were confirmed and accepted.

Research Question 1 - Based on the data from primary research, we have analysed factors affecting decision-making on the housing in the next generation. The strongest factors that affect respondents have become generally known factors as property location, real estate price, object condition, property condition, human factor, or real estate equipment. These factors have gained over 50% support for both genders. The factor property location was marked by 96.52% of respondents. The following factor the real estate price was marked by 93.91% of respondents. The overall condition of the object has been marked by 69.56% of respondents. In each factory, we record a dramatic difference between genders. In the case of the male gender, this factor was marked by 87.80% and 59.46% in the case of female. Strong affecting factors can also include a factor of property condition that has been marked with 65.22% of respondents. From the gender structure, it was more important and more marked with female respondents at 79.73%. The smallest support for respondents has received a factor of the environmental property (energy certificate) that has been marked with a comprehensive in 7.82% of the total number of respondents. From the emerging generation point of view, we have seen the impact of the expected factors that largely determine consumer behaviour.

Research Question 2 - The need for housing is one of the most basic human rights. Therefore, natural expectations of housing standard are created. Based on the primary research, we measured and subsequently analysed the expectations affecting the consumer's decision-making. The most powerful recorded expectation has become a psychological satisfaction with the need for safety (safe district). This expectation was marked 66.09% of the total number of respondents. Looking at the gender structure we record different results. In female respondents, this expectation was marked with 70.27% and gained several markings to 58.54% in male respondents. We recorded a gender structure difference at 16.39%. We also recorded a strong representation for the expectations of personal reasons (self-realization, better job opportunities). The expectation marked 56.52% of the total number of respondents. From the view of the point of gender structure, this expectation was marked with 55.41% of female respondents and 58.54% of male respondents. From the point of view of gender structure differences, we have seen the smallest difference at 0.66% at the expectation of the investment potential of real estate (real estate assessment). These recorded phenomena create a possibility for further closer examination of the selected research.

Everyone in their life will encounter a solution to the question of housing. The uniqueness of each person creates an unattainable process of satisfying all the needs of human. The very personality of an individual creates personal preferences in life, which greatly influence him. Understanding every living person and his needs creates an unrealistic state of satisfaction for the society itself. Based on this reason, we place people in generations where we can partially understand most of the affecting factors that affect them in different intensities. The next Generation Z will form the basis of functioning economies and the rule of law itself. Understanding the factors that affecting these consumers in the question of housing has become a desirable topic in the private, public, and academic world. The recorded trends in the field of housing, as well as the quality of housing, create sufficient conditions for its understanding by participants in the real estate market. The necessary challenges are created, which, if properly understood, can be contained by a properly set marketing strategy. Practical knowledge in the field of housing forms the necessary basis for the future development of theoretical knowledge directly applicable to the future development of the society.

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The impact of economic prosperity on the quality of housing with a focus on selected issues

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Abstract

The Slovak Republic's economic prosperity has created sufficient potential to improve the quality of housing in our conditions. The paper examines the Slovak Republic's economic prosperity in the period under review on selected aspects of housing quality. The paper used research questions that were used to investigate the observed phenomena. We examined the household's current state in terms of average living space and the number of people living there. We compared the findings with the countries of the European Union. In this paper, we focus on the issue of rising real estate prices and the consequences of financing real estate from foreign sources. Due to the current epidemiological situation, secondary research of a professional publication in the world and our country was used to solve the mentioned problem. In the final part, the author evaluated the research questions. The output of the paper is formulated answers to the results of selected research questions aimed at assessing the connection between the quality of life, quality of housing, and economic prosperity of the country.

Keywords

Quality of life, Quality of housing, Household debt, Overcrowded rate, Real estate market

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Introduction

The issue of quality of life has become the center of attention of researchers from various scientific fields. Researchers seek to define and measure the quality of life-related only to the health of the individual and the conditions of quality of life from a political, economic, and social point of view, as well as the overall satisfaction of the individual with life. The increasing interest in issues related to the quality of life creates opportunities for new knowledge to measure or identify factors influencing decision-making in specific situations. Despite the high interest of the scientific community in quality of life, there is no generally accepted classification of factors and a common opinion on the factors influencing the quality of life and their interrelationships. At the theoretical level, there is still a lack of a methodologically based model for measuring the quality of life, identifying, and systematizing the factors determining the quality of life (Pukeliene & Starkauskiene, 2011). Due to the absence of a comprehensive measurement of quality of life and their identifiers, a barrier is created to a precise theoretical basis for defining theoretical directions of quality of life. Despite the lack of consensus of the scientific community on the theoretical basis of the issue of quality of life, the

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authors are characterized by similar features in creating the theoretical basis. According to the author Liba, the quality of life can be characterized as: "*a set of conditions (health, psychosocial, economic, environmental) that enable (ensure) health and satisfaction with life in a complex of factors and dimensions of human life*" (Liba, 2016). According to the author Murgaš, the quality of life consists of: "somatic, psychological, social and economic good, resulting in a subjective feeling of satisfaction or happiness confronted with health, socio-pathological, economic and environmental evils" (Murgaš, 2005). Therefore, we can say that quality of life is a broad-spectrum concept that includes general phenomena that affect the needs themselves. In general, we can characterize the quality of life based on an objective or subjective view (Cummins, 2005). An objective view can be characterized as the penetration of social, cultural, environmental satisfaction of needs. An objective view can be characterized as the penetration of social, cultural, environmental satisfaction of needs. Objective quality of life is generally quality of life measured using objective criteria, social and economic indicators without the use of personal experience and individual perception of the environment. The main subject of the study of objective quality of life is the external environment of quality of life and the environment's habitability. It is evaluated using social and economic indicators, their systems, and composite indices. The subjective view evaluates a person's overall impression of satisfaction with the quality of life itself. It is expressed by personal feelings for overall satisfaction with life (Pukeliene & Starkauskiene, 2011).

It was adopted in 2009 to address the issue of quality of life in the European Union "*Stiglitz - Sen - Fitoussi Report*" (Kanbur et al., 2018). There were accepted statistically measurable indicators of the quality of life. The issue of quality of life has been divided into nine statistically measurable areas, which is a common context assume the quality of life of the population in the Member States of the European Union (Eurostat, 2009).

1. The material living conditions evaluation indicator defines statistical data aimed at meeting the needs in terms of the individual's financial security or meeting the needs in terms of housing quality.
2. The Productivity indicator collects statistical data on employment in the country.
3. Health indicator collects statistical data regarding the satisfaction of the citizen with his health condition.
4. Statistical data from the field of education define satisfaction with the securement of quality education throughout a whole life.
5. Collection of statistical data to evaluate the aspect of leisure and social relations.
6. Statistical data analyzing the field of Physical and economic security of the citizen.
7. The Governance and Human Rights indicator focuses on collecting statistical data on citizens' trust in government institutions and justice.
8. The Natural and Living Conditions indicator assesses satisfaction with the state of the environment.
9. General life experience indicator, which assesses overall life satisfaction.

The approach to quality of life requires a comprehensive approach and cooperation between various social sciences. A more comprehensive understanding of consumers' housing needs is required. From the point of view of consumers' needs, service providers must understand what needs their consumers demand and expect. Service providers

must emphasize factors that affect housing needs that affect the very quality of life of the consumer. Authors like Almquist took over this idea and created the so-called Value pyramid. The value pyramid perceives man as a consumer. As a result, it creates the necessary causality in expressing a person's needs in the field of consumer behavior (Almquist et al., 2016). Housing and the household are generally known as environmental and social determinants of health, and the quality of housing is associated with mental, physical, and general health (Thomson, et al., 2013). Quality of life is an issue that affects billions of people in developing and developed countries in the 21st century. Although the economic field has many orientations, from physical to socio-cultural, psychological, and environmental, it is undoubtedly crucial to increase it. In the article, which will deal with the links between housing conditions and the country's economic prosperity, it is necessary to assess the concept of housing in the broadest sense, which includes not only physical but also socio-cultural, political, and economic requirements of human prosperity.

The concept of pillars of sustainable housing is used in modern approaches in the field of housing quality issues. The concept of the pillars of sustainable housing seeks to address the current problems with a lasting effect. We include the economic, social, and environmental aspects among the Pillars of Sustainable Housing (Purvis et al., 2019). From the economic point of view of sustainability, it is based on the assessment of the primary economic relationship profit - consumption, while from the point of view of theory, there are two basic assumptions for the economic sustainability of housing (Strange & Bayley, 2008). As a first assumption, we can include benefits for housing providers or investors. The second assumption focuses on production and consumption processes that do not create unwanted externalities. The environmental sustainability of housing is based on the effects of housing on the environment. At the same time, on the other hand, from the effects of the environment on housing. From the perspective of the Social Sustainability of Housing, the essential moment is to ensure a decent quality of life for every person (Dhahri & Omri, 2008).

The need for housing is one of the most fundamental human rights. Housing is one of the social rights and a basic human need, and its quality and availability are one of the evaluation indicators of the living standards of the population of a given state. The authors Bonnefoy and Krieger characterize the quality of housing as: "*the physical condition of a person's household, as well as the quality of the social and physical environment in which the household is located*" (Bonnefoy & Krieger, 2002). In terms of internationally accepted documents, adequate housing is characterized by affordability, habitability, accessibility, location, and cultural suitability (Cohre, 2004). The quality of housing itself is one of the determinants of quality of life. The issue of housing quality satisfies one of the most important human needs. With the right satisfaction of the need for housing, a person's motivation increases. Improving the quality of life has become an important part of society's development, and therefore it is necessary to address this issue. The paper aims to evaluate the connection between the country's economic prosperity and the selected researched problems of housing quality in the Slovak Republic.

1 Methodology

The paper aims to evaluate the connection between the country's economic prosperity and the selected researched problems of housing quality in the Slovak Republic

based on statistical data. The aim of the paper is to point out and evaluate the close connection between the examined variables. Due to the current epidemiological situation, the author used the secondary research of a professional publication globally and in our country to solve the mentioned problem. To achieve the goal of the paper, the author took over and analyzed important data from statistical portals. In this paper, the author used the method of analysis and synthesis to obtain and process the necessary statistical data. For better understanding, these statistics were presented graphically in the form of tables and graphs. The author used correlation and regression analysis to examine the relationship between the observed variables. Regression analysis was examined at a 95 % confidence level. The analyzes were processed in Microsoft Excel. Using correlation and regression analysis, the author examined in research question 1 the relationship between the % share of the rate of overcrowded dwellings and the average living space in housing units. The parameters used in the analyzes are expressed in Table 1 and Table 2. The resulting values of the correlation and regression analysis are expressed in Table 3 and Table 4. In solving research question 2, the relationship between the average mortgage interest rate and % household debt was examined. The investigated variables used in the correlation and regression analysis were taken from Graph 3 and Table 5. The resulting values of the investigated relationship of variables are expressed in Table 6 and Table 7.

The author focused on answering the following research questions:

Research question 1: How does the country's increasing economic prosperity affect the quality of housing in the Slovak Republic?

Research question 2: How do the development of real estate prices and low-interest rates affect households' financial indebtedness in the period 2015-2019 in the Slovak Republic?

The output of the paper is formulated answers to the results of selected research questions aimed at assessing the connection between the quality of life, quality of housing, and economic prosperity of the country.

All the acquired knowledge encouraged the author to a deeper analysis of the measurement of housing quality using a comparative, systematic analysis of scientific literature and statistical data to determine the interrelationships of the researched issues.

2 Results and discussions

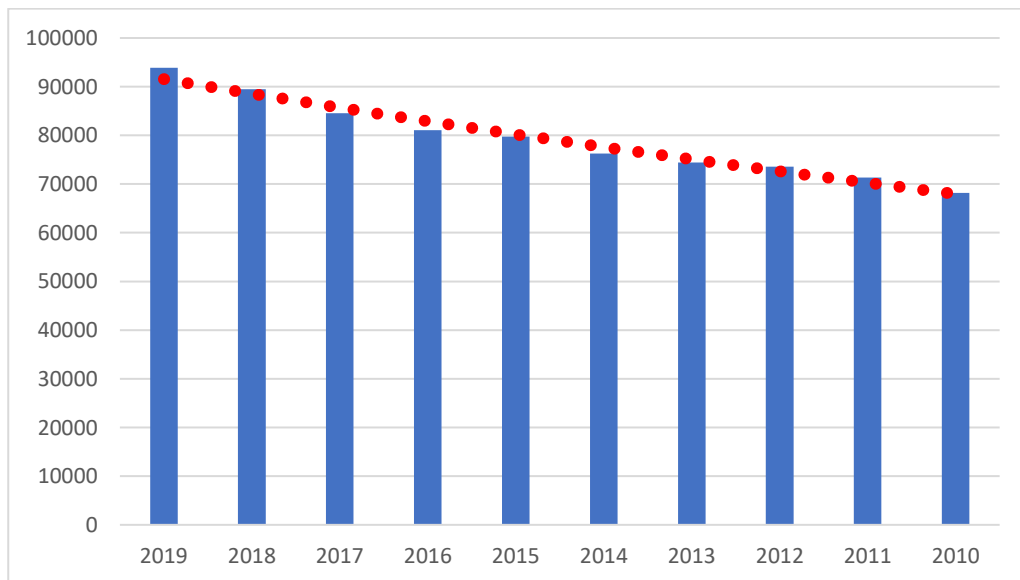
2.1 A brief evaluation of the economic development of the Slovak Republic in the period 2010 - 2019

The development of the economic situation has two opposite periods. A period of prosperity and a period of recession. The economic development of a country itself depends on several factors, which we can summarize as external and internal factors. We can then use these methods to express these factors in the nominal and cumulative values we require. The best-known method of expressing a country's economic devel-

opment is using the method of Gross Domestic Product (GDP) and Gross Domestic Product per capita (GDP per capita). The author of the paper will use both presented methods for a graphical representation of the Slovak Republic's economic development.

Based on available statistical data from the Statistical Office of the Slovak Republic, we can see exponential growth in the observed period 2010 - 2019 in terms of cumulative values. These statistics are shown in Graph 1.

Graph 1 Development of GDP in nominal values in mil. EUR of the Slovak Republic in the period 2010 - 2019

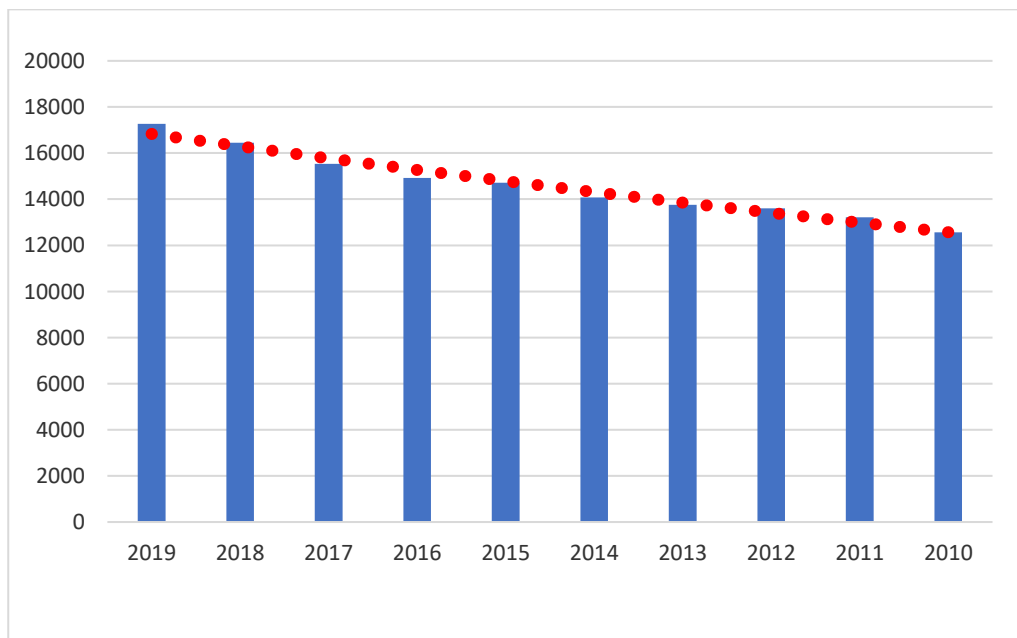


Source: own processing based on data from the Statistical Office of the Slovak Republic (2020)

From a retrospective view of the Slovak Republic's GDP growth for the observed period 2010 - 2019, regular exponential growth is recorded. The Slovak Republic experienced economic prosperity, which was to be transformed in 2020. Due to force majeure, we can assume that the Slovak Republic and other countries will see a decline in their performance. With the latest forecasts from the International Monetary Fund, the fall in GDP for 2020 will be expected to be 6 % (Statistical Office of the Slovak Republic, 2020).

From the point of view of the GDP per capita method, we can also record exponential growth in terms of cumulative values. When comparing 2019 with 2015, we can see up to a 17,4 % increase in GDP per capita. This data is shown graphically in Graph 2.

Graph 2 Development of GDP per capita in nominal values in thousands EUR of the Slovak Republic in the period 2010 – 2019



Source: own processing based on data from Countryeconomy.com (2020)

The economic development of a country creates the necessary tool for the development of capital in a given country. Based on the economic development and recorded prosperity in the Slovak Republic, the author decided to apply the findings to confirm/refute the selected research questions.

2.2 Evaluation of the research questions examined

The author of the paper focused on answering two research questions that will help him meet the goal of the paper. Using theoretical knowledge, he assessed the impact of the country's economic prosperity on selected aspects of housing quality in the Slovak Republic. Graphs 1 and 2 show an exponential increase in the country's economic development. Based on these findings, the author focused on answering the research questions.

Research question 1: How does the country's increasing economic prosperity affect the quality of housing in the Slovak Republic?

The social policy of the state helps to create social conditions for the need and quality of housing. With increasing pressure from the population on states, an important mechanism is being created to ensure that households' unfavorable living conditions are reduced. The economic development and prosperity of the country create the necessary

incentives for social policy, which can apply social needs in real form. Among the most important components of quality of life, we mention the component quality of housing. The quality of housing creates the necessary stimulus for the application of basic human rights in the field of housing.

After applying the findings on economic growth, the author of the article focused on an important component of housing quality, namely the rate of overcrowding. The population overcrowding rate is characterized by the proportion of people living in one household and rooms' number and size. Overcrowding individual households express the % share of households that do not meet the recommended standards for the number of people living in a given household type. Statistical data expressing the household overcrowding rate in the period 2010 - 2019 in the Slovak Republic were taken from Eurostat. These statistics are shown graphically in Table 1

Tab. 1 Share of the rate of overcrowded dwellings in the period 2015 - 2019 in the Slovak Republic

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
% share of overcrowded households	34,1	35,5	36,4	37,9	37,8	38,6	39,8	38,4	39,5	40,1

Source: own processing based on Eurostat data (2020)

The data expressed in Table 1 reveal a positive declining trend in the % share of household overcrowding in the Slovak Republic. The percentage of household overcrowding in 2019 was at the level of 34,1 %. From a demographic point of view, we can say that a third of a household in the Slovak Republic lives more people than is recommended for a given household type. The author decided in Table 2 to analyze the average living area m2 within the housing units in the Slovak Republic due to the findings.

Tab. 2 Average living area m2 in housing units within the Slovak Republic for the period 2010 - 2019

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Average living area m2	69,6	70,9	70,4	73,8	71,4	73,1	73,7	71,7	71,8	71,5

Source: own processing based on data from the Statistical Office of the Slovak Republic (2020)

The construction of housing units must meet strict standards and norms that protect the area's economic, social, or environmental aspects. These standards create precise rules for what the average living area of m2 is recommended for a given household

population. The average living space is recording a regular nationwide average decline, with housing units with smaller living space coming to the fore. The average living area in 2019 was 69,6 m². One of the critical issues in assessing the quality of housing is the availability of sufficient space in the dwelling. The author of the paper examined the relationship between the examined parameters.

From the interconnectedness of the given indicators, the author decided to determine their degree of dependence using correlation and regression analysis. Regression analysis was expressed at a 95 % confidence level. The analyzes were processed in Microsoft Excel. The examined variables used in the correlation and regression analysis were for the period 2019 - 2010. The observed degree of dependence is expressed in Table 3 and Table 4.

Tab. 3 The resulting correlation between the observed aspects of the household overcrowding rate

	<i>% share of overcrowded households</i>	<i>Average living space m²</i>
% share of overcrowded households		1
Average living space m ²	0,68	1

Source: own processing based on processed data monitored parameters (2020)

Tab. 4 The resulting regression between the observed aspects of the household overcrowding rate

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	15,78219588	15,78219588	6,88172	0,03049363
Resid	8	18,34680412	2,293350515		1
Total	9	34,129			

Significance F

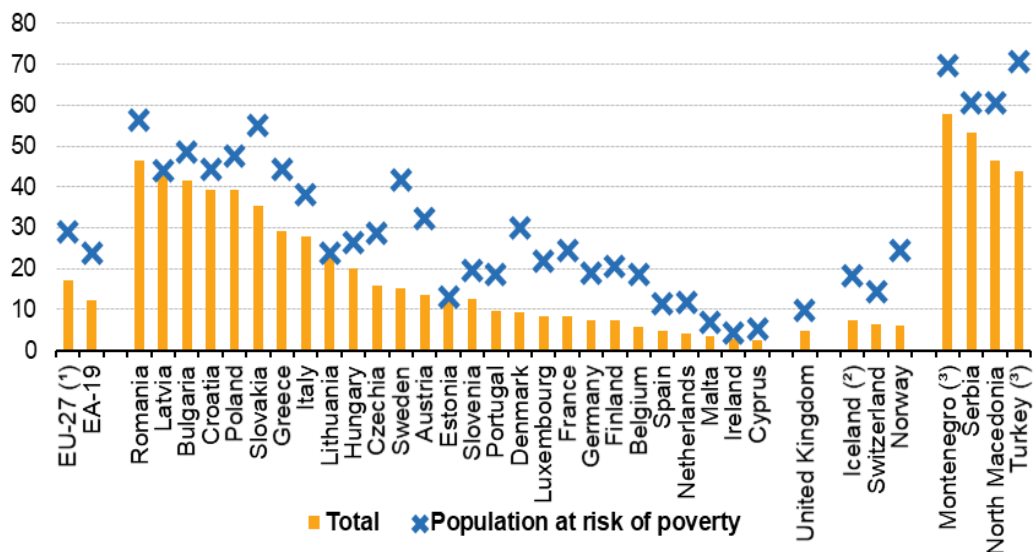
0,030493631 < 0,05

Source: own processing based on processed data monitored parameters (2020)

Based on the findings, the author can confirm that there is a regression relationship between the parameters and that the measured value at the 95 % confidence level is statistically significant. A positive linear relationship has been recorded from the correlation analysis.

In 2019, the European Union conducted a 2018 survey to measure housing quality factors. These factors measured housing overcrowding within the Member States and the poverty line in terms of disposable income. The data are shown in Figure 1, which was taken from Eurostat.

Figure 1 The rate of overpopulation of housing within the European Union in 2018



Source: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Overcrowding_rate,_2018_\(%25\)_SILC20.png](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Overcrowding_rate,_2018_(%25)_SILC20.png)

In terms of the results of the research, it was found that the highest rate of overcrowding among the population at risk of poverty (population whose disposable income per person was less than 60 % of the national median) registered in countries such as Romania (56,4 %), Slovakia (54,9 %) and Bulgaria (48,7 %).

The most common reasons for overpopulation are personal and social reasons. The declining trend of overpopulated households may also be related to the country's economic growth, which creates sufficient financial conditions for the purchase of real estate by members of the household. With the purchase of real estate, space is being created to reduce overcrowded households' problem in our conditions. This directly proportionally improves the quality of housing, which is reflected in the overall quality of life.

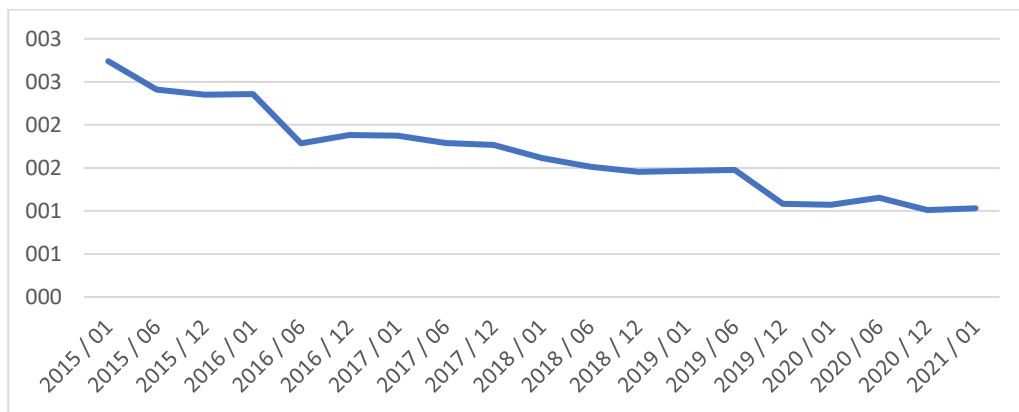
Research question 2: How do the development of real estate prices and low-interest rates affect households' financial indebtedness in the period 2015 - 2019 in the Slovak Republic?

To meet the natural need for housing, a natural stimulus is created to address the issue. The issue of housing is one of the main reasons for the indebtedness of the population. The reason is to own insufficient resources to finance real estate. The majority of the population uses financial institutions' foreign sources to finance the purchase of real estate. In recent years, low-interest rates have prevailed in the Slovak Republic. These, together with favorable economic conditions, created an incentive to buy real estate. Interest in real estate began to grow faster than the offer of real estate for sale itself. Demand has exceeded and far exceeds supply, thus creating the conditions for a

steady rise in property prices. This creates a chain reaction, which causes more outstanding indebtedness of the population.

In the following chart 3, the author took over data on the average interest rate of mortgage interest with a fixation of up to 5 years from the National Bank of Slovakia statistics for the period 1. 2015 – 1. 2021.

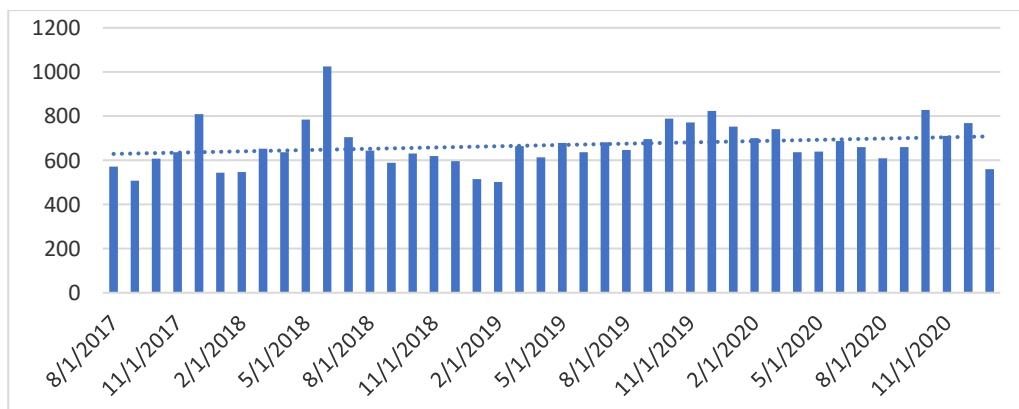
Graph 3 Average interest rate on mortgage loans with a fixation period of up to 5 years for the period 1. 2015 – 1. 2021



Source: own processing based on data from the National Bank of Slovakia (2021)

The average interest rate on mortgage loans is regularly falling and falls below 1 %. Favorable interest rates and still favorable bank conditions create the necessary incentives to buy real estate. The author's statement is confirmed by Graph 4, which shows the total volume of funds provided (in millions of euros) using mortgage loans for the purchase of the real estate by financial institutions for the period 8. 2017 - 1. 2021.

Graph 4 Volume of funds provided through mortgage loans for the period 8. 2017 - 1. 2021

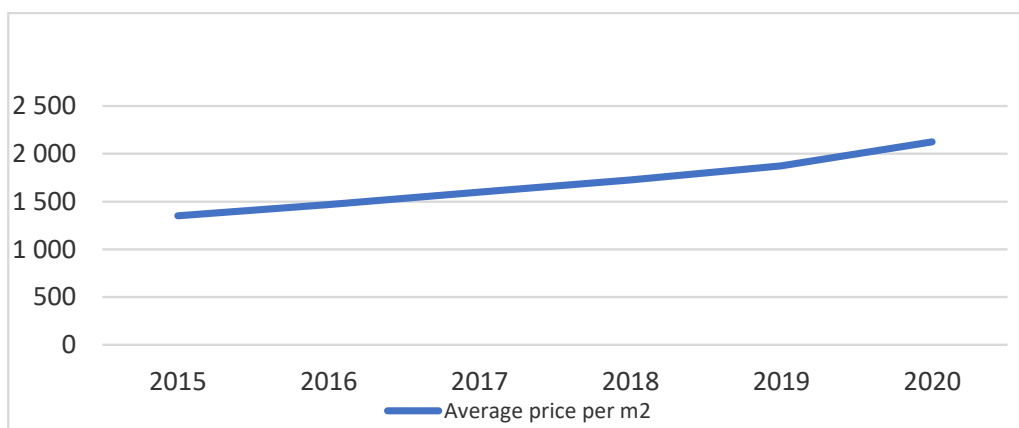


Source: own processing based on data from the National Bank of Slovakia (2021)

The volume of funds (in millions of euros) provided through mortgage loans to households reaches hundreds of millions of euros per month. The most significant volume of provided funds was in the period 06.2018, when the volume of borrowed funds reached more than 1. billion. Eur. The reason for this financial volume provided for mortgage loans changed in banking rules.

Real estate prices reach regular new highs due to the insufficient number of properties offered on the market. The average price per m2 of flats in the Slovak Republic is regularly growing, which is also confirmed by data from the National Bank of Slovakia shown in Graph 5.

Graph 5 Average price per m2 of dwellings for the period 1. 2015 - 12. 2020



Source: own processing based on data from the National Bank of Slovakia (2020)

The price per m2 is growing along with the increased demand for real estate. However, we must consider several factors on which the growth of real estate prices will depend. The most well-known factors that influence the growth of real estate prices are: personal preconditions of the applicant, technical parameters of the real estate, location of the real estate, civic amenities, or other specific parameters (seasonality). The reason for the still high growth in real estate prices is the insufficient supply of real estate, high demand for real estate, and advantageous banking products offered by financial institutions.

After taking over the OECD data, we can see in Table 5 the growth of household indebtedness in the Slovak Republic in the period 2015 - 2019.

Tab. 5 Household debt in the period 2015 - 2019 in the Slovak Republic

	2019	2018	2017	2016	2015
% share of net disposable household income	79,3	77,36	77,90	73,72	68,66

Source: own processing based on OECD data (2020)

We can see the annual increase in household indebtedness in the Slovak Republic from the available statistical data. In 2019, the average value of indebtedness reached a level of 79,3 % of net disposable household income. Almost 80 % of net disposable income equals household debt, with a growing trend. When the interest rate on mortgage loans decreases, household indebtedness increases. The author of the paper examined the relationship between the examined parameters.

The author decided the relationship between average low-interest rates and indebted households to determine their degree of dependence using correlation and regression analysis. Regression analysis was expressed at a 95 % confidence level. The analyzes were processed in Microsoft Excel. The examined variables used in the correlation and regression analysis were for the period 12. 2019 – 12. 2015. The degree of dependence found is expressed in Table 6 and Table 7.

Tab. 6 The resulting correlation between the observed aspects of indebtedness

	<i>The average interest rate on mortgage loans</i>	<i>% share of net disposable household income</i>
The average interest rate on mortgage loans	1	
% share of net disposable household income	-0,90976	1

Source: own processing based on processed data monitored parameters (2020)

Tab. 7 The resulting regression between the observed aspects of indebtedness

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0,746674377	0,746674	14,4070913	0,032099009
Resid	3	0,155480595	0,051827		
Total	4	0,902154972			

Significance F

0,032099009 < 0,05

Source: own processing based on processed data monitored parameters (2020)

Based on the findings, the author can confirm that there is a regression relationship between the parameters, and the measured value at the 95 % confidence level is statistically significant. A negative linear relationship has been recorded from the correlation analysis.

Favorable banking products, the relentless demand for real estate, low real estate supply, and rising real estate prices create conditions for the Slovak Republic population's indebtedness. The supporting trend about advantageous banking products creates

a psychological phenomenon of using the opportunity to borrow from the population. Everyone wants to live on their own, and the prospect of a favorable mortgage loan with a fixed interest rate for a long period of time causes the effect of indebtedness. Based on the information obtained, we can say that a low-interest rate, with the need for housing, creates an effect that causes household indebtedness.

Conclusion

The aim of this paper was to answer the author's research questions based on available statistical data. In research questions, the author focused on evaluating the connection between the quality of life, quality of housing, and country's economic prosperity. Using correlation analysis, the author of the paper confirmed the interrelationships between the examined variables. Due to the current epidemiological situation, the author of the article used the secondary research of a professional publication worldwide and in our country to solve the mentioned problem. To achieve the goal of the paper, the author took over and analyzed important data from statistical portals. In this paper, the author used the method of analysis and synthesis to obtain and process the necessary statistical data. The author used correlation and regression analysis to examine the relationship between the observed variables. Regression analysis was examined at a 95 % confidence level. The analyzes were processed separately for the researched research questions. Correlation and regression analysis were processed in Microsoft Excel.

Research question 1 - based on the analysis of the performance of economic indicators of the Slovak Republic, positive economic growth was recorded in the observed period 2010 - 2019. Using the method of analysis of statistical data, a decrease in the rate of population overcrowding in the Czech Republic was recorded in the observed period. Despite the statistical results of the decline in overpopulation rate in our conditions, the Slovak Republic is one of the worst countries in the European Union. The population overcrowding rate is closely related to the average living area of m² per capita. In the given parameter, the average living area m² gradually decreases with the number of built-up properties. The author of the paper used correlation analysis to confirm the relationship between the monitored parameters. There is a regression relationship between the monitored parameters, and the measured value at the 95 % confidence level is statistically significant. The decline in the country's overpopulation could be achieved by improved economic conditions in the country. Improving the economic conditions and purchasing power of the population creates opportunities for buying real estate. With the purchase of the real estate, the need for housing is fulfilled, which is reflected in the overall quality of life.

Research question 2 - the need for housing is one of the most basic human rights. Nevertheless, resolving the issue of housing is one of the most complex processes, especially in terms of funding. The Slovak Republic recorded a positive economic development, which affected the purchasing power of the population. Financial institutions were able to provide low-interest rates during the period under review, thus acquiring real estate. Using the analysis of data taken from the National Bank of Slovakia, we graphically expressed the development of interest rates by financial institutions operating on the domestic market. Thanks for reducing interest rates, causality has been created for greater interest in the financial services provided. This was also reflected in the increased

volume of funds provided by financial institutions. With the reduction of bank interest rates and the increasing purchasing power of the population, the necessary basis has been created to increase interest in addressing the issue of housing. Nevertheless, the country's economic prosperity created opportunities for rising property prices as demand for them escalated. Supply, however, did not match demand, so we saw an increase in property prices. We analyzed this parameter based on data from the National Bank of Slovakia. The author used a correlation analysis to confirm the relationship between the monitored parameters of average low-interest rates and household indebtedness in the country. There is a regression relationship between the monitored parameters, and the measured value at the 95 % confidence level is statistically significant. Low-interest rates, increased demand for real estate with the contrast of low real estate supply, which is the reaction of rising real estate prices, creates conditions for the indebtedness of the Slovak Republic population. The author evaluated this research question positively and found interconnectedness in a given relationship.

The quality of life, the quality of housing, and the state's economic development are closely related. With the proper use of economic growth, the necessary conditions are created to improve the living conditions of the state's population. This will ensure the increased quality of life and, with it, the quality of housing. Practical knowledge in the field of housing quality creates the necessary basis for the future development of theoretical knowledge directly applicable to the community's future development.

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RECENZIA / BOOK REVIEW

HORBULÁK, Z. 2020. *Dél-Szlovákia gazdasága a normalizációs időszakban (1969–1989)* [Hospodárstvo južného Slovenska v období normalizácie (1969-1989)]. Univerzita J. Selyeho, Komárno, 203 p.

Ľubomíra Strážovská¹

História nás nielen poučuje, otvára pred nami minulý dej udalostí, ale naznačuje tiež možné efektívne smery ďalšieho vývoja, v našom prípade vývoja ekonomiky s dôsledkami. Aplikované na ekonomické dianie možno ekonomické rozhodnutia minulosti vyhodnocovať ako užitočné, resp. tie ktoré zanechali negatívne stopy v hospodárskom živote.

Naša republika vo svojom uplynulom vývoji podstúpila viacero vrcholových zmien. Retrospektívny pohľad na vybrané z nich ponúka autor Zsolt Horbulák v publikácii *Dél-Szlovákia gazdasága a normalizációs időszakban (1969–1989)* [Hospodárstvo južného Slovenska v období normalizácie (1969-1989)]. Zaujímavá a z hľadiska histórie vývoja slovenskej ekonomiky hodnotná publikácia vyšla uplynulý rok v maďarskom a v súčasnosti vychádza v slovenskom jazyku.

Svojím spôsobom je jedinečná, zachytáva ekonomické procesy a ekonomické nástroje v období chýlostivých rokov 1969 – 1989, teda v období normalizácie. Autor Zsolt Horbulák proces hodnotenia podkladá hospodárskymi dejinami, čerpá zo sociológie a využíva regionálne vedy. Ale podstatou jeho stanovísk je národná ekonomika.

Časový úsek, ktorý autor zvolil ako predmet analýzy a hodnotenia, je svojská éra československého socializmu. Popisujú a skúmajú ju viacerí autori. Normalizácia je doba ktorú sme prežili a máme vlastné osobné skúsenosti. Zároveň je táto doba dosť ďaleko aby sme ju dokázali hodnotiť pohľadom históriografie, pripomína autor.

Z formálneho hľadiska publikácia obsahuje 11 kapitol, čo dáva autorovi dostatok priestoru na vyjadrenie vlastných záverov analýzy a formulovanie vlastných stanovísk. Autor preštudoval rad publikácií k predmetnej téme a cituje závery početných autorov, ktorých predstavuje čitateľom v prvej kapitole.

Hospodársku situáciu Slovenska v období rokov 1969 – 1989 analyzoval v ďalšej kapitole ako východisko a podklad k ostatným častiam práce (2. kapitola).

3. kapitola práce má poznávací charakter územia ktoré hodnotí. U rôznych autorov je južné Slovensko definované nejednotne. Pristupuje sa k nemu z hľadiska geografického, územno-správneho, historického a etnografického. Určenie hraníc regiónu južného Slovenska sa najčastejšie vymedzuje územno-správnym prístupom. Autor prijal toto delenie a vo svojej práci z neho vychádza. V predmetnej publikácii do vlastného hodnotenia zaraďuje okresy: Bratislava – mesto, Bratislava – vidiek, Dunajská Streda, Galanta, Nitra, Nové Zámky, Komárno, Levice, Veľký Krtíš, Lučenec, Rimavská Sobota,

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Rožňava, Košice – mesto, Košice – vidiek, Trebišov. Veľký analytický záber autora svedčí o jeho výnimočnej pracovitosti a vedeckej pripravenosti. V roku 1970 rozloha tohto územia – južné Slovensko – tvorilo 17 666 km². táto rozloha predstavovala 36 % územia Slovenska s 1 918 211 obyvateľov, čo predstavovalo vyše 42 % obyvateľov celej krajiny.

S danou problematikou úzko súvisí etnická otázka (4. kapitola). Je známe, že na tomto území žije veľký podiel obyvateľstva maďarskej národnosti. V roku 1970 tu žilo na Slovensku 552 006 príslušníkov tohto etnika, z toho na južnom Slovensku 547 668 osôb. V roku 1989 sa počet Maďarov na Slovensku zvýšil na 561 445 osôb.

Z obsahu monografie sa čitateľ dozvie základné informácie o sídelnej štruktúre južného regiónu (5. kapitola). V období normalizácie bolo zároveň érou búrlivej urbanizácie. V tomto období počet obyvateľov miest prevýšil počet obyvateľov obcí. V okresoch južného Slovenska tento proces prebiehal v menšej miere ako v celoštátnom priemere. V trinástich okresoch v období 1970 – 1990 zmena predstavovala nárast o 44,63 %, kým celoštátny priemer dosahoval 60,96 %. Výrazne sa tento proces prejavil v okrese Levice (80,78 %), najmenej v okrese Rimavská Sobota (6,93 %).

6. kapitola je venovaná okresným mestám, analyzuje a hodnotí ich ako regionálne priemyslové centrá. Autor poskytuje zaujímavý pohľad na pozitívny ekonomický rozvoj.

Siedma kapitola je venovaná Pražskej jari. Oživila sa politická diskusia na Slovensku, zdôrazňuje autor. Zmeny smerovali aj na ekonomický rast regiónov južného Slovenska. Pozitívne zmeny sa týkali ekonomickej, kultúrnej i vzdelanostnej úrovne. Tento proces sa rozvíjal rastom výrobných kapacít, aj zabezpečením vzdelanostného rastu na strednom a aj tretom stupni budovania škôl.

K interesantným častiam publikácie patrí obsah ôsmej kapitole. Autor predkladá náročné a zaujímavé investičné projekty na agrárnu produkciu vhodnú aplikovať na celom území južného Slovenska. Ide svojím spôsobom o veľmi originálne úvahy s dôsledkom na rast efektívnosti.

Výsledky priamych štatistických analýz sú uvedené v deviatej kapitole publikácie. Autor analyzuje hodnoty vybraných ukazovateľov okresov južného Slovenska, pričom volí viaceré miery hodnotenia, ako sú: hodnota priemyselnej výroby, počet zamestnancov, hrubá poľnohospodárska produkcia na jeden ha poľnohospodárskej pôdy, počet dokončených bytov a úroveň miezd.

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Záverečné kapitoly hodnotenia danej problematiky autor venoval otázkam cezhraničného styku celej oblasti pozdĺž južných hraníc nášho štátu.

Dvojstrannú spoluprácu oboch socialistických krajín podporovalo aj najvyššie politické a stranícke vedenie oboch štátov. Problémy sa vyskytovali v celom procese nedostatkového hospodárstva, čo vyvolalo výskyt tzv. nákupného turizmu. V tejto súvislosti však dobre pôsobila spolupráca v oblasti poľnohospodárstva, školstva, doprave a obchode, ktoré boli v tom čase prioritami národnej ekonomiky.

Autor si všíma aj tzv. ostro sledovanú vnútropolitickú situáciu v Maďarsku, zdôrazňuje, že vedenie KSS sa snažilo zabrániť šíreniu myšlienok o potrebe a možnosti podnikania a záhumienkového poľnohospodárstva.

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Z výsledkov autorovej analýzy vyplýva nižšia úroveň rozvinutosti periférnych území Slovenska, čo bolo charakteristické hlavne pre južné Slovensko. Dokazuje to nižšia úroveň výsledkových ukazovateľov, čo bolo nevyhnutné naprávať v ďalších desaťročiach.

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Autor monografie Ing. Zsolt Horbulák, PhD. pôsobí ako odborný asistent Katedry ekonomických teórií, oddelenia dejín ekonomických teórií a hospodárskych dejín Národohospodárskej fakulty Ekonomickej univerzity v Bratislave. Je autorom viacerých hodnotných vedeckých publikácií, kde spája históriu a ekonomiku. Treba oceniť autorovu snahu o spracovanie originálnych problémov a ich predstretie čitateľom.