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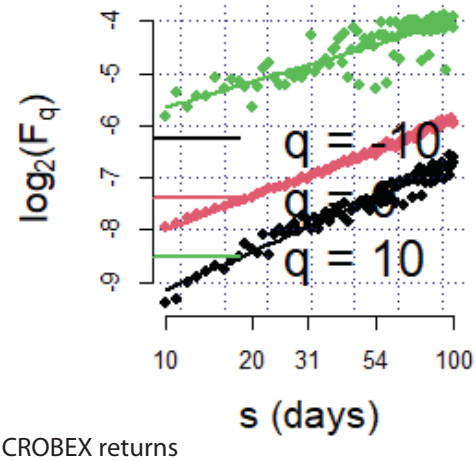

CROBEX returns

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ORIGINALNI NAUČNI RAD / ORIGINAL SCIENTIFIC PAPER

FRACTALITY OF CROATIAN AND SERBIAN STOCK MARKETS

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Abstract: *Empirical literature explaining stock markets behaviour develops in a several directions. One strand of literature supports efficient market hypothesis while other strand of literature suggests fractal market hypothesis. Existing literature presents mixed findings on long memory property and hypothesis of stock market fractality. This paper aims to contribute to the debate and examine multifractality and long memory property of returns in Croatian and Serbian capital markets while considering the role of trading columns. Using multifractal Detrended Fluctuation Analysis and daily returns from the beginning of 2010 up to the end of 2021 for CROBEX and BELEX15 empirical finding suggested multifractality and long memory or persistence in CROBEX and BELEX15 returns. Dynamics in trading volumes exhibited multifractality but no long memory property in case of CROBEX as well as in case of BELEX15. Price-volume cross-correlation in case of CROBEX as well as in case of BELEX15 can be described as mean reverting process with no long memory property.*

Keywords: *CROBEX, BELEX15, long memory, multifractality.*

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INTRODUCTION

Returns on capital markets is an ever-green topic in empirical finance literature. One strand of literature considers efficient or adaptive market hypothesis and brings empirical results regarding validity of the hypothesis (Bosnjak, 2023) and literature herein. İcan & Çelik (2023) suggested that the markets in countries with well-functioning and more transparent public sector exhibits weak-form market efficiency. Other strands of literature put an effort to establish link from behavioural sciences to finance (Aslam et

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al., 2021) suggesting an irrational behaviour of entities on the market. Liu et al. (2022) provided differences and similarities between fractal market hypothesis and efficient market hypothesis. Croatia is one of the post-transition economies that recently joined the European Union. In the last few decades Croatia has experienced transformation of the economy emphasizing promotion of the free market structures. This transformation was accompanied by privatization and development of the financial system. With rising efficiency of the financial intermediaries the stock market has experienced significant growth and relationship between the stock market and the fundamental economic variables has become an important issue for scholars and practitioners (Novak, 2021).

This paper aims to consider persistence in returns and trading volumes on Croatian and Serbian stock market using multifractal detrended fluctuation analysis.

Besides introductory part, the remainder of this paper is organized as follows: Section 2 briefly summarizes existing literature related to the topic under consideration. Section 3 presents research methodology, while Section 4 empirical results and discussion. The final section provides an overview of the main findings of the research.

BRIEF LITERATURE OVERVIEW

The papers present mixed findings on the hypothesis of stock market fractality. Jiang and Zhou (2008) find that the so-called multifractality in intraday stock market indexes is merely an illusion. However, Zhuang et al. (2004) find that the rate of returns of the Chinese stock market does not obey the normal distribution, and that the stock price indexes exhibit fractal time series. Dar et al. (2017) finds that stock markets around the globe indicate the dominance of higher frequencies during crises periods, which validates the assertions of Fractal Market Hypothesis. Based on daily data between January 12, 2018 and January 12, Karaömer (2022) found long memory in returns supporting validity of fractal market hypothesis in Indonesia, Mexico, Turkey and Nigeria. Nargunam & Lahiri (2022) employed detrended fluctuation analysis the and provided empirical results against validity of market efficiency in Indian stock returns. Arashi & Rounaghi (2022) provided literature review for fractal market hypothesis and efficient market hypothesis along with analysis of NASDAQ stock exchange. The empirical finings suggested non-fractality but efficiency of NASDAQ stock exchange market. Lahmiri et al. (2022) pointed out fractal market hypothesis as the most appropriate approach to explain dynamics of returns on European equity markets. Novak (2019) based on quantile regression approach rejected weak form of the efficient market hypothesis for the Croatian capital market. Bošnjak (2023) employed variance ratio test and fix-length rolling window on daily CROBEX returns between September 1997 and July 2021 to examine market efficiency of Croatian stock market. The empirical findings were in favour of adaptive market hypothesis for Croatian stock market. The periods lower prices and higher liquidity were found as more likely to be inefficient. Krsikapa-Rasajski & Rankov (2016) evaluated efficient market hypothesis for Belgrade Stock Exchange BELEX 15 and BELEX LINE on daily data up to 31 December 2014. Empirical findings suggested that capital market in Serbia could not be considered sufficiently efficient. Schabek et al. (2019) based on data between September 2017 and March 2018 suggested semi-strong form of market efficiency. Overall, the papers suggest that the evidence for the hypothesis of stock market fractality is mixed and requires further investigation.

METHODOLOGY

This paper used multifractal Detrended Fluctuation Analysis (DFA) as a suitable approach to capture the structure of a series and determine the properties that define change of the series structure over time.

Method employed in this paper developed by Peng et al. (1995), Kantelhardt et al. (2002) and Jiang et al. (2019) involves detrended random walk like time series. Suppose random walk like time series $X(i)$ where $i = 1, \cdots N$. Detrended residuals can be calculated following equation (1):

$$\in (i) = X(i) - \hat{X} \tag{1}$$

Where $\hat{X}$ denotes local polynomial linear trend function. The residuals $\in (i)$are devided into $N_s = int[N/s]$ segments of equal size such that segments do not overlap. So, v^{th} segment can be presented as $S = \in \big((v-1)s + j\big)$ while $j = 1, \cdots s$. and fluctuation function or root mean square of detrended residuals can be calculated as given in equation (2):

$$[F_v(s)]^2 = \frac{1}{s}\sum_{j=1}^{s}\left[\in \big((v-1)s + j\big)\right]^2 \tag{2}$$

And q^{th} order of the flucuation function for a given value of q can be calculated following equation (3):

$$[F_v(s)]^q = \frac{1}{s}\sum_{j=1}^{s}\left[\in \big((v-1)s + j\big)\right]^q \tag{3}$$

Where q can take any real value except 0. Relationship between fluctuation function and s is governed by power law and can be described by equation (4):

$$F_q(s) \sim s^{h(q)} \tag{4}$$

These fractals are explained by singularity spectrum $f(\alpha)$ given by equation (5):

$$f(\alpha) = q \cdot \alpha - \tau(q) \tag{5}$$

Where $f(\alpha)$ explains the fractal dimension of the multifractals, α represents singularity strength, q represents the slope of the spectrum while $\tau(q)$can be expressed by generalized Hurst exponent $H(q)$ in equation (6):

$$H(q) = \lim_{q' \to q}\left(\frac{\tau(q') + 1}{q'}\right) \tag{6}$$

In a multivariate case of two series (Jiang et al., 2019; Podobnik & Stanley, 2008; Zhou, 2008) with equal number of observations $\{X(i)\}$ and $\{Y(i)\}$ where $i = 1, \cdots, N$. each time series is divided into segments of equal size s such that they do not overlap, as it is a case when univatiate series is considered. The cross-correlation in each segment is given in equation (7):

$$F_v^2(s) = \frac{1}{s}\sum_{k=1}^{s}\left[X_v(k) - \widehat{X_v(k)}\right]\left[Y_v(k) - \widehat{Y_v(k)}\right] \quad (7)$$

Cross-correlation between two series or the qth order is provided in equation (8):

$$F_{xy}^2(q,s) = \left[\frac{1}{m}\sum_{v=1}^{m} F_v(s)^q\right]^{\frac{1}{q}} \quad (8)$$

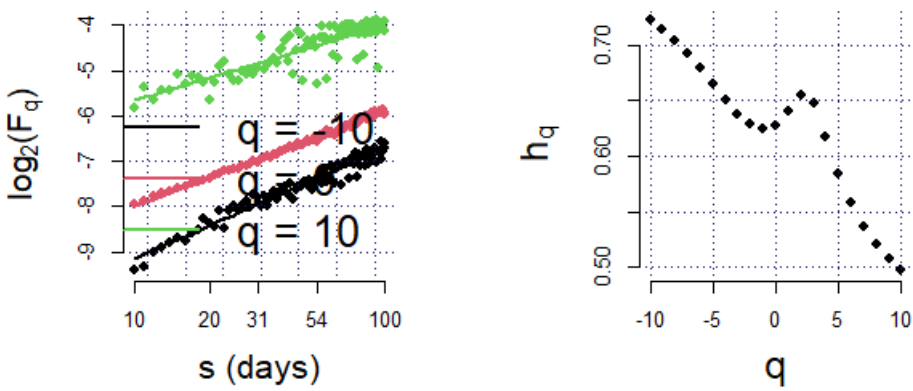
While scaling relation is given in equation (9):

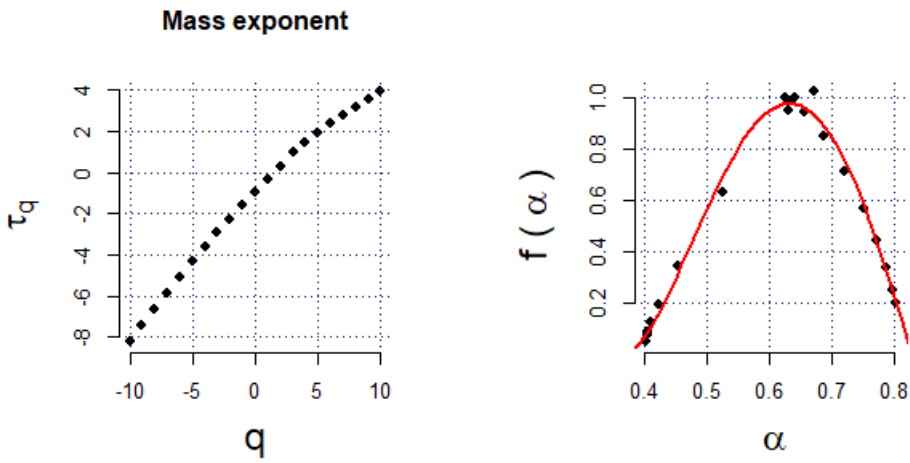
$$F_{xy}(q,s) \sim sH_{xy}(q) \quad (9)$$

RESEARCH RESULTS AND DISCUSSION

Research data used in this paper were introduced and described in appendix of this paper. Figure A1 and A2 present development of the time series while Table 1 and 2 provided descriptive statistics for the time series under consideration. Following methods described in section entitled methodology, Figure 1 presents fluctuation function, scaling exponent, multifractal exponent and singularity spectrum for CROBEX returns.

Figure 1. CROBEX returns





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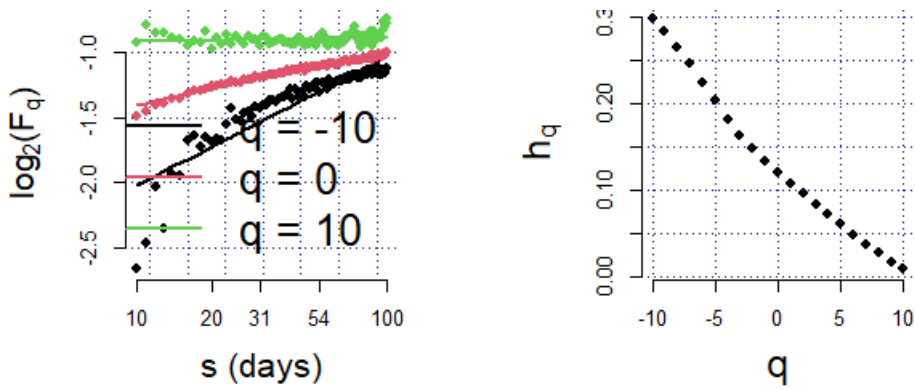
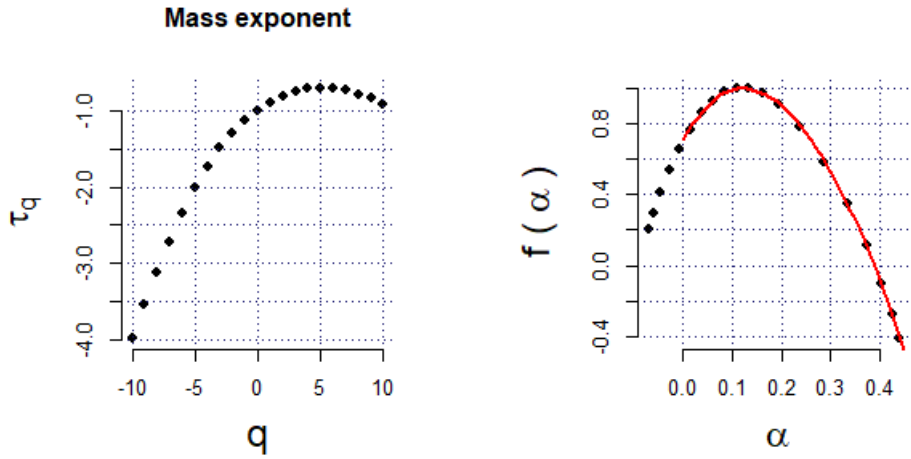
As illustrated in Figure 1, fluctuation function increases for large values of (days) demostrating existence of long-range power law correlation in the series as given in equation (4). The plot of versus illustrated decreasing trend and suggesting multifractality of the time seires. Since Hurst exponent takes values between 0.5 and 1 for positive and negative values (Kantelhardt et al., 2002) the series exhibits presence of long memory for large fluctuations as well as for small fluctuations. Furthermore, the relationship between multifractal exponents and is nonlinear that suggests multifractality of the time seires as well. The spectrum of the series is right-shifted from suggesting persistence of long memory in series. Figure 2 presents fluctuation function, scaling exponent, multifractal exponent and singularity spectrum for CROBEX trading volumes.

Figure 2. CROBEX trading volumes

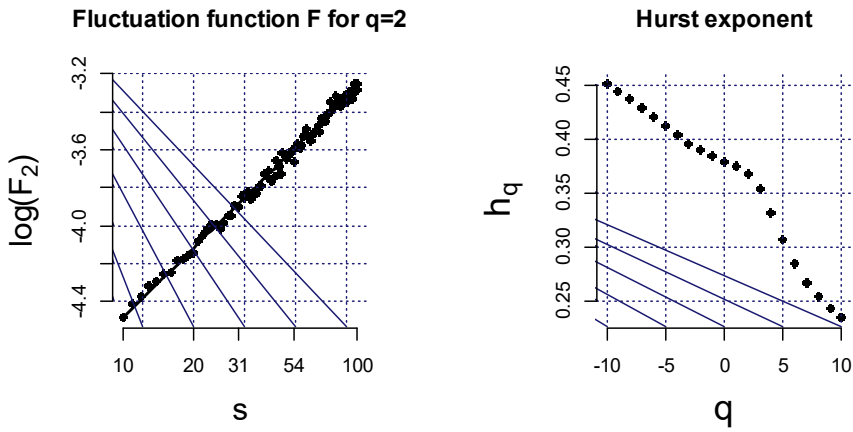


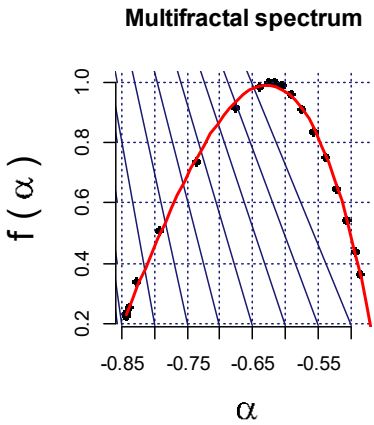


Source: Prepared by the authors

Unlike dynamics in Figure 1, no persistence was found in dynamics of CROBEX trading volume. Mass exponent suggested multifractality of time series as well as in case of CROBEX returns. The spectrum of the series is left-shifted from suggesting no long memory or no persistence in series. Figure 3 presents price-volume relationship in case of CROBEX.

Figure 3. price-volume relationship in case of CROBEX

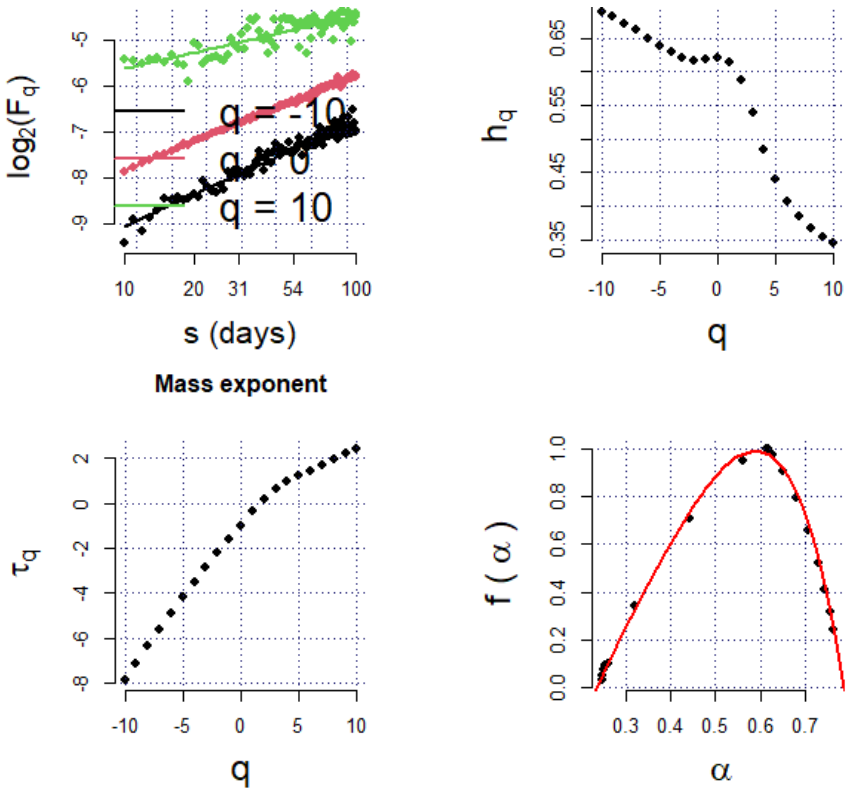




Source: Prepared by the authors

Results in Figure3 suggested that price-volume cross-correlation had no long memory. Consequently, volume and price-volume were found as mean-reverting series while price series exhibited long memory property in case of CROBEX. Bošnjak (2023) found higher liquidity linked to market inefficiency in CROBEX returns. Figure 4 presents properties of BELEX returns dynamics.

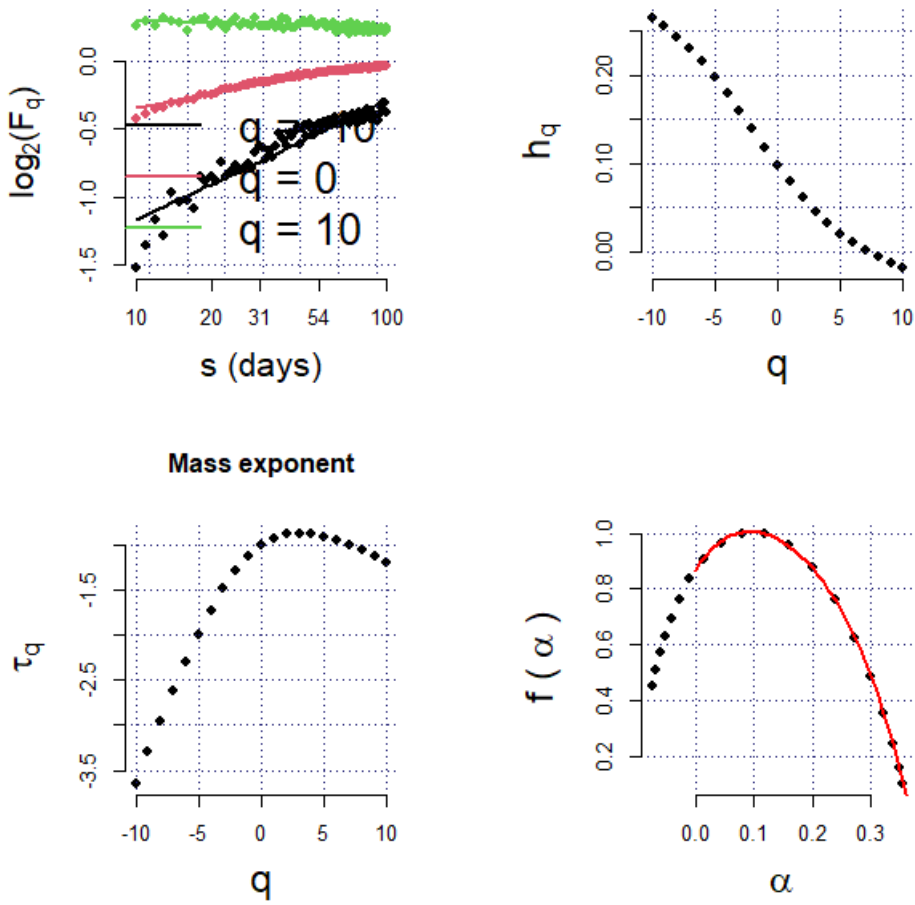
Figure 4. BELEX returns



Source: Prepared by the authors

Fluctuation function increases for large values of (days) demostrating existence of long-range power law correlation in the series as given in equation (4). The plot of versus illustrated decreasing trend and suggesting multifractality of the time series. Since Hurst exponent takes values higher than 0.5 for negative values small fluctuations seem to be persistent while large fluctuations appeared as with no long memory mostly. The series was further characterized by multifractality and the spectrum of the series is slightly right-shifted from suggesting long memory or persistence in series. Figure 5 illustrates dynamics of BELEX trading volume.

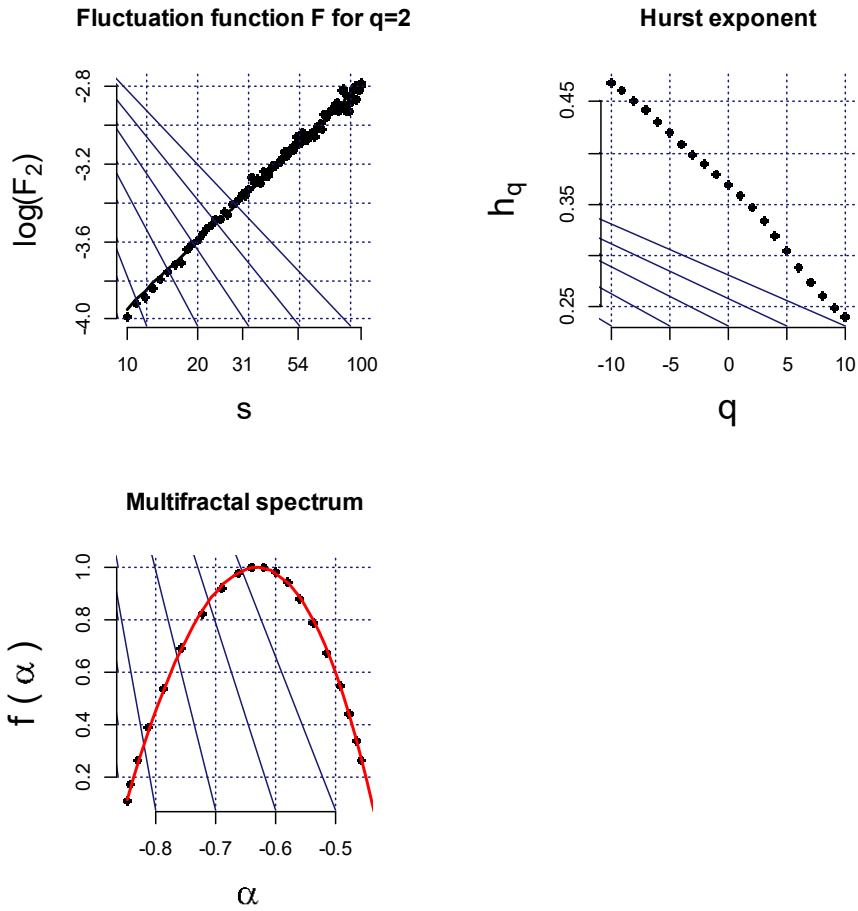
Figure 5. BELEX trading volumes



Source: Prepared by the authors

As well as in case of CROBEX trading volumes, BELEX trading volumes appeared left-shifted from suggesting no long memory or no persistence in series. Mass exponent suggested multifractality of time series as well as. Figure 6 price-volume relationship in case of BELEX.

Figure 6. price-volume relationship in case of BELEX



Source: Prepared by the authors

Results in Figure 6 suggested that price-volume cross-correlation had no long memory. Hence, there was multifractality and long memory properties of returns on both markets considered in this paper. No long memory was found in trading volumes neither in price-volume cross correlation.

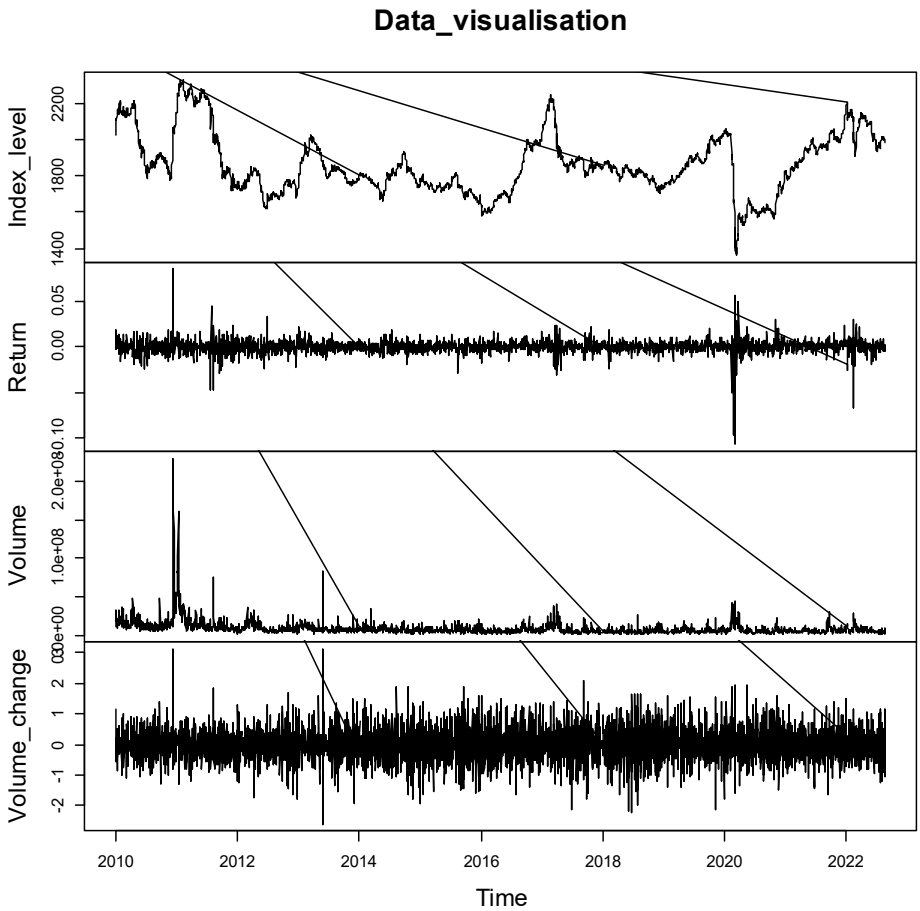
CONCLUDING REMARKS

There are several conclusions that can be derived out of the research presented in this paper. Firstly, existing empirical literature suggest ambiguous findings regarding long memory property of stock markets. Empirical finings suggested multifractality of CROBEX returns and trading volumes and presence of long memory for large fluctuations in CROBEX returns as well as for small fluctuations in CROBEX returns. No long memory or no persistence was found in trading volumes on Croatian stock market. Price-volume cross-correlation on Croatian stock market was not characterized by long memory. Consequently, volume and price-volume were found as mean-reverting series while price series exhibited long memory property in case of CROBEX. Empirical finings for BELEX15 returns suggested multifractality of the time series. Small

fluctuations seem to be persistent while large fluctuations appeared mostly with no long memory. Trading volumes on Serbian stock market exhibited no long memory or no persistence and multifractality of trading volumes. Price-volume cross-correlation exhibited no long memory property.

APPENDIX

Figure A1. Considered series in Croatian Case



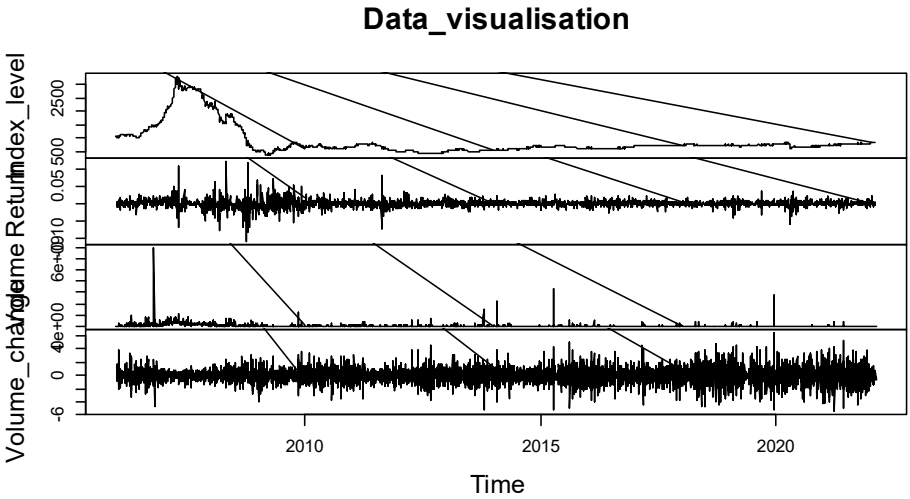
Source: Prepared by the authors

Table 1. Descriptive statistics for CROBEX time series

	Index	Index change	Volume	Volume change
Min.	1365	-0.1073230	757625	-2,6140175
1st Qu.	1752	-0.0031919	4042911	-0.3736423
Median	1837	0.0001860	6192440	-0.0157923
Mean	1862	-0.0000062	8576433	-0.0005984
3rd Qu.	1962	0.0035157	9614106	0.3689675
Max.	2334	0.0856288	230466363	3,1403988

Source: Author's calculations

Figure A2. Considered series in Serbian Case



Source: Prepared by the authors

Table 2. Descriptive statistics for BELEX15 time series

	Index	Index change	Volume	Volume change
Min.	354.4	-0.1086135	26130	-5,579589
1st Qu.	608.4	-0.0041540	8032000	-0.678174
Median	706.6	-0.0000216	19760000	0.014850
Mean	863.5	-0.0000616	58770000	-0.000649
3rd Qu.	770.8	0.0042101	49010000	0.662204
Max.	3304.6	0.1215756	6987000000	6,490316

Source: Author's calculations

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WOMEN'S PREFERENCES TO DIGITALIZATION OF RESTAURANTS' SERVICES: A FOCAL POINT OF EDUCATIONAL AND FUNCTIONAL BENEFITS OF ELECTRONIC WINE LIST

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Abstract: *The aim of this paper is to examine and analyze the perceptions and reactions of women regarding digital services and electronic wine lists in restaurants while making wine ordering decisions. Women make up a significant proportion of population, and that is why is important to comprehend their reactions and impressions of digital services and electronic wine lists in restaurants. The research was conducted with a specially designed questionnaire, involved the participation of 182 women from Croatia and Serbia who used digital services and electronic wine lists in restaurants. Collected answers were processed and analyzed using the Statistical Software for Social Sciences (SPSS) version 21.0. and applying Kolmogorov-Smirnov test, Levene's test and Kruskal-Wallis H-test. Research results indicated differences among various demographic groups of women in terms of their perceptions of the educational and functional benefits of using electronic wine list in restaurants. Results showed that younger women, those who frequently visit restaurants and those with less knowledge of wine perceived greater benefits of using electronic wine list in restaurants. This paper enriches the relatively sparse literature on women's preferences to digital services and wine purchasing behavior, providing valuable insights for restaurant managers and decision-makers regarding women's preferences for electronic wine lists.*

Keywords: *Electronic wine list, Restaurants, Women's preferences, Digital services, Organizational behavior*

JEL classification: *O33.*

INTRODUCTION

Whilst traditionally the world of wine has been perceived as male-dominated, recent trends are painting a more balanced picture. A spotlight is being cast on women, as they not only become notable consumers but also influencers within the wine indus-

try. This observation is supported by Payini et al. (2022), who highlighted the growing prominence of women in wine consumption, particularly in India. Women are now proprietors of wineries, wine manufacturers, promoters of viticulture and enology, educators of wine consumers, and global wine marketers (Matasar, 2006). Furthermore, there is a surge of organizations like Women in Wine, Wonder Women in Wine, and Women of the Vine & Spirits dedicated solely to women with knowledge of wine. These groups host events, conferences, and exhibitions, providing platforms for women to actively participate and showcase their wine expertise.

Thomson (2007) highlighted that women are purchasing more wine than men, a claim corroborated by later studies indicating that women spend disproportionately more on wine in relation to men (Lai, 2019). Considering that women comprise large part of the global population, this might predict an increase in overall wine consumption (Rodríguez-Donate et al., 2020). As such, understanding their reactions and impressions of electronic wine lists and their wine ordering decisions in restaurants becomes crucial. The focus of this paper, therefore, is to investigate the educational and functional benefits of electronic wine lists from a women's perspective.

The developments of technologies such as Internet of Things, Big Data, Real-Time Analytics, Cloud Computing, Data Science, Machine Learning, Robotics, Robotic Process Automation, Artificial Intelligence, Blockchain, Virtual Reality, Augmented Reality, and many others enabled significant changes in the operating and functioning of any organization (Lukić Nikolić et al., 2022). As in every other sector, organizations from the service sector want to retain existing clients, as well as to attract new ones through varios technological solutions and tools (Koyluoglu & Acar, 2023). New digital technologies can influence not only the way organizations in tourism sector operate, but also the customer's behaviour (Baiocco & Paniccia, 2022/2023). Restaurants are not an exception. They are becoming increasingly oriented towards digitalization of their processes and services. Electronic menus and wine lists have become integral components of the restaurant digitalization process (Labus & Jelovac, 2022; Labus & Lukić Nikolić, 2023a). Wine consumers used to base their decisions on the information on the wine bottle and other sources, such as retail personnel, paper-based wine lists, periodicals, and newsletters, before the invention and widespread usage of electronic wine lists (Malik et al., 2023). Due to the widespread usage and deployment of new digital tools and technologies, the situation has changed.

Structured in several parts, this paper first presents a review of the literature, focusing on the importance and role of electronic wine lists within the restaurant industry. This is followed by a detailed overview of the applied research methodology, research results, and by a thorough discussion of the research findings. The paper concludes by highlighting key research implications, acknowledging its limitations, and suggesting potential avenues for future studies in this field.

KEY CHARACTERISTICS OF WINE AND ELECTRONIC WINE LIST

Wine is an alcoholic beverage which is easily accessible, affordable and consumed openly throughout the world (Labus, 2023). It is a complex product because it incorporates culture, history, a sociability aspect, and a tourism activity (Lai, 2019). It represents an extensively traded product that is increasingly marketed because of its distinctive identity and the fact that the majority of consumers are not knowledgeable

enough about wine (Malik et al., 2023). The diversity of wine types reflects the complexity of this product, with classifications based on several factors. These include the sensory experience they offer, such as the efferve scence of sparkling, pearl, and carbonated wines; the visual appeal from red, pink, and white color variations; the varying degrees of sweetness from dry to semi-dry, and sweet to semi-sweet profiles; and distinct categories that cater to specific preferences, like dessert wines, aromatic wines, and liqueurs, as detailed in Table 1.

Table 1. Wine's type according to different classifications

Classification	Type of wine
By its basic sense	sparkling, pearl, carbonated
By color	red, pink, white
By residual sugar content	dry, semi-dry, sweet, semi-sweet
By its speciality	dessert, aromated, liqueur

Source: Ružić, 2011

Wine relies on the creation, re-creation, and marketing of a specific type of history and heritage. Years, vintages, droughts, frosts, and named producers are all bottled with the wine (Brabazon et al., 2014). That is why wine is a singular product by nature, and the overall impression it creates is largely subjective (Brand et al., 2020). To help navigate this subjectivity, California chemist and scientist Ann Noble developed the Wine Aroma Wheel in 1984. Her goal was to provide wine consumers with a common language for sharing thoughts and experiences using reliable and consistent terminology (Noble et al., 1987). Wine aroma, shaped by grape varietals, regional factors, and diverse winemaking methods, encompasses various compounds, such as higher alcohols, terpenoids, esters, fatty acids, and aldehydes. These compounds are influenced by elements like grape variety, terroir, wine production techniques, and aging. Wine aroma narratives are frequently utilized to capture the complexity and diversity of wines (Jin et al., 2022).

The Wine Aroma Wheel, divided into categories and subcategories, aids in classifying and describing wine aroma (Shapin, 2016). Its inner circle features basic descriptors like fruity, spicy, nutty, and vegetal. The second layer breaks these terms into subgroups - for instance, 'vegetal' subdivides into fresh, canned, and dried. The third layer offers more precise descriptions (e.g., the 'vegetative/fresh' group includes stems, bell pepper, mint, and so on) (Martin Poole et al., 2021). Several authors have explored wine aroma descriptions and phrases in depth, with Croijmans et al. (2020) establishing three broad wine description categories: (1) aromas (fruit, spices, food, non-food); (2) flavor/texture (technical tasting, proper taste, texture); (3) technical vocabulary (grape types, modifiers, occasion, vinification, other). The wine aroma wheel serves as a valuable tool for describing wine comprehensibly and comparing different wine types, thereby enabling wine enthusiasts to better grasp the chemical composition of wine and pair it with suitable food.

In the context of dining, the wine list plays a pivotal role in informing restaurant guests about available wines and guiding their ordering decisions. A wine list is essentially a document that presents crucial information about the restaurant's wine offerings. Con-

sequently, it is imperative for a wine list to encompass as many different varieties of wine as possible, thereby providing guests with a wide selection to choose from (Labus, 2023). Increasing wine sales, a key aim for any restaurant, can be effectively achieved through an exceptional wine list that is suitable to guests' needs (Livat et al., 2023). The customer is frequently interested not only in the consumption of wine after purchase, but also in its history - the grape type, the vineyard, the winemaker and winery, and the process the wine went through before it came in front of the consumer (Brabazon et al., 2014).

In the digital age, many restaurants are digitalizing their services, including their menus and wine lists (Labus & Lukić Nikolić, 2023b). The menu significantly influences a guest's overall restaurant experience (Suarez et al., 2019), and an electronic wine list can not only boost sales but also impact a restaurant's overall success or failure (Oliveira-Brochado & Vinhas da Silva, 2014). Electronic menus allow interactive suggestions for pairing wines and other beverages with customer's meal selections, enhancing the ordering experience and customer satisfaction (Beldona et al., 2014; Şahin, 2020). Electronic wine list can provide detailed wine information, such as origin, brand, producer, grape varieties/vintage, flavor description, and price (Ruiz-Molina et al., 2010; Staub & Siegrist, 2021). Apart from the name, color, quantity, price, origin, vineyard, and year of production, the wine list might also indicate alcohol content, acidity, tannin content, flavor characteristics, and the overall quality level (Terblanche & Pentz, 2019). Consequently, electronic wine list is a unique communication tool that have the ability to influence guests' selection of wine (Labus & Lukić Nikolić, 2023a), especially in situations where guests wish to try something new, to pair wine with their food, and/or the sommelier has limited knowledge and experience (Labus & Lukić Nikolić, 2023b).

RESEARCH METHODOLOGY

This paper aims to explore and analyze women's perceptions of digital services in restaurants, with special emphasis on the educational and functional benefits associated with the use of electronic wine lists. For that purpose, three hypotheses were investigated.

Hypothesis 1: Younger women perceive greater educational and functional benefits when using electronic wine lists in restaurants.

Hypothesis 2: Women who frequently visit restaurants perceive greater educational and functional benefits when using electronic wine lists.

Hypothesis 3: Women without extensive knowledge of wine perceive greater educational and functional benefits when using electronic wine lists in restaurants.

The empirical research was conducted with the use of a specially designed questionnaire. The initial section included few profile questions pertaining to the respondents' age, education, marital status, employment status, frequency of restaurant visits, and level of wine knowledge. Subsequent to this, respondents were asked to evaluate statements concerning their perceptions of the educational and functional benefits of electronic wine lists in restaurants. Twelve statements pertaining to "Educational and Functional Benefits Towards Electronic Wine List in Restaurants" were assessed by respondents on a five-point Likert scale, ranging from 1 - strongly disagree to 5 - strongly agree.

During 2020-2021, the questionnaire was distributed in hotel restaurants in Croatia and Serbia and completed by 182 women who used electronic wine lists in restau-

rants. All responses were analyzed using the Statistical Software for Social Sciences (SPSS) version 21.0.

The Cronbach's Alpha coefficient for the scale "Educational and Functional Benefits Towards Electronic Wine Lists in Restaurants" was 0.844, suggesting high reliability (Taber, 2018). The normality of the data distribution was examined using the Kolmogorov-Smirnov test, histograms, skewness, kurtosis, the normal probability curve, and the boxplot. The results for the scale, Sig. = 0.000, indicated that the assumption of normal data distribution was not met. Consequently, non-parametric statistical techniques were employed for statistical analyses within the measurement scales. The Kruskal-Wallis H test was utilized to compare differences between three or more groups, with a 95% confidence interval. Levene's test for equality of variances was used in all tests comparing differences between groups and the assumption of variance homogeneity was met in all cases ($p > 0.05$).

RESEARCH FINDINGS

Table 2 provides key characteristics of women participated in the research. The age group with the largest representation (34.1%) ranged from 26 to 35 years, followed by those between the ages of 36 and 45 (25.3%). The majority of women (50.5%) were married, with the rest being single, divorced, or widowed (49.5%). A significant majority (85.7%) had completed bachelor's or master's studies. In terms of restaurant visits, just under a third of women (31.9%) visited restaurants a few times per month, followed closely by women visiting restaurants at least once a week (29.7%). Basic wine knowledge was reported by the majority of women (38.4%), with the next largest group having solid wine knowledge (36.3%).

Table 2. Statistics pertaining to key characteristics of women participating in the research

Answers		N	%
Age	From 18 to 25	20	11.0
	From 26 to 35	62	34.1
	From 36 to 45	46	25.3
	From 46 to 55	27	14.8
	From 56 to 65	19	10.4
	Above 65	8	4.4
Marital status	Married	92	50.5
	Single (divorced, widowed)	90	49.5
Education	Secondary school	20	11.0
	Faculty (bachelor and master)	156	85.7
	Faculty (PhD)	6	3.3
Frequency of restaurants visit	Every week	54	29.7
	A few times a month	58	31.9
	One or two times a month	40	22.0
	One in three months	17	9.3
	Rarely	13	7.1

Wine knowledge	No knowledge at all	26	14.3
	Basic	70	38.4
	Solid	66	36.3
	Expert	20	11.0

Source: Authors

Table 3 presents the mean and standard deviation for the responses to each statement on the "Educational and Functional Benefits Towards Electronic Wine Lists in Restaurants" scale. Of all the statements, the one receiving the highest mean value (4.27) was "The ordering was correct," indicating strong agreement among participants. The second highest mean value (3.86) was linked to the statement "It was easy to use the electronic wine list." The third-ranking statement, with a mean value of 3.82, was "I prefer restaurants with an electronic wine list."

Table 3. Mean (M) and standard deviation (SD) for statements on the scale "Educational and Functional Benefits Towards Electronic Wine List in Restaurants"

Statements	M	SD
The electronic wine list assisted me in learning more about wine.	2.49	1.444
I have a better understanding of the wines thanks to the electronic wine list.	3.51	1.444
The digital service is ideally suited to the needs of visitors.	3.59	1.464
The ordering was correct.	4.27	1.041
It was easy to use the electronic wine list.	3.86	1.266
The electronic wine list elegantly displays all important information.	3.19	1.040
Using an electronic wine list allowed me to get to what I wanted faster.	3.58	1.199
I am glad I had the opportunity to learn more about the restaurant's electronic wine list.	3.29	1.290
When I used the electronic wine list, it met all of my expectations.	3.64	1.239
I had an enjoyable feeling after using the electronic wine list.	3.29	1.273
In my perspective, the electronic wine list has improved the level of service.	2.41	1.464
I prefer the restaurants which have electronic wine list.	3.82	1.446

Source: Authors

Table 4 categorizes responses to each item on the Likert scale into three groups: agree, neutral, and disagree, facilitating more manageable analysis. Slightly more than half of the women surveyed (52.75%) believe that the electronic wine list enhanced their understanding of wines. Interestingly, a considerable number of women felt that the electronic wine list did not provide them with new information about wine, indicating that while the content did not add novel educational value, it assisted them in better understanding the current wine offerings. Moreover, 57.15% of women feel the digital service is well-suited to guests' needs, 81.32% consider the ordering process appropriate, and 65.93% find using the electronic wine list straightforward. About two-thirds of women felt the electronic wine list enabled them to receive what they needed faster (60.44%) and met their expectations (64.84%). Consequently, 65.94% of women expressed a preference for restaurants with electronic wine lists. However, more than half disagreed that the electronic wine list improved the overall level of restaurant

service, suggesting that other service aspects must also meet standards for a positive overall impression.

Table 4. Frequency (N) and percentage (%) of responses to the "Educational and Functional Benefits Towards Electronic Wine List in Restaurants" statements

Statements	Answers	N	%
The electronic wine list assisted me in learning more about wine.	Agree	40	21.98
	Neutral	46	25.27
	Disagree	96	52.75
I have a better understanding of the wines thanks to the electronic wine list.	Agree	96	52.75
	Neutral	46	25.27
	Disagree	40	21.98
The digital service is ideally suited to the needs of visitors.	Agree	104	57.15
	Neutral	30	16.48
	Disagree	48	26.37
The ordering was correct.	Agree	148	81.32
	Neutral	20	10.99
	Disagree	14	7.69
It was easy to use the electronic wine list.	Agree	120	65.94
	Neutral	28	15.38
	Disagree	34	18.68
The electronic wine list elegantly displays all important information.	Agree	66	36.26
	Neutral	82	45.05
	Disagree	34	18.68
Using an electronic wine list allowed me to get to what I wanted faster.	Agree	110	60.44
	Neutral	40	21.98
	Disagree	32	17.58
I am glad I had the opportunity to learn more about the restaurant's electronic wine list.	Agree	84	46.16
	Neutral	52	28.57
	Disagree	46	25.27
When I used the electronic wine list, it met all of my expectations.	Agree	118	64.84
	Neutral	28	15.38
	Disagree	36	19.78
I had an enjoyable feeling after using the electronic wine list.	Agree	86	47.25
	Neutral	60	32.97
	Disagree	36	19.78
In my perspective, the electronic wine list has improved the level of service.	Agree	48	26.37
	Neutral	30	16.48
	Disagree	104	57.15
I prefer the restaurants which have electronic wine list.	Agree	120	65.93
	Neutral	22	12.09
	Disagree	40	21.98

Source: Authors

To test the proposed hypotheses, a Kruskal-Wallis H-test was conducted in this research. The results are presented in Table 5.

Table 5. The results of Kruskal-Wallis H-test

Answers	N	Mean	Md	χ2	df	p
Age						
From 18 to 25	20	115.90	3.73	22.361	5	0.000
From 26 to 35	62	99.31	3.54			
From 36 to 45	46	96.24	3.54			
From 46 to 55	27	77.91	3.23			
From 56 to 65	19	76.29	2.69			
Above 65	8	24.75	2.31			
Frequency of visits						
Almost every week	54	90.52	3.54	21.521	4	0.000
Few times a month	58	106.91	3.65			
Once or twice a month	40	81.80	3.27			
Once in 3 months	17	106.26	3.61			
I rarely visit restaurants	13	37.35	2.54			
Knowledge of wine						
None	26	121.81	3.73	11.057	3	0.011
Basic	70	87.10	3.46			
Solid	66	88.95	3.42			
Expert	20	75.90	3.38			

Source: Authors

The results of the Kruskal-Wallis H-test indicated statistically significant differences in responses based on the respondent's age. $\chi2(df=5, n=182) =22.361$, $p=0.000$. Women aged 18 to 25 exhibited the highest median response (Md=3.73). These findings confirm *Hypothesis 1* that younger women perceive greater educational and functional benefits from using electronic wine lists in restaurants.

Further, the Kruskal-Wallis H-test indicated statistically significant differences in responses concerning the frequency of restaurant visits. $\chi2(df=4, n=182) =21.521$, $p=0.000$. Women who visit restaurants a few times per month had the highest median response (Md=3.65). This result confirms *Hypothesis 2*, which asserts that women who frequent visit restaurants perceive greater educational and functional benefits when using electronic wine lists.

Finally, the Kruskal-Wallis H-test indicated statistically significant differences in responses in relation to the participants' wine knowledge. $\chi2(df=3, n=182) =11.057$, $p=0.011$. Women with no wine knowledge exhibited the highest median response (Md=3.73). These results confirm *Hypothesis 3* that women lacking wine knowledge perceive greater educational and functional benefits from using electronic wine lists in restaurants.

Table 6 provides the mean values for responses regarding wine knowledge level. An examination of the mean values yields some valuable insights.

Table 6. Mean values on the "Educational and Functional Benefits Towards Electronic Wine List in Restaurants" scale grouped by wine knowledge level

Statements	Wine knowledge level			
	No	Basic	Solid	Expert
The electronic wine list assisted me in learning more about wine.	1.73	2.57	2.56	3.00
I have a better understanding of the wines thanks to the electronic wine list.	4.27	3.43	3.44	3.00
The digital service is ideally suited to the needs of visitors.	4.58	3.40	3.35	3.80
The ordering was correct.	4.85	4.03	4.27	4.40
It was easy to use the electronic wine list.	4.58	3.74	3.74	3.70
The electronic wine list elegantly displays all important information.	3.54	3.16	3.14	3.00
Using an electronic wine list allowed me to get to what I wanted faster.	3.96	3.59	3.52	3.30
I am glad I had the opportunity to learn more about the restaurant's electronic wine list.	3.96	3.17	3.29	2.80
When I used the electronic wine list, it met all of my expectations.	4.12	3.51	3.59	3.60
I had an enjoyable feeling after using the electronic wine list.	3.81	3.26	3.29	2.70
In my perspective, the electronic wine list has improved the level of service.	1.42	2.60	2.65	2.20
I prefer the restaurants which have electronic wine list.	4.42	3.73	3.91	3.10

Source: Authors

Apart from two statements, the results indicate that mean values for almost all statements are notably higher among women without prior knowledge of wine. The two exceptions relate to the statements that the electronic wine list helped them learn more about wine and that it improved the level of service. For these two statements, women with no prior wine knowledge reported the lowest mean values. For all other statements, these women reported the highest mean values regarding the educational and functional benefits of the electronic wine lists. That points out the importance of educational and functional benefits of electronic wine lists in restaurants in decision making process of women without wine knowledge.

DISCUSSION OF RESEARCH FINDINGS

This research affirmed the existence of variation in perceptions of the educational and functional benefits of electronic wine list in restaurants, depending on certain characteristics of the women. Results indicated that younger women, those who frequently visit restaurants and women with limited wine knowledge derive greater benefits from electronic wine lists. The research implies that these women appreciate being able to make well-informed decisions about their wine orders, seeking detailed information about wine's characteristics.

These findings align with results from other studies. For instance, a survey involving 497 males and 877 females in the United States found that when unsure about a wine selection, women are more likely to seek additional information about the wine than men. They pay close attention to wine label details and any mention of awards or

recognition (Atkin et al., 2007). Women also show a greater interest in price points and discounts when choosing a wine, suggesting a higher likelihood of cost consideration during the purchasing process compared to men (Forbes et al., 2010).

Further, a study of 399 wine consumers from New Zealand, Australia, the United Kingdom, and the United States identified that the key factors influencing women's consumption choices include price, type of wine, prior tasting experiences, discounts, variety, and brand (Forbes, 2012). Women aim to be well-informed about these factors before making a decision. Moreover, an eye-tracking study conducted in a simulated supermarket setting at Javeriana University in Cali, Colombia, provided insight into consumers' behavior when selecting wine. The research revealed that women tend to carefully read the labels and place a high value on nutritional information, country of origin, and health information (Escandon-Barbosa & Rialp-Criado, 2018).

A separate study involving focus groups from four Portuguese wine regions found that the context of wine consumption and prior experience significantly influence women's wine decisions. Women paid special attention to the brand, region, and awards associated with the wine (Ferreira et al., 2019). According to various studies, factors influencing women's wine choices include flavor, previous tasting experiences, brand, recommendations, price, wine region, in-store promotions, medals, and awards (De Oliveira Dornelles et al., 2022). Furthermore, health benefits, bottle design, label information, and wine's price are among the main factors influencing wine consumption, according to a study conducted in India in which participated 646 consumers of wine (Malik et al., 2023).

Considering above mentioned studies, it is apparent that women value comprehensive information about wine for informed decision-making. Consequently, electronic wine lists should incorporate all this information.

CONCLUSION

This research delved into exploring the educational and functional benefits of electronic wine lists in restaurants from the perspective of women. With a growing trend towards digital technologies, many restaurants are adopting electronic menus and wine lists to meet the needs of their guests. Such digital innovations hold the potential to improve overall restaurant operations and enhance wine sales.

The findings from the research, which involved 182 women from Croatia and Serbia, revealed significant educational and functional benefits associated with using electronic wine lists in restaurants. Statistical analysis indicated that younger women, those who frequently visit restaurants and those with limited wine knowledge found higher benefits in utilizing electronic wine lists. It became evident that women seek to make well-informed decisions when choosing wines and desire detailed information about the wine's characteristics. The educational and functional aspects of electronic wine lists hold tremendous importance for women, as about two-thirds of the participants expressed a preference for restaurants that offer this digital feature.

The significance of this research lies in shedding light on the differences within this diverse group of women consumers, enabling decision-makers to design wine lists that cater to these varying preferences. As women constitute a significant portion of wine sales, understanding their perceptions and feelings towards electronic wine lists can aid designers in developing more effective and customer-centric wine lists.

The paper makes a notable contribution by presenting important findings that

address the existing, otherwise scarce literature on wine purchasing behavior. Its practical implications are evident, providing valuable insights to managers and decision-makers in restaurants regarding women's preferences for electronic wine lists. Restaurants can enhance their offerings by providing an electronic wine list, offering valuable information that empowers guests, especially women, to make well-informed decisions about their wine choices.

While this research provides significant insights, it does come with certain limitations. The study involved a relatively small sample of 182 women from only two countries, Croatia and Serbia, potentially limiting the generalizability of the findings to other countries or demographics. Moreover, the use of a restricted number of closed-ended questions in the questionnaire may have hindered respondents from fully expressing their unique experiences and emotions. Additionally, the reliance on self-reported data may have introduced subjectivity to the results.

To address these limitations and further enhance knowledge in this field, future research should aim to involve more diverse participant samples from various countries. Utilizing different research methodologies, such as open-ended questionnaires or interviews, can provide a more comprehensive understanding of women's experiences and perspectives regarding the educational and functional benefits of electronic wine lists. By delving deeper into these aspects, researchers can contribute to the continuous improvement of electronic wine lists and the overall wine dining experience for women in restaurants.

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ORIGINALNI NAUČNI RAD / ORIGINAL SCIENTIFIC PAPER

COORDINATION AND HARMONIZATION OF CLIENT AND CONSULTANT GOALS IN THE DEVELOPMENT OF INFORMATION SYSTEMS PROJECTS

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Abstract: *The success of the project is the main goal in the management of projects of development and implementation of information systems. However, in the projects carried out by the joint team of the client and the consulting organization, the consultant's goals are also set, namely the acquisition of the consultant's knowledge and the growth of the consulting organization's business. In this research, we examined the impact of inter-organizational coordination on the achievement of client and consultant goals. For this purpose, a model of coordination and harmonization of the goals of the client and the consultant in the development and implementation of the information systems project was created. Based on the model, hypotheses were set and tested based on the views of the designers. The hypotheses confirmed the significant influence of coordination on the alignment of client and consultant goals. The scientific contribution of the work relates to new theoretical knowledge in the field of information systems management theory, coordination theory, agency theory and contracting theory. The practical benefits of the research refer to the benefits that managers of client and consulting organizations have in solving the problems and challenges of the development and implementation of an information systems project when it is carried out by a joint team of designers. The originality of the work refers to the modeling of the coordination relationship in order to achieve the goals of the client and the consultant.*

Keywords: *project success, contractual relationship, project uncertainty, new knowledge, business growth.*

JEL classification: *M15, M54.*

INTRODUCTION

Client organizations are increasingly hiring consulting organizations to participate in the development and implementation of information systems projects. Information systems development projects in which the client and consulting organization

participate differ from internal projects in which the project team is only from the client organization and external projects in which only designers from the consulting organization participate. Managing the relationship between the client and the consultant in a joint team is very complex, because the goals and interests of the client and the consultant are different.

The research problem is insufficiently realized goals of the client and the consultant in the implementation of the joint project of development and implementation of information systems. In order to solve the mentioned problem, close cooperation between the client and the consultant is needed during the development and implementation of the entire project. The cause of the problem is the poor inter-organizational coordination of the joint team of the client and consultant on the development and implementation of information systems. Coordination is defined as the effort to manage resources, client-consultant relationships, and interdependent tasks (Ljevo & Isak, 2018).

The subject of research is multidisciplinary and relates to the following areas: (1) management and development of information systems, (2) business process management, which includes coordination theory and agency theory, and (3) business law, where the theory of contracting between a client and a consultant is analysed.

The goals of the research are directed towards science and towards practice. Scientific objectives are related to describing the process of coordination of a joint team in the development and design of information systems to achieve the goals of the client and the consultant. Project uncertainty related to technical uncertainty and demand uncertainty will be described with the aim of reducing risks in the development and implementation of information systems. It will describe the method of measuring the success of the project (quality, costs, and time), it will describe the measurement of the consultant's knowledge acquisition (transfer of technology and the transfer of knowledge and skills) and it will describe the measurement of the growth of the consultant's business (financial growth, strategic growth, structural growth, and organizational growth).

The aim of the paper is to create a coordination model for the purpose of harmonizing the goals of the client and the consultant in the development of the information systems project, based on which new scientific facts and knowledge about the process of coordination of the joint project team, solving agency problems and establishing a good contractual relationship between the client and the consultant would be obtained.

Practical goals will refer to the benefits that will be enjoyed by the managers of the client and consulting organizations, the owners of those organizations, as well as the project employees in the joint project team.

Based on the proposed model, eleven auxiliary hypotheses were set.

THEORETICAL ASPECTS OF RESEARCH

Client-consultant relationship

The wishes and demands of customers for products and services are constantly changing under the influence of technical and technological developments. Competing companies continuously develop new products to satisfy and delight customers. For this reason, companies must have new knowledge, skills, and experiences in order to withstand the competitive struggle (El Dine & Taher, 2020). Since companies usually

do not have enough knowledge and skills, they often use external services provided by consulting firms (Nguyen & Fagerstrøm, 2021). The cooperation between consultants and clients seeks to create value for both parties. Value is determined by client satisfaction. For good cooperation, it is necessary to know the characteristics of the consultant and the client (Faghihi, Peimankar, Nazarpour, & Shafaat, 2022).

The characteristics of consultants are as follows: consulting knowledge, consulting skills and consultant behaviour. Consulting knowledge is a combination of technical skills, business understanding, insight into the sector and knowledge of the environment. Consulting skills refer to knowledge of tools and techniques that are key in providing consulting services. Professional behaviour of consultants are attitudes that act as factors for achieving defined goals and consulting competence of consultants.

The client's characteristics are as follows: a sense of partnership, commitment, and support of the management in the realization of goals, trust of the client, acceptance of changes and the like.

The client-consultant relationship has three phases (Figure 1), namely: 1) establishing the client-consultant relationship; 2) relationship management and 3) relationship transformation.

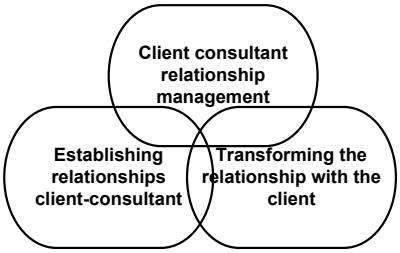


Figure 1. Phases of the client-consultant relationship

Source: Authors

Each phase has its own elements (Figure 2). The phase of establishing the client-consultant relationship deals with activities of consulting understanding of the client's organization and gaining the trust of key people in the client's organization (Ma, 2023). In addition, the development of the client-consultant relationship should be designed, and the terms of the arrangement agreed upon, as well as the negotiation and communication of mutual expectations for the consulting relationship. The client-consultant relationship management phase defines project management and the achievement of synergistic effects, the establishment of joint work between the client and the consultant and provides understanding and related to the clear expectations of the client and the consultant and determines the process of knowledge transfer and the development of skills at the client. The phase of transformation of the client-consultant relationship means that the initial dependence of the client on the consultant ends and gives way to cooperation by forming a joint team for implementation, ensuring support for project implementation and ensuring professional implementation of the project.

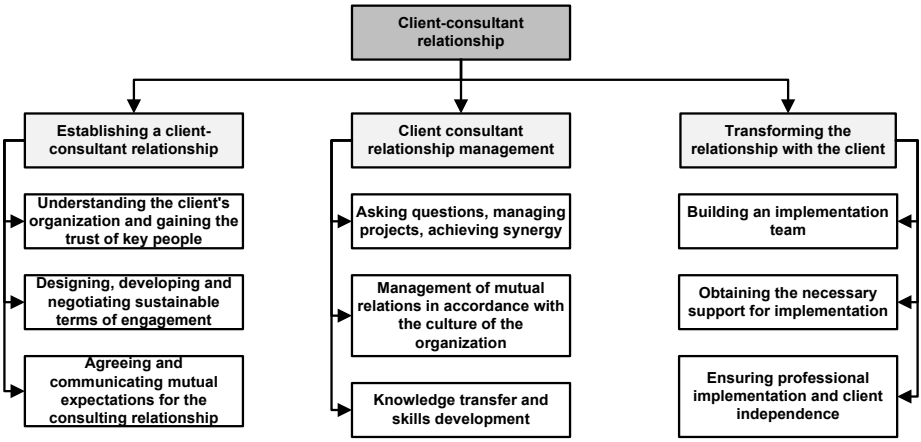


Figure 2. Elements of client-consultant relationship phases

Source: Authors

Contractual client-consultant relationship

The client-consultant relationship is a contractual relationship based on which professional and business success is built both for the client's organization and for the consultants (Vogel, Lind, & Holm, 2019).

Almost any contractual relationship, in which one party (the consultant) promises performance to the other (the client), is potentially subject to an agency problem. The cause of the problem is that the consultant usually has better information than the client about the relevant facts. The client cannot easily be convinced that the consultant's performance is exactly what was promised. Consequently, the consultant has an incentive to act opportunistically, skimping on the quality of his performance, or even diverting to himself some of what belongs to the client. For this reason, the client must establish a consultant monitoring system, which causes additional costs (Ahmadisheykhsarmast & Sonmez, 2020).

Contracts serve as an important platform to ensure that the future planned transaction and all potential contingencies, liabilities and risks are properly specified. The contractual relationship can be formal and define the client's expectations, and it can be informal and should understand the unwritten psychological expectations of the client (Vacca, Di Sorbo, Visaggio, & Canfora, 2021).

There are two types of contracts that are most often used in the relationship between a client and a consultant (Sayeed, Marco-Gisbert, & Caira, 2020), namely: 1) contracts with a fixed price for a specified job and 2) contracts that compensate for the time spent working and materials.

Research results (Sayeed, Marco-Gisbert, & Caira, 2020) show that in software projects, about 70% use contracts with a fixed price for specified work and about 30% use contracts that compensate for the time spent working and materials. By analysing the contractual relationships used, the authors (Sayeed, Marco-Gisbert, & Caira, 2020) came to the conclusion that projects using fixed-price contracts for specified work are more likely to become problematic compared to projects using time-compensating

contracts labour and materials (Di Angelo & Salzer, 2019). The risks associated with contracts with a fixed price for specified work are related to: 1) focus on low price increases the risk of opportunistic behaviour of the consultant, 2) less focus on the competence of the consultant resulting in the risk of project failure and 3) less involvement of the consultant in management with the project results in an extension of the project completion deadline and a lower level of project quality. The main reason for using fixed price contracts for specified work is to avoid financial risks related to time and material cost overruns.

The selection of contracts that compensate for the time spent working and materials is not sufficient in itself for the success of information systems projects but requires adequate inter-organizational coordination between the client and the consultant.

Inter-organizational coordination

Coordination is defined as an effort to manage resources, relationships, time, and interdependencies of tasks among project participants (Kudaravalli, Faraj, & Johnson, 2017). Coordinating shared resources includes resource allocation processes to regulate the use of limited resources by multiple actors in a team (Todorović, Todorović, & Tomaš). Coordinating relationships is particularly important when the performance of one actor's activity is used as an input for another actor's activity. Coordination over time involves managing divergent work schedules, process cycles related to different actors. Task and subtask coordination involves breaking down large-scale processes into smaller tasks and their constituent subtasks, ensuring their alignment, and allocating the necessary resources to them to help organizations achieve their goals.

Client organizations are increasingly hiring consulting firms to participate in the implementation of information systems projects. Coordination in the joint team of the client and the consultant in the development of information systems is an emerging phenomenon that includes the use of strategies and patterns of behaviour aimed at integrating and harmonizing the actions, knowledge and goals of team members, with the aim of achieving common goals (Zaitsev, Gal, & Tan, 2020).

When the team achieves a high level of coordination, the work of all its members contributes to the results of the project, but when the coordination is poor, the losses that occur in the process negatively affect the outcomes of the project (Al-Saqqa, Sawalha, & AbdelNabi, 2020).

In the theory of coordination, the most common problems stand out (Stray & Moe, 2020): How can general goals be divided into actions? How can actions be assigned to groups or individual actors? How can resources be allocated between different activities? How can information be shared among different actors to help achieve common goals?

The mechanisms of coordination are (Carstens & Richardson, 2019): the contract on the management of the joint project, the establishment of standards, written policies, rules, job descriptions and standard procedures that enable an integrated pattern of behaviour.

We especially emphasize the importance of project management contracts that describe in detail how, when and to whom resources should be distributed in order to facilitate project coordination (Zou, Lo, Kochhar, Le, & Xia, 2019).

Uncertainty of the project

Project uncertainty has a negative impact on project management and success. Uncertainty can be a requirement uncertainty or a technical uncertainty (Liberatore & Luo, 2009).

Requirement uncertainty refers to ambiguities regarding the specification of program activities. i.e. requirements that the system should perform, as well as under what conditions those activities should be performed. The specification is the initial phase of the software process where the requirements for the future information system are analysed. The specification is dealt with by designers in the information system and future users. The elements of the specification of program activities on the development of information systems must include: 1) user requirements, 2) system requirements and 3) software support. In order to reduce the uncertainty of requests, business knowledge is necessary.

Technical uncertainty can lead to greater complexity and ambiguity in project development and implementation. Consultants must possess technical knowledge and skills, and project management skills to interest clients in joining the team. Consultants should impart knowledge and skills to the client and earn their respect and trust. We can say that the technical competence of the consultant is an in-depth expertise with which the client is not familiar. Technical knowledge as a competence enables the consultant to deliver the agreed results for the client. Consultants differ like any other professional group in the quality of their technical competence, and the onus is on the client to analyse the consultants in terms of their technical competence. Possession of technical competence of consultants does not guarantee successful client-consultant interaction. Instead, it is necessary for consultants to share and transfer knowledge and skills to their client. If the consultant does not transfer his knowledge and skills to the client, the client will not consider the project successful.

Alignment of client and consultant goals

The success of development and implementation of an information systems development project with the help of consultants requires that the client and consultants work together and achieve their goals individually and jointly. For this reason, the client and consulting organization should implement coordinated activities that favourably affect their goals (Lauer, 2021).

The client's goals are related to the success of the information system project, obtaining relevant information about the project and the activities of the consultants, controlling the consultant's actions, the performance of the project and agreeing on the optimal reward for the consulting organization. The success of an information systems project is measured by (Zaleski & Michalski, 2021): client satisfaction, i.e. the acceptance of the project by the client, 2) the perceived quality of the project, i.e. that the project affects the improvement of user performance, 3) the successful implementation of the project, i.e. that the project was completed within the plan and budget and fulfil the specified requirements.

Objectives of the consultant are a skills and knowledge-related issue. Having knowledge and skills is an important source of a consultant's competitive advantage. Consulting firms require their managers and employees to continuously improve their knowledge and skills individually, but also through joint work with the client on the

development and implementation of information systems (Durmic, 2020). An important managerial problem relates to the balance between coordination mechanisms and knowledge flows. Coordination mechanisms are: decision-making decentralization, personal coordination and electronic communication. Successful projects offer consultants experience and knowledge that they can easily transfer to another project and increase the chances of project success. Even if the projects are not successful or marginally successful, the consultants will get new information about what went wrong and what should be avoided in future projects. In order to survive consulting organizations must constantly contract new projects in an extremely competitive market. Therefore, the goal of the consulting organization is a higher level of development. In addition, the consultant's goals may relate to the optimal level of rewards, autonomy in assessing necessary and necessary actions, achieving the best possible results with standard efforts and informational advantage over the client.

METHODS

The research used a combined research methodology. Quantitative data were obtained on the basis of a survey questionnaire of the joint project team of the client and consultant, and qualitative data were obtained by talking to managers and designers of information systems.

Only respondents who were willing to voluntarily participate in the research took part in the research. The research examined the views of 30 designers who worked on the development of information systems projects. Individual and average assessments of respondents represent the opinion of those persons, and not the position of the organization in which they are employed. After the research was conducted, an interview was conducted with randomly selected respondents (managers and designers). We asked them to give comments on certain characteristic items.

The study was designed to evaluate the influence of independent variables on the dependent variable, that is, the influence of inter-organizational coordination (client and consultant) on the achievement of the client's and consultant's goals. To test the proposed model, we created a questionnaire based on which we collected data on the following constructs: contractual relationship, coordination, demand uncertainty, technical uncertainty, client goals and consultant goals. The items measured in the constructs were developed based on literature review and practical experience. The items were measured based on the views of the project team members, and a five-point Likert scale was used (Table 1).

Table 1. Five-point Likert scale of perception

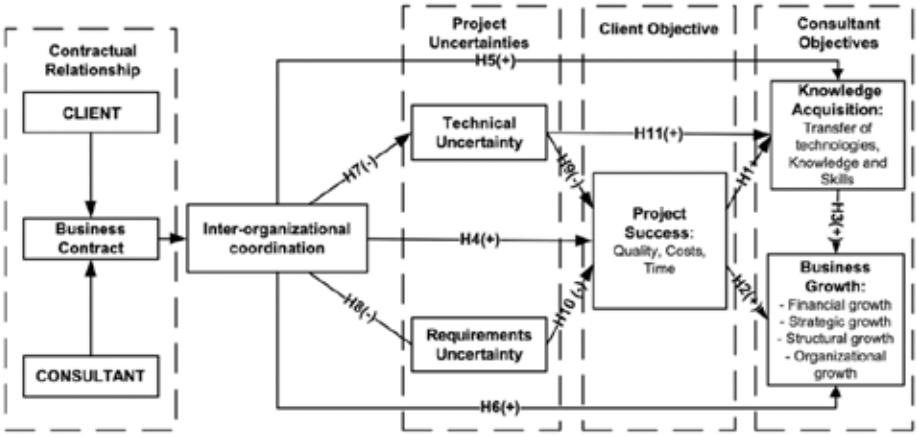
Agreement				
1	**2**	**3**	**4**	**5**
I don't agree at all	I do not agree	I'm undecided	I agree	I completely agree
Frequency				
Never	Rarely	Periodically	Often	Very often
Importance				

It doesn't matter	Little important	Moderately important	Important	Very important
Probability				
Almost never true	Usually not true	Sometimes true	Usually true	Almost always true

Source: Authors

The percentage of perception ranges from 0 to 100 %. Zero % is when the perception is negative (1), and 100 % when the perception is maximally positive (5). For research purposes, a model of coordination and harmonization of client and consultant goals in the development of an information systems project was defined (Luo & Liberatore, 2009) (Figure 3).

Figure 3. Model of coordination and harmonization of goals of the client and the consultant in the development of the information systems project



Source : Authors

For the project of inter-organizational coordination and harmonization of client and consultant goals in the development and implementation of information systems projects:

H1: A higher level of project performance will lead to new knowledge for consultants;

H2: Higher levels of project performance will lead to business growth of the consulting organization;

H3: A higher level of knowledge of consultants will lead to business growth of the consulting organization;

H4: A higher level of coordination between the client and the consultant will lead to higher levels of project success;

H5: A higher level of coordination between the client and the consultant will lead to new knowledge for the consultants;

H6: A higher level of coordination between clients and consultants will lead to the business growth of the consulting organization;

H7: A higher level of coordination between the client and the consultant will lead to lower levels of technical uncertainty;

H8: A higher level of client-consultant coordination will lead to lower levels of demand uncertainty;

H9: A higher level of technical uncertainty will lead to lower levels of project success;

H10: A higher level of uncertainty of requirements will lead to lower levels of project success;

H11: A higher level of technical project uncertainty will lead to new knowledge for consultants.

RESEARCH RESULTS

Results of certain hypotheses

H1: A higher level of project performance will lead to new knowledge for consultants

In order for consulting firms to survive and develop, it is necessary for them to have continuous engagement. Successfully implemented projects bring them new knowledge and a competitive advantage. Knowledge acquisition means the amount of new knowledge that consultants can acquire in all phases of project implementation. Consultants from successful projects can gain knowledge about project management that enables them to better manage and cooperate in future projects. Even unsuccessful and marginally successful projects can serve consultants to avoid risks and problems that may appear in similar projects. Figure 4 shows the impact of the success of the project on the consultant's knowledge acquisition.

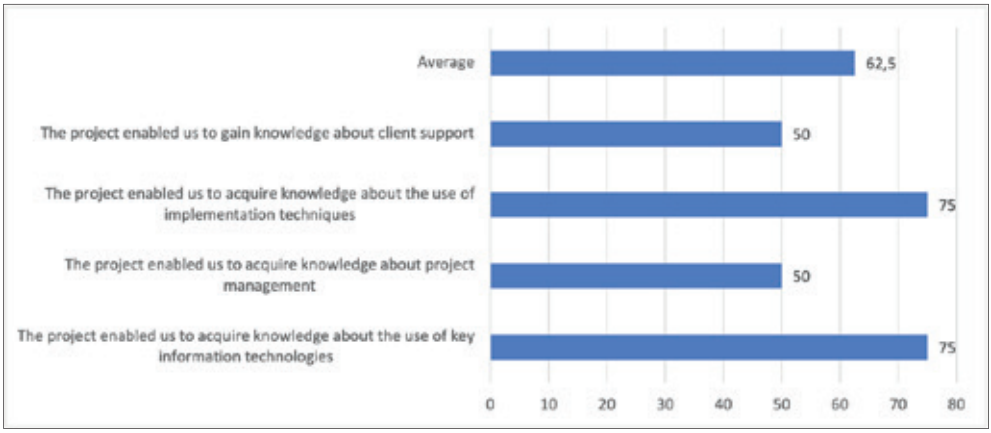


Figure 4. Questions related to the impact of project success on the consultant's knowledge acquisition

Source: Authors

Designers agree (75%) on two issues that the success of the project has a significant impact on the acquisition of knowledge of consultants, namely: (1) the project enabled us to acquire knowledge about the use of key information technologies and (2) the project enabled us to acquire knowledge about the use of techniques implementation.

The designers had a neutral attitude (50%) on two questions about the impact of the project's success on the acquisition of knowledge of consultants, namely: (1) the project enabled us to acquire knowledge about project management and (2) the project enabled us to acquire knowledge about client support.

The average level of agreement is 62.5% about the impact of project success on the consultant's knowledge acquisition.

H2: Higher levels of project performance will lead to business growth of the consulting organization.

Successfully implemented projects are the basis for the growth of the consulting organization's business. The consulting organization relies on the reputation and recommendations it has achieved through the realization of projects to acquire new clients and expand its business. Satisfied clients are the best recommendation for getting new business. Figure 5 shows the issues related to the impact of inter-organizational coordination on the success of the project.

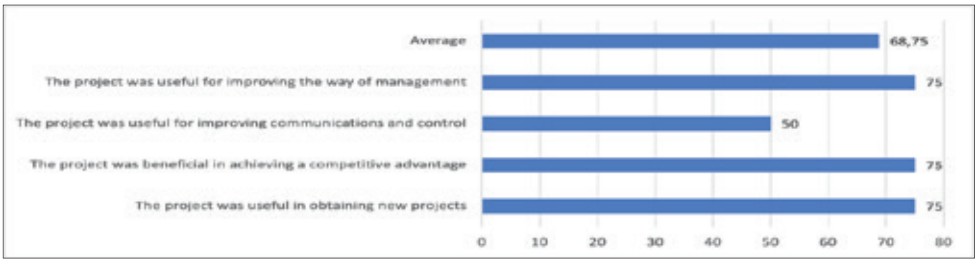


Figure 5. Questions related to the impact of project performance on the business growth of the consulting organization

Source: Authors

Designers agree (75%) on three issues that the impact of the project's performance on the business growth of the consulting organization is significant, namely: (1) the project was useful in obtaining new projects, (2) the project was useful in achieving a competitive advantage and (3) the project was useful for improving the way of management.

The designers had a neutral attitude (50%) when it came to whether the project was useful for improving communications and control.

The average level of agreement is significant (68.75%) about the impact of the success of the project on the business growth of the consulting organization.

H3: A higher level of knowledge of consultants will lead to business growth of the consulting organization.

The consultant's knowledge is of utmost importance for establishing relationships with clients, attracting new clients, and expanding the service. Knowledge of project management best practices enables consultants to provide quality service and increase client satisfaction. Figure 6 presents the questions related to the impact of the consultant's new knowledge on the growth of the consultant's business.

Designers agree (75%) on two questions that the impact of project performance on the business growth of the consulting organization is significant, namely: (1) acquired knowledge helped us achieve financial growth of business (income, profit, own funds) and (2) acquired knowledge helped us achieve organizational growth (change in company structure, organizational culture, leadership style). Designers had a neutral attitude (50%) regarding two questions: (1) acquired knowledge helped us achieve strategic growth, i.e. competitive advantage, (2) acquired knowledge helped us achieve structural growth (responsibility, communication, control). The average level of agreement is significant (62.5%) about the influence of the consultant's new knowledge on the growth of the consultant's business.

Figure 6. Questions related to the impact of the consultant's new knowledge on the growth of the consultant's business

Source: Authors

H4: A higher level of coordination between the client and the consultant will lead to higher levels of project success.

Team cohesion is the degree to which a team is united to achieve common goals and objectives. Joint teams working on the development of information systems usually consist of several developers of client and consulting organizations who work on different parts of the project at the same time, so the contribution of each member becomes important for the completion of the project. Interconnections and coordination between team members are essential for the success of the project. Figure 7 presents questions related to the impact of inter-organizational coordination on the success of the project. Designers agree (75%) on all questions that the influence of inter-organizational coordination on project success is significant.

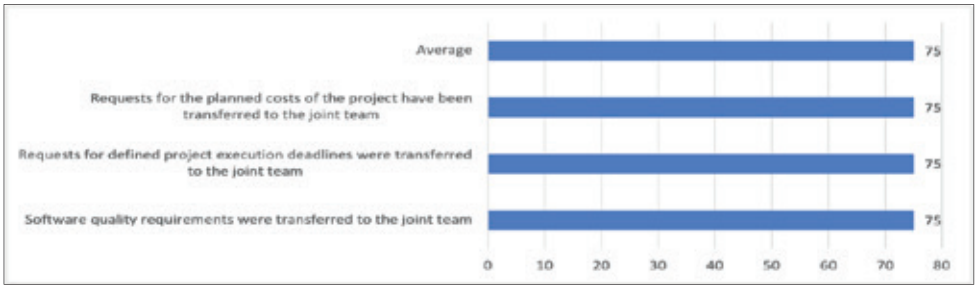


Figure 7. Issues related to the impact of inter-organizational coordination on project success

Source: Authors

H5: A higher level of coordination between the client and the consultant will lead to new knowledge for the consultants.

Knowledge sharing is the recognition of existing and available knowledge, with the aim of transferring and applying knowledge to solve specific tasks better, faster, and cheaper. Sharing knowledge, skills, ideas, and information among team members can significantly affect quality solutions in the process of project development and implementation. In the case of a joint team on the development of information systems, each member of the team participates in decision-making and is obliged to share available information and knowledge with his colleagues in order to achieve the success of the project. Figure 8 shows the questions related to the influence of inter-organizational coordination on the acquisition of consultant knowledge. Designers agree (75%) on all questions that the influence of inter-organizational coordination on the acquisition of consultant knowledge is significant.

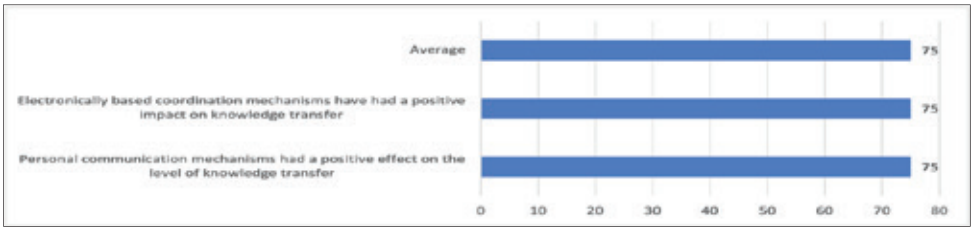


Figure 8. Questions related to the influence of inter-organizational coordination on the acquisition of knowledge by consultants

Source: Authors

H6: A higher level of coordination between the client and the consultant will lead to the business growth of the consulting organization.

Growth can be defined as an integral and continuous process, which is characteristic of all systems that have the ability to evolve over time, and thus move to higher levels of organization and more efficient states. Figure 9 shows questions related to the impact of inter-organizational coordination on the growth of the consultant's business.

Designers agree (75%) on two questions that the influence of inter-organizational coordination on the growth of business at consultants is significant, namely: (1) inter-organizational coordination helped us achieve financial growth of business (revenues, profits, own funds) and (2) inter-organizational coordination helped us achieve organizational growth (change in company structure, organizational culture, leadership style).

Designers had a neutral attitude (50%) regarding two questions about the impact of inter-organizational coordination on the growth of business at consultants, namely: (1) inter-organizational coordination helped us achieve strategic growth, i.e. competitive advantage and (2) inter-organizational coordination helped us achieve structural growth (responsibility, communication, control).

The average level of agreement is 62.5% on the impact of inter-organizational coordination on the growth of the consultant's business.

Figure 9. Questions related to the impact of inter-organizational coordination on the growth of the consultant's business

Source: Authors

H7: A higher level of client-consultant coordination will lead to lower levels of technical uncertainty.

Technical uncertainty refers to the knowledge and skills of the joint team in the development and implementation of information systems projects. It is believed that a higher level of inter-organizational coordination reduces the technical uncertainty of the project, and therefore the overall uncertainty of the project. Figure 10 shows questions related to the impact of inter-organizational coordination on the level of technical uncertainty.

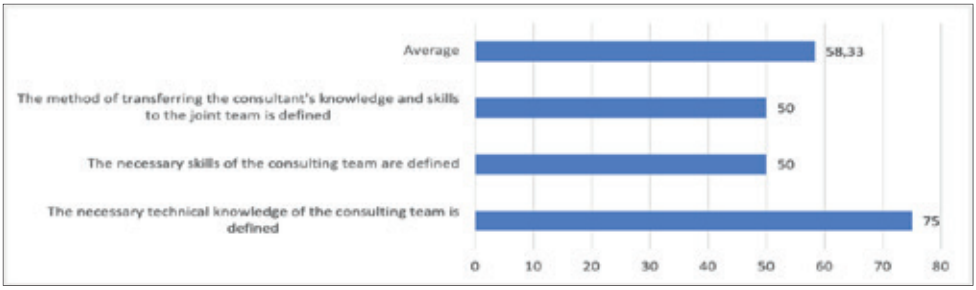


Figure 10. Questions related to the influence of inter-organizational coordination on the level of technical uncertainty

Source: Authors

Designers agree (75%) that inter-organizational coordination has a significant impact on the level of technical uncertainty in cases where the required technical knowledge of the consulting team is clearly defined.

Designers had a neutral attitude (50%) regarding two questions about the impact of inter-organizational coordination on the level of technical uncertainty, namely: (1) the necessary skills of the consulting team were defined and (2) the method of transferring the knowledge and skills of the consultant to the joint team was defined.

The average level of agreement is 58.33% on the impact of inter-organizational coordination on the level of technical uncertainty.

H8: A higher level of client-consultant coordination will lead to lower levels of requirement uncertainty.

Requirements uncertainty refers to uncertainties about the application specifications desired by clients. A higher level of inter-organizational coordination is expected to reduce the level of requirement uncertainty, as it will leverage the client's and consultant's business knowledge to better define application requirements. Figure 11 shows questions related to the impact of inter-organizational coordination on the level of uncertainty of requirements.

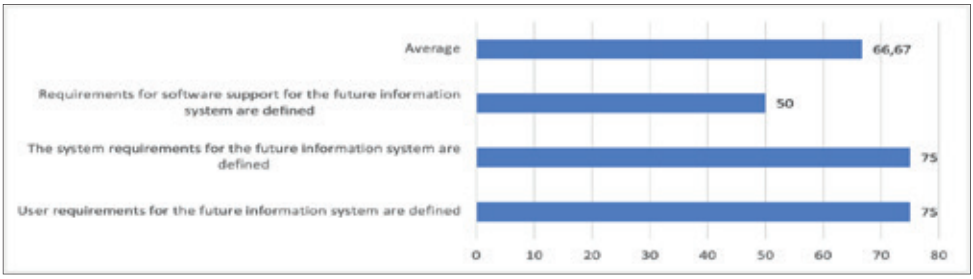


Figure 11. Questions related to the influence of inter-organizational coordination on the level of uncertainty of requirements

Source: Authors

Designers agree (75%) on two issues that inter-organizational coordination has a significant impact on the level of uncertainty of requirements: (1) user requirements for the future information system are defined and (2) system requirements for the future information system are defined.

Designers had a neutral attitude (50%) in the question about the influence of inter-organizational coordination on the level of uncertainty of requirements in the question related to the defined requirements for software support for the future information system.

The average level of agreement is 66.67% on the influence of inter-organizational coordination on the level of uncertainty of requests.

H9: A higher level of technical uncertainty will lead to lower levels of project success.

Technical uncertainty related to the level of knowledge and skills of designers leads to increased risks and deviations in project time and costs. Inexperience can

increase errors and inconsistencies and lead to a lower quality of the designed information system. In Figure 12, there are questions related to the influence of the technical uncertainty of the project on the level of success of the project.

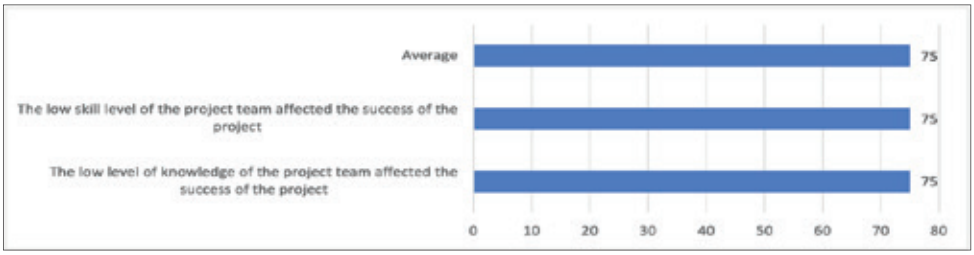


Figure 12. Questions related to the influence of the project's technical uncertainty on the level of project success

Source: Authors

Designers agree (75%) on both questions that the technical uncertainty of the project has a significant impact on the level of project success, namely: (1) the low level of knowledge of the project team affected the success of the project and (2) the low level of skills of the project team affected the success project.

The average level of agreement is 75% on the impact of the technical uncertainty of the project on the level of success of the project.

H10: A higher level of uncertainty of requirements will lead to lower levels of project success.

Uncertainty of requirements can be the main causes of project delays, cost overruns, lower project quality levels and customer dissatisfaction. In Figure 13, there are questions related to the impact of project uncertainty on the level of project success.

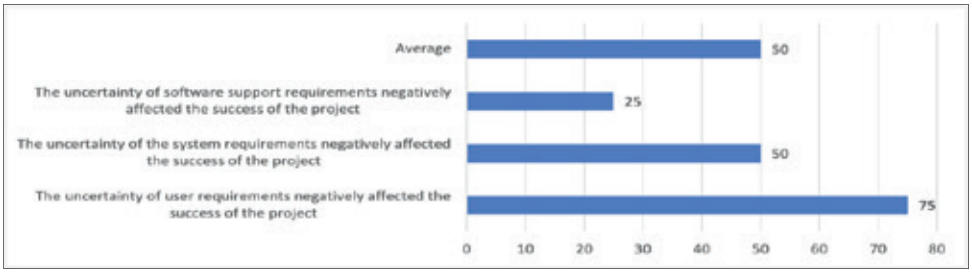


Figure 13. Questions related to the impact of project uncertainty on the level of project success

Source: Authors

Designers agree (75%) on the question that the uncertainty of user requirements for the future information system had a negative impact on the success of the project. Designers had a neutral attitude (50%) regarding the impact of the uncertainty of system requirements on the success of the project.The designers did not agree with the view (25%) that the uncertainty of the software support request affected the success of the project.The average level of agreement is 50% on the impact of project uncertainty on the level of project success.

H11: A higher level of technical project uncertainty will lead to new knowledge for consultants.

New and more complex projects require greater technical knowledge and skills of consultants. Increasing technical uncertainty increases the risks of project development and implementation. Consultants must continuously improve their knowledge and adopt new technologies. In addition, consultants must acquire knowledge about solving problems and overcoming challenges. Figure 14 shows questions related to the impact of technical uncertainty on the consultant's knowledge acquisition.

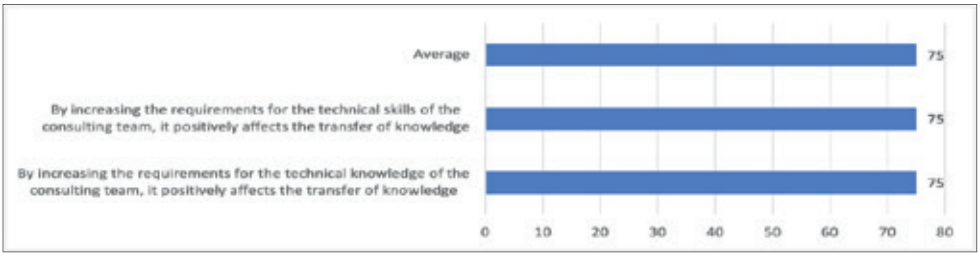


Figure 14. Questions related to the impact of technical uncertainty on the consultant's knowledge acquisition

Source: Authors

Designers agree (75%) on both questions: (1) increasing the demand for technical knowledge of the consulting team positively affects knowledge transfer and (2) increasing the demand for technical skills of the consulting team positively affects knowledge transfer.

The average level of agreement is 75% on the influence of technical uncertainty on the acquisition of consultant knowledge.

Summary results

Figure 15 presents summary results on the impact of inter-organizational coordination on project uncertainty, client goals, and consultant goals. Inter-organizational coordination is best defined by the contract between the client and the consultant. The contract is the basis for properly specifying and regulating the relationship between the client and the consultant related to future planned transactions, all potential contingencies, obligations, responsibilities and risks.

Interorganizational coordination has a significant impact on project uncertainty 62.5%, i.e. the impact of inter-organizational coordination on technical uncertainty 58.33% and demand uncertainty 66.67%. Inter-organizational coordination has a significant impact (75%) on project success. The impact of inter-organizational coordination on the consultant's goals is 66.67%, i.e. the impact on knowledge acquisition is 75% and the impact on business growth is 58.33%.

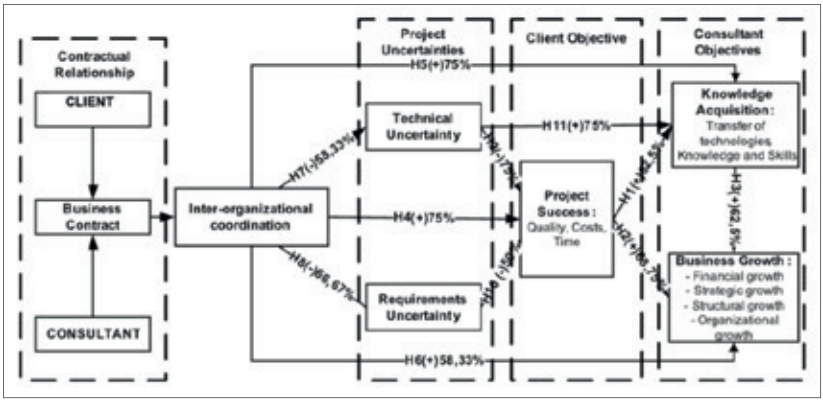


Figure 15. Results of the model of coordination and harmonization of the goals of the client and the consultant in the development of the information systems project

Source: Authors

DISCUSSION

In the paper, we defined the model and examined the impact of coordination on project uncertainty, client goals, and consultant goals. All 11 hypotheses were confirmed, and we showed that coordination has a significant impact on project uncertainty, client goals, and consultant goals. First, we determined the impact of coordination on the client's goals, and then the impact of coordination on the consultant's goals. We divided the consultant's goals into two groups: (1) acquiring knowledge and (2) business development. Since the research is also focused on the consultant, we determined that the development of their relationship is crucial for the success of the project. The role of coordination is to: (1) establish the client-consultant relationship, (2) manage the client-consultant relationship, and (3) transform the client-consultant relationship. Research has shown that a successfully completed project allows consultants to acquire new knowledge and skills that will help them achieve a competitive advantage, improve their image, get new projects and improve the success of the organization. The research contributed to the understanding of the importance and role of the contractual relationship between the client and the consultant for building a professional relationship and business success for both the client's organization and the consultant's organization. This research contributes to the understanding of coordination theory and agency theory. We found that coordination is a key factor in reducing agency problems and agency costs.The results of the research provide useful information for practice, and especially for managers of client and consulting organizations and their joint teams on the development of information systems. The managers of the client organization should understand that through the implementation of the project, the consultants must also meet their goals. Managers of the consulting organization must transfer technology, knowledge, and skills to the client organization.

This research also has its limitations. In our work, we focused more on the acquisition of knowledge and the growth of the consulting organization, and less on the acquisition of knowledge and the growth of the client organization. We examined the relationship between the goals of the client and the consultant more from the perspective of the consultant. In the research, we did not fully examine all the factors that

influence the relationship between the client and the consultant, which are defined by the agency theory.

CONCLUSION

Improving project performance is an important goal in managing information systems development projects. In projects of development and implementation of information systems where designers of client and consulting organizations are engaged, successfully implemented projects must meet the goals of the client and the consultant.

For this reason, in this paper we created a model for researching the impact of inter-organizational coordination on project uncertainty, client and consultant goals. We used data from a survey and interviews with designers of client and consulting organizations who worked on the development of information systems.

We found that coordination has a significant impact on project uncertainty, client and consultant goals.The designers noted that by harmonizing the goals of the client and the consultant, agency problems in their relationships are solved, business risks are reduced and business results are achieved.

In addition to non-formal relations, the designers emphasized the importance of formal contractual relations between the client and the consulting organization. Contracts determine who and what is allowed to do with what is owned, what will be the relationship with the people who are employed and many other mutual rights and obligations. This research contributes to information systems theory and development, coordination theory, agency theory, and contracting theory. In addition, the research provided useful information to managers related to managing the development of information systems, improving coordination, reducing agency costs and defining contractual relationships between the client and the consultant.

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SUSTAINABLE CONSUMPTION OF PRODUCTS AND CONSUMER BEHAVIOUR IN THE REPUBLIC OF SERBIA

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Abstract: *Having in mind that sustainable consumption has become an important subject in today's marketing, the paper uses literature review to analyse the theoretical approaches to sustainable consumer behaviour and models that explore the factors that affect the consumer purchasing process. In addition, empirical research was conducted during April and May 2023 with the aim of identifying the factors that impact green purchasing decisions of consumers and influence their awareness of sustainability. The survey has included 171 consumers (N=171) in the Republic of Serbia who rated different statements related to sustainable consumption and purchasing behaviour. The questionary was consisted of 28. variables referring to consumers' purchasing decisions, post-purchasing behaviour, environmental awareness, and concern. The research has also included an analysis of sustainable consumption in the context of the respondents' gender. Data processing and presentation of results were performed based on the application of descriptive statistics, t- test and factor analysis.*

Keywords*: sustainable consumption, green purchasing behaviour, sustainable business, consumer behaviour.*

JEL Classification: *M0, M3.*

INTRODUCTION

The paper explores the consumer behaviour related to sustainable consumption in contemporary environment. The concept of sustainable consumption has been widely recognised as a significant aspect of contemporary marketing and business.

In the earliest conceptual definitions, the term sustainable consumption was directly linked to production processes in organisations. Norwegian Ministry of Environment has made one of the first definitions of this term, indicating that "sustainable consumption and production is the use of services and related products, which respond

to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardise the needs of further generations" (Norwegian Ministry of Environment, 1994). Another important contribution to the concept was made at the World Summit on Sustainable Development in 2002, when it was noted as "one of the key objectives of sustainable development that promotes resource and energy efficiency" (Unated Nations, 2002). Moreover, sustainable consumption is one of the most important Sustainable Development Goals (SDGs) defined by United Nations in 2015, within The 2030 Agenda for Sustainable Development (Unated Nations, 2015).

In marketing literature, the term sustainable consumption has been given a wider meaning that includes "the process of decisions and actions regarding purchasing, product use, and the handling of any remaining tangible product after use" (Peattie, 2009). In addition, a study provided by Perčić et al. explained the marketing context of sustainable consumption in terms of adding a sustainable value to the brand (Perčić, 2023).

The starting point in this study arose from the need to provide insight into the patterns of (un)sustainable consumption due to the research gap that exists when it comes to the application of certain models and instruments for measuring consumers' attitudes towards sustainable consumption.

Regarding that sustainable consumption has become an important subject in marketing, the aim of this study was to identify the factors that influence green purchasing decisions of consumers and affect their awareness of sustainability. To answer this research question, an empirical study was conducted based on a questionnaire developed by Testa et al. within the programme of European Union (Testa, 2020). The survey has included 171 consumers (N=171) in the Republic of Serbia who rated different statements related to sustainable consumption and purchasing behaviour. The questionary was consisted of 28 variables referring to consumers' purchasing decisions, post-purchasing behaviour, environmental awareness, and concern. The research has also included an analysis of sustainable consumption in the context of the respondents' gender and age categories. Data processing and presentation of results were performed based on the application of descriptive statistics, t- test and factor analysis.

LITERATURE OVERVIEW

In early studies, the term sustainable consumption was often observed in the context of ecological modernization of production, with a focus on domestic consumption and individual consumer decisions related to environmental issues (Martens, 2005); (Welch, 2015). However, the practice has shown that dealing with unsustainable consumption patterns must also include holistic and systematic point of view and cannot be overcome with only an individual perspective of consumers. Jaeger-Erben & Offenberger have also indicated that sustainable consumption should be considered from a broader context that would include the framework of individual consumption patterns in combination with specific socio-cultural and socio- technical factors (Jaeger-Erben, 2014). An even broader approach to the study of sustainable consumption was made by Govindan who analysed the supply chains on the example of food industry and emphasised the necessity of stakeholder approach in addressing the sustainability issues (Govindan, 2018). Other significant scientific studies (Anantharaman, 2018); (Corsini,

2019) have pointed out the importance of individual behaviour change and sustainable consumption as main elements of engendering more sustainable societies, as well as their interdependence of social conditions. Studying the consumer perspective of sustainable consumption, Geiger et al. have recognised that the process takes place in "different areas (e.g., food, clothing, mobility) and different phases (e.g., acquisition, usage, disposal)" (Geiger, 2018).

The concept of sustainable consumption has been explored from diverse theoretical approaches, and it has been widely recognised by academicians, policymakers, and practitioners (Quoquab, 2020); (Haider, 2022); (Koval, 2023); (Maduku, 2024). However, the scientific research on this topic is still in its infancy when it comes to the implementation of instruments and models which explore the factors that affect consumer behaviour and their buying decisions regarding sustainability. According to literature review, a few scientific studies were based on the application of certain models in the examination of sustainable consumption and green marketing. For instance, McDonald & Oates provided an empirical test of 40 sustainability activities of consumers that affect environment (McDonald, 2006). Furthermore, a study conducted by Young et al. demonstrated the purchasing process for green consumers regarding consumer technology products in the United Kingdom (UK) (Young, 2010). In addition, Do Paço et al. have developed a model for testing the relationships between consumer environmental values, attitudes, and behaviours (Do Paço, 2013). The model was successfully applied in England, Germany, Portugal, and Spain. A significant scientific contribution was made by Chekima et al. who analysed the influence of environmental knowledge, cultural values, environmental advertising as well as consumers' demographic factors on their purchasing decisions and sustainable consumption (Chekima, 2016). Lim has developed a "theoretical toolbox" that marketing and consumer behaviour researchers can use in further explorations of sustainable consumption and ecological marketing (Lim, 2017). Another significant study made by Torres-Ruiz, Vega-Zamora & Parras-Rosa was investigating sustainable consumptions of organic food in Spain (Torres-Ruiz, 2018). The authors have proposed an operational model that illustrated the purchasing process and analysed all the steps along the way. Bearing in mind the aim of this study, it is useful to state the findings of a research conducted by Testa et al. who recognised the following seven drivers of green consumptions: "behavioural factors, socio-demographic variables, intrapersonal values—environment, intrapersonal values—non environment, personal capabilities, products and producers-related factors and context-related factors" (Testa F. P., 2021). A special contribution of this study is that the survey was tested in different countries in Europe, such as France, Spain, Italy, Germany, and the United Kingdom.

METHODOLOGY

The theoretical propositions in the study are based on the application of literature review, as a basic research method that aimed to chronologically analyse and compare different approaches to the concept of sustainable consumption. Starting from the relevant studies presented in the literature review, the following research questions were defined.

RQ1 What are the main factors that influence consumer decisions in sustainable consumption and affect their awareness of sustainability?

RQ2 Is there a difference in consumer behaviour and attitudes towards sustainable consumption between genders?

To address the stated research questions an instrument developed by Testa et al. was used in this study (Testa F. I., 2020). Regarding that the research instrument was successfully tested in five different countries in Europe, the questionnaire was considered suitable for applying in Serbia on a selected sample of 171 consumers. The original survey made by Testa et al. has included different variables that have been assumed to affect green consumption, such as: purchasing and post-purchasing intentions, psychographic dimensions of consumers, trust, and greenwashing, ecolabeling and information on green products. Similar variables were also tested in a research conducted on a large sample of 700 participants in Italy in Sweden (Siminelli, 2017). The authors explored the relations between variables such as consumers' decisions in purchase, utilisation, and disposal of products with personal lifecycles. In the study presented in this paper, three dimensions of sustainable consumption were investigated. The questionary was consisted of 28 variables referring to consumers' purchasing decisions, post-purchasing behaviour, environmental awareness and concern. The respondents used a five-point scale (0=totally disagree; 1 = disagree; 2= somewhat disagree; 3= somewhat agree; 4=agree; 5=totally agree) for assessing the statements. Data processing and presentation of results were performed by descriptive statistics and factor analysis. Cronbach's Alpha scores for all three dimensions of sustainable consumption were a>0.8 indicating high reliability of the research instrument (table 1).

Table 1. Cronbach's Alpha scores for three dimensions of sustainable consumption

Cronbach's Alpha Variables related to purchasing decisions (Var 1- Var 9)		N of Items
	.944	9
Cronbach's Alpha Variables related to post - purchasing behaviour (Var 10 – Var 18)		
	.922	9
Cronbach's Alpha Variables related to consumers' environmental awareness, and concern (Var 19 – Var 28)		
	.896	10

Source: Authors' calculations in SPSS

RESULTS AND DISCUSSION

The survey was conducted on a sample of 171 consumers (N=171) in the Republic of Serbia, during April and May 2023. Respondents of different age categories were represented in the sample (table 2). However, most of the consumers (27.5%) belonged to the 35-44 age group.

Table 2. Age categories of respondents – descriptive statistics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	11	6.4	6.4	6.4
	25-34	38	22.2	22.2	28.7
	35-44	47	27.5	27.5	56.1
	45-54	34	19.9	19.9	76.0
	55-64	30	17.5	17.5	93.6
	65- 80	11	6.4	6.4	100.0
	Total	171	100.0	100.0	

Source: Authors' calculations in SPSS

The gender structure of the sample is shown in table 3, which indicates that male respondents were in the majority of 53.8% compared to 46.2% of female respondents.

Table 3. Gender structure of the sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	92	53.8	53.8	53.8
	female	79	46.2	46.2	100.0
	Total	171	100.0	100.0	

Source: Authors' calculations in SPSS

Furthermore, the research has included factor analysis of the examined variables. The data was tested with Kaiser-Meyer-Olkin (KMO) test to indicate the suitability for structure detection. Bearing in mind that the result was 0.796, (p= 0.00 <0.05) which was higher than the proposed minimum of 0.6 it was concluded that the data was suitable for the factor analysis.

Table 4. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.796
Bartlett's Test of Sphericity	Approx. Chi-Square	9063.285
	Df	378
	Sig.	.000

Source: Authors' calculations in SPSS

The application of factor analysis with the extraction method of principal component analysis provided the table of communalities before and after extraction. In principal component analysis it is assumed that the communalities are initially 1. According to the results presented in table 5, the values of communalities after extraction for 27 variables were high, between 0.769 and 0.947. The lowest value (0.648) is recorder for Var 26: I know the meaning of the term "recycled".

Table 5. Communalities

	Initial	Extraction
Var 1:When buying food, I carefully evaluate the amount I need to avoid waste	1.000	.776
Var 2:When I buy vegetables, I look for local produce	1.000	.931
Var 3:When I buy paper products, I always choose the ones made with recycled paper	1.000	.946
Var 4:When I buy bottled beverages, I look for recycled packaging	1.000	.928
Var 5: When I buy groceries, I choose food with a low environmental impact	1.000	.797
Var 6: When I buy biscuits or similar products, I choose the ones with recyclable packaging	1.000	.887
Var 7:When I buy a laundry detergent, I choose the one with the lowest environmental impact	1.000	.900
Var 8: When I buy soap for personal care, I choose the one with the lowest environmental impact	1.000	.816
Var 9: I usually buy food closer to its expiration date to help supermarkets avoid waste	1.000	.856
Var 10: If I have a product that is closer to the expiration date, I eat it first	1.000	.888
Var 11: When I prepare my meals, I carefully evaluate	1.000	.911
Var 12: When I do my laundry, I use the recommended dosage on the detergent packaging	1.000	.890
Var 13: When I finish a shower-gel I recycle its bottle	1.000	.805
Var 14:When I finish a packaged food product, I carefully separate the packaging for recycling	1.000	.769
Var 15: When I use a shampoo, I use the amount indicated on its packaging	1.000	.789
Var 16: When I finish a liquid hand-soap I usually refill its bottle	1.000	.922
Var 17: I eat food even after the "best before" date	1.000	.814
Var 18:When I finish a packaged food product, I try to reuse the packaging if possible	1.000	.777
Var 19: I recycle my paper, plastic, and metallic waste	1.000	.853
Var 20: I try to save water and energy in my house	1.000	.825
Var 21: I do my best to buy local products	1.000	.887
Var 22: I buy products which have a low impact on the environment	1.000	.919
Var 23: I buy products made in safe and healthy workplaces	1.000	.913
Var 24: I frequently change my preferences in shopping	1.000	.947
Var 25: As a consumer, it is worth making efforts to protect and improve the environment	1.000	.836
Var 26: I know the meaning of the term "recycled".	1.000	.648
Var 27: I know the meaning of the term "organic".	1.000	.920
Var 28: I know the meaning of the term "energy-efficient".	1.000	.901

Extraction Method: Principal Component Analysis.

Source: Authors' calculations in SPSS

The table of Total Variance Explained (table 6) demonstrates that five factors have eigenvalues higher than 1. Together they account more than 85% of the variability in the original variables.

Table 6. Total Variance Explained

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.492	51.756	51.756	14.492	51.756	51.756
2	4.180	14.928	66.684	4.180	14.928	66.684
3	2.468	8.813	75.497	2.468	8.813	75.497
4	1.725	6.162	81.659	1.725	6.162	81.659
5	1.189	4.247	85.907	1.189	4.247	85.907
6	.904	3.230	89.136			
7	.749	2.675	91.811			
8	.572	2.041	93.852			
9	.355	1.269	95.121			
10	.241	.860	95.981			
11	.186	.663	96.644			
12	.160	.572	97.216			
13	.140	.499	97.715			
14	.117	.419	98.134			
15	.096	.342	98.477			
16	.079	.281	98.758			
17	.076	.271	99.029			
18	.053	.188	99.217			
19	.046	.163	99.380			
20	.039	.138	99.518			
21	.031	.109	99.627			
22	.026	.094	99.721			
23	.025	.090	99.811			
24	.018	.064	99.875			
25	.015	.053	99.928			
26	.012	.042	99.969			
27	.006	.023	99.992			
28	.002	.008	100.000			

Extraction Method: Principal Component Analysis.

Source: Authors' calculations in SPSS

Table 7 presents the Component Matrix with the loadings of 28 variables on the five factors extracted. The components can be interpreted as the correlation of each item with the components. According to the presented results, the first factor is highly associated with the variables related to consumers' purchasing and post -purchasing behaviour. The second factor is highly associated with the variables related to consumers' environmental awareness and concern.

Table 7. Component Matrix

	Component				
	1	2	3	4	5
Var 1:When buying food, I carefully evaluate the amount I need to avoid waste	**.803**	-.249	.051	.109	-.232
Var 2:When I buy vegetables, I look for local produce	**.899**	-.093	.288	.038	-.174
Var 3:When I buy paper products, I always choose the ones made with recycled paper	**.909**	-.090	.292	.050	-.157
Var 4:When I buy bottled beverages, I look for recycled packaging	**.901**	-.089	.289	.014	-.156
Var 5: When I buy groceries, I choose food with a low environmental impact	.831	-.032	.295	.046	.130
Var 6: When I buy biscuits or similar products, I choose the ones with recyclable packaging	**.876**	.300	.143	-.050	-.087
Var 7:When I buy a laundry detergent, I choose the one with the lowest environmental impact	**.892**	-.295	-.025	-.020	-.127
Var 8: When I buy soap for personal care, I choose the one with the lowest environmental impact	**.864**	-.175	.000	-.050	-.190
Var 9: I usually buy food closer to its expiration date to help supermarkets avoid waste	.346	.644	.320	-.168	-**.736**
Var 10: If I have a product that is closer to the expiration date, I eat it first	**.683**	.109	-.142	-.486	.391
Var 11: When I prepare my meals I carefully evaluate	**.833**	.007	-.144	-.442	-.002
Var 12: When I do my laundry, I use the recommended dosage on the detergent packaging	**.766**	.073	-.122	-.471	.247
Var 13: When I finish a shower-gel I recycle its bottle	**.820**	-.006	.061	-.359	-.027
Var 14:When I finish a packaged food product, I carefully separate the packaging for recycling	**.732**	-.056	.155	.446	.084
Var 15: When I use a shampoo, I use the amount indicated on its packaging	.744	-.088	-.445	.157	.070
Var 16: When I finish a liquid hand-soap I usually refill its bottle	**.875**	-.126	-.341	.140	-.065
Var 17: I eat food even after the "best before" date	**.850**	-.149	-.076	.087	-.235
Var 18:When I finish a packaged food product, I try to reuse the packaging if possible	.626	.130	-.558	.121	.208
Var 19: I recycle my paper, plastic, and metallic waste	.567	**.705**	-.116	.009	-.143
Var 20: I try to save water and energy in my house	.247	**.848**	.094	.077	.171
Var 21: I do my best to buy local products	**.707**	-.002	-.421	**.747**	.103

Var 22: I buy products which have a low impact on the environment	**.805**	-.429	-.248	.143	-.076
Var 23: I buy products made in safe and healthy workplaces	.388	**.751**	-.286	.339	.026
Var 24: I frequently change my preferences in shopping	.137	**.924**	-.020	.240	.129
Var 25: As a consumer, it is worth making efforts to protect and improve the environment	.805	.120	-.088	-.335	.231
Var 26: I know the meaning of the term "recycled".	.084	.620	.504	-.043	.003
Var 27: I know the meaning of the term "organic".	.463	-.220	**.757**	.261	.397
Var 28: I know the meaning of the term "energy-efficient".	.567	-.343	.501	.211	**.708**

Extraction Method: Principal Component Analysis.

5 components extracted.

Source: Authors' calculations in SPSS

Bearing in mind the results of factor analysis, the further part of this study has included the testing of 19 variables that were highly associated with the first component. To answer the Research Question 2, t test was applied with the purpose of finding the difference in answers between male and female respondents. The issue of gender equality and different attitudes towards the concept of sustainability in consumption between men and women is recognised as a very important topic, which was pointed out by many authors (Dzialo, 2017); (Kennedy, 2018); (Godin, 2021). Moreover, MacGregor explains the gender gap in understanding the sustainable consumption by underlining "the connection that exists between women's caring and ecological politics" (MacGregor, 2006). Similar, Brough, Wilkie & Isaac pointed out scientific evidence showing that concepts of greenness and femininity are cognitively connected (Brough, 2016). Other authors (Fathallah, 2020) have recognised that there is lack of studies dealing with differentiation between genders in energy studies. According to findings presented in this study (table 8), the higher means were registered in female answers for all 19 tested variables. However, an Independent Sample test demonstrated that the difference in male and female answers were statistically significant ($p= 0.00 <0.05$) for the following variables: Var 2:When I buy vegetables, I look for local produce, $t(169) = -5.311$; Var 3:When I buy paper products, I always choose the ones made with recycled paper, $t(169)= -5.114$;Var 4: When I buy bottled beverages, I look for recycled packaging, $t(169) = -5.237$;Var 8: When I buy soap for personal care, I choose the one with the lowest environmental impact , $t(169)= -7.335$;Var 10: If I have a product that is closer to the expiration date, I eat it first , $t(169) = -2.264$;Var 11: When I prepare my meals I carefully evaluate, $t(169)= -3.529$;Var 12: When I do my laundry, I use the recommended dosage on the detergent packaging, $t(169) =-2.256$;Var 13: When I finish a shower-gel I recycle its bottle, $t(169)= -2.431$;Var 15: When I use a shampoo, I use the amount indicated on its packaging, $t(169) = -6.535$; Var 16: When I finish a liquid hand-soap I usually refill its bottle , $T(126)= -6.837$;Var 21: Var 21: I do my best to buy local products , $t(126)= -4.122$. The highest means in female answers were registered for variables: Var 22: I buy products which have a low impact on the environment (M=4.62) and Var 25: As a consumer, it is worth making efforts to protect and improve the environment (M=4.03).

Table 8. Group statistics in male and female answers related to sustainable consumption

Group Statistics					
	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Var 1:When buying food, I carefully evaluate the amount I need to avoid waste	male	92	2.8370	.73045	.07616
	female	79	**3.6582**	.65801	.07403
Var 2:When I buy vegetables, I look for local produce	male	92	2.9457	.65237	.06801
	female	79	**3.4937**	.69565	.07827
Var 3:When I buy paper products, I always choose the ones made with recycled paper	male	92	2.9565	.64473	.06722
	female	79	**3.4810**	.69542	.07824
Var 4:When I buy bottled beverages, I look for recycled packaging	male	92	2.9565	.64473	.06722
	female	79	**3.4937**	.69565	.07827
Var 5: When I buy groceries, I choose food with a low environmental impact	male	92	3.1196	.64352	.06709
	female	79	**3.5190**	.61729	.06945
Var 6: When I buy biscuits or similar products, I choose the ones with recyclable packaging	male	92	2.946	.6353	.0662
	female	79	**3.063**	.5393	.0607
Var 7:When I buy a laundry detergent, I choose the one with the lowest environmental impact	male	92	2.9891	.60209	.06277
	female	79	**3.8354**	.58683	.06602
Var 8: When I buy soap for personal care, I choose the one with the lowest environmental impact	male	92	3.0000	.59300	.06182
	female	79	**3.6962**	.64757	.07286
Var 10: If I have a product that is closer to the expiration date, I eat it first	male	92	3.8152	.64500	.06725
	female	79	**4.0000**	.35806	.04028
Var 11: When I prepare my meals I carefully evaluate	male	92	3.6304	.65829	.06863
	female	79	**3.9367**	.43388	.04882
Var 12: When I do my laundry, I use the recommended dosage on the detergent packaging	male	92	3.7717	.63077	.06576
	female	79	**3.9620**	.43686	.04915
Var 13: When I finish a shower-gel I recycle its bottle	male	92	3.6304	.76629	.07989
	female	79	**3.8861**	.57707	.06493
Var 14:When I finish a packaged food product, I carefully separate the packaging for recycling	male	92	2.8587	1.10525	.11523
	female	79	**3.3165**	1.09245	.12291
Var 15: When I use a shampoo, I use the amount indicated on its packaging	male	92	3.2826	.70049	.07303
	female	79	**3.8987**	.49601	.05581
Var 16: When I finish a liquid hand-soap I usually refill its bottle	male	92	3.2065	.67185	.07005
	female	79	**3.8481**	.53322	.05999
Var 17: I eat food even after the "best before" date	male	92	3.0870	.87269	.09098
	female	79	**3.7342**	.82755	.09311
Var 21: I do my best to buy local products	male	92	3.0652	.98119	.10230
	female	79	**3.6203**	.73909	.08315
Var 22: I buy products which have a low impact on the environment	male	92	3.3043	.76660	.07992
	female	79	**4.6203**	.77300	.08697
Var 25: As a consumer, it is worth making efforts to protect and improve the environment	male	92	3.7717	.69698	.07267
	female	79	**4.0380**	.33753	.03797

Source: Authors' calculations in SPSS

Table 9. Independent Samples Test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Var 1	Equal variances assumed	.208	.649	-7.671	169	.000	-.82127	.10706	-1.03261	-.60993
	Equal variances not assumed			-7.733	168.599	.000	-.82127	.10621	-1.03094	-.61160
Var 2	Equal variances assumed	13.888	.000	-5.311	169	.000	-.54802	.10318	-.75171	-.34433
	Equal variances not assumed			-5.285	161.396	.000	-.54802	.10369	-.75278	-.34325
Var 3	Equal variances assumed	15.681	.000	-5.114	169	.000	-.52449	.10256	-.72695	-.32204
	Equal variances not assumed			-5.085	160.628	.000	-.52449	.10315	-.72819	-.32079
Var 4	Equal variances assumed	15.720	.000	-5.237	169	.000	-.53715	.10257	-.73964	-.33466
	Equal variances not assumed			-5.206	160.605	.000	-.53715	.10317	-.74089	-.33341
Var 5	Equal variances assumed	7.829	.006	-4.123	169	.000	-.39942	.09687	-.59066	-.20819
	Equal variances not assumed			-4.136	166.914	.000	-.39942	.09656	-.59007	-.20878

Var 6	Equal variances assumed	1.275	.261	-1.294	169	.198	-.1176	.0909	-.2972	.0619
	Equal variances not assumed			-1.310	168.981	.192	-.1176	.0898	-.2950	.0597
Var 7	Equal variances assumed	1.604	.207	-9.272	169	.000	-.84631	.09128	-1.02651	-.66612
	Equal variances not assumed			-9.290	166.286	.000	-.84631	.09110	-1.02618	-.66645
Var 8	Equal variances assumed	13.567	.000	-7.335	169	.000	-.69620	.09491	-.88357	-.50883
	Equal variances not assumed			-7.286	159.768	.000	-.69620	.09555	-.88491	-.50749
Var 10	Equal variances assumed	19.174	.000	-2.264	169	.025	-.18478	.08163	-.34592	-.02364
	Equal variances not assumed			-2.357	146.085	.020	-.18478	.07839	-.33971	-.02986
Var 11	Equal variances assumed	30.021	.000	-3.529	169	.001	-.30627	.08680	-.47763	-.13492
	Equal variances not assumed			-3.637	158.913	.000	-.30627	.08422	-.47261	-.13994
Var 12	Equal variances assumed	12.936	.000	-2.256	169	.025	-.19029	.08434	-.35678	-.02379
	Equal variances not assumed			-2.318	162.063	.022	-.19029	.08210	-.35241	-.02816
Var 13	Equal variances assumed	14.456	.000	-2.431	169	.016	-.25564	.10514	-.46321	-.04808
	Equal variances not assumed			-2.483	166.278	.014	-.25564	.10295	-.45889	-.05239

Var 14	Equal variances assumed	.042	.838	-2.715	169	.007	-.45776	.16863	-.79065	-.12487
	Equal variances not assumed			-2.717	165.670	.007	-.45776	.16848	-.79040	-.12512
Var 15	Equal variances assumed	19.367	.000	-6.535	169	.000	-.61613	.09428	-.80224	-.43002
	Equal variances not assumed			-6.703	163.329	.000	-.61613	.09191	-.79761	-.43464
Var 16	Equal variances assumed	4.554	.034	-6.837	169	.000	-.64158	.09384	-.82683	-.45633
	Equal variances not assumed			-6.957	168.004	.000	-.64158	.09222	-.82365	-.45951
Var 17	Equal variances assumed	.044	.834	-4.952	169	.000	-.64722	.13071	-.90526	-.38919
	Equal variances not assumed			-4.972	167.317	.000	-.64722	.13018	-.90423	-.39021
Var 21	Equal variances assumed	4.471	.036	-4.122	169	.000	-.55504	.13464	-.82083	-.28924
	Equal variances not assumed			-4.210	166.287	.000	-.55504	.13183	-.81531	-.29476
Var 22	Equal variances assumed	.041	.840	-11.148	169	.000	-1.31591	.11804	-1.54893	-1.08288
	Equal variances not assumed			-11.141	164.694	.000	-1.31591	.11812	-1.54912	-1.08269
Var 25	Equal variances assumed	27.162	.000	-3.097	169	.002	-.26624	.08597	-.43596	-.09652
	Equal variances not assumed			-3.247	135.686	.001	-.26624	.08199	-.42838	-.10409

Source: Authors' calculations in SPSS

Considering the presented findings, it can be concluded that female respondents from the sample showed higher levels of sustainable consumption intentions in all three dimensions of behaviour: purchasing, post-purchasing and environmental awareness and concern. According to literature review, the similar study was conducted by Bulut, Kökalan & Doğan on a sample of 393 participants in Turkey. The authors indicated that women demonstrated a higher level of "sustainable consumption behaviour both in overall behaviour and tendency to reuse products" (Bulut, 2017). Similar, Grau-Berlanga et al. have stated that women show higher levels of sustainable consumption and presented the practical implications of these findings (Grau-Berlanga, 2023). However, different conclusions and results were demonstrated in a study conducted by Booi-Chen & Teck-Chai, who did not find significant differences between male and female consumers (Booi-Chen, 2009). Another significant study that was conducted on a large sample of 3.000 households in France (Lazaric, 2020) has also showed the importance of age and gender for spurring sustainable consumption. In addition, an experimental study that was carried out by Costa Pinto, Herter, Rossi & Borges has shown that gender sustainable intentions depend on personal and social identity (Costa Pinto, 2014). According to their findings when personal identity was salient, female participants demonstrated higher levels of sustainable consumption compared with male participants. On the contrary, if the social identity was salient, the levels of sustainable consumption within men population have increased at the same levels as female respondents' attitudes. The presented findings in this research may be also compared with the study conducted by Siminelli who demonstrated that female participants positively influenced sustainable behaviours in the survey (Siminelli, 2017).

CONCLUSION

The findings presented in this paper has provided an additional insight into scientific research of sustainable consumption behaviour on the example of the Republic of Serbia.

However, certain limitations should be considered when interpreting the results, such as the systemic perspective of sustainable consumption, given that social and cultural factors were not regarded in this empirical research. However, the study has a particular scientific and practical contribution, which is reflected in the fact that a research instrument that has already been successfully tested in European countries, was applied in examining sustainable consumption behaviour in the Republic of Serbia. The testing of this instrument was further expanded through the analysis of the attitudes of respondents belonging to different genders.

The survey was consisted of 28 variables referring to consumers' sustainable behaviour in consumption that were reduced by factor analysis on 19 variables, which were further explored regarding the respondents' gender differences. The largest number of selected variables referred to consumers' purchasing decisions and post-purchasing behaviour, while a slightly smaller number of variables included attitudes towards sustainable awareness and concern. The results of the study indicated that there is a significant statistical difference in consumer behaviour and attitudes towards sustainable consumption between genders, in favour of female respondents who demonstrated higher levels of sustainable behaviour in all three dimensions that were tested in this survey: purchasing behaviour, post-purchasing decisions, environmental aware-

ness and concern.

The results of this study can be used for future research on sustainable consumption, as well as for defining guidelines for the effective practice of consumer behaviour that will be in accordance with the principles of sustainable development.

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ORIGINALNI NAUČNI RAD / ORIGINAL SCIENTIFIC PAPER

ANALYSIS OF THE INFLUENCE OF WORKING TIME FLEXIBILITY AND LABOUR LAW STATUS FLEXIBILITY ON THE REDUCTION OF THE UNEMPLOYMENT RATE

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Abstract: *With the aim of analyzing the impact of employment in the observed flexible forms of work on the unemployment rate in Austria, Croatia, Italy, Hungary and Slovenia, the author systematically investigated and analyzed the impact of working time flexibility and labour law status flexibility on the unemployment rate. The aim of this paper is to investigate the connection between the unemployment rate and the proportion of people surveyed in the sample who work in the following flexible forms of work: work in shifts, evening work, night work, work on Saturdays, work on Sundays and work from home. The research in the paper was conducted on the EU LFS official data set obtained on the basis of the RPP 35/2020-LFS project approved by the European Commission and Eurostat. The author analyzed a sample of 447,031 respondents in the period from 2008 to 2018. In the research part of the work, a statistically significant model of the linear association of the criterion variable of the unemployment rate with the predictor variable SENSSH and a statistically significant model of the nonlinear association of the criterion variable of the unemployment rate with the predictor variable SENSSH will be generated for each observed EU country. Based on an extensive analysis of data from selected EU member states, results were obtained that indicate an evident reduction in the unemployment rate in 80% of the observed countries through the introduction of flexible forms of employment.*

Keywords*: flexible forms of work, unemployment rate, labour market, EU countries.*

JEL Classification: *J21, J64, O17, O52.*

INTRODUCTION

The extent of the presence of non-standard forms of employment in different economies depends on the applicable laws, the offer on the demand side (employers) and the interest in that offer on the supply side (employees). Non-standard employment

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benefits employers more than employees because it often implies worse working conditions and lower wages. (Zieliński, 2020) (Holscher, Perugini, & Pompei, 2011) write about wage inequality, flexibility and duality of the labour market in Eastern and Western Europe. The authors show the complexity and heterogeneity of the labour market of EU member states in 2007 at the beginning of the economic crisis in the context of components related to differences in earnings, with a special emphasis on the dimensions of labour market flexibility that can be identified with contractual arrangements - temporary versus permanent employment and self-employment.

A large number of organizations have recently experienced various changes in organizational structures and business processes as a result of changes in the business environment. (Galić, Sudarić, & Galić, 2022) From 2007 to today, certain previously mentioned changes have taken place: from legislative, institutional, technological to social and the very frequency of application of contractual arrangements, such as temporary employment and self-employment. It would be interesting to compare the incidence of the aforementioned contractual arrangements in 2020 and 2021 in the context of the crisis caused by the pandemic.

Likewise, job insecurity affects individual well-being and organizational performance. Many studies show a correlation between job insecurity and flexible employment. (Rehman, Hawryszkiewycz, Sohaib, Namisango, & Samad Dahri, 2023) However, this area is certainly not yet sufficiently researched, and this work aims to analyze the issue in the form of correlation between the working time flexibility and the labour law status flexibility and the economic development of selected countries of the European Union through their effect on reducing the unemployment rate, and conclusions are drawn individually, for each country. The countries were selected based on their geopolitical position and similarities in the mentality and work habits of the population, and an additional condition was EU membership. By using non-linear regression models, knowledge about complex interactions on the labour market was deepened, with a special focus on the effects of the flexibility model, which is more pronounced in certain EU countries. Also, using non-parametric methods, differences in the flexibility of individual labour markets were precisely identified, which gives an in-depth insight into the concrete state of the labour market of selected EU countries in the period from 2008 to 2018.

The research is based on the following research question:

- Is the unemployment rate lower in those countries that have a greater share of flexible forms of work – work in shifts, evening and night work, work on Saturdays and Sundays and work from home?

In accordance with previous theoretical knowledge and empirical research, the hypothesis that will be accepted or rejected by the research is:

Hypothesis 1 (H1).

With the increase in the share of work in shifts, evening and night work, work on Saturdays and Sundays, and work from home, the unemployment rate decreases.

Explanation:

A statistically significant model will be generated for each EU country:

a) linear associations of the criterion variable *unemployment rate* with the pre-

dictor variable *SENSSH*[1]

b) non-linear associations of the criterion variable *unemployment rate* with the predictor variable *SENSSH*

Statistical processing and analysis of hypothesis H1. will receive conclusions about the impact of flexible forms of work analyzed in the hypothesis on the unemployment rate as the most commonly used indicator of the prosperity of the labour market and an important measure that projects the state of the economy, which consequently affects the level of development of the countries that are the subject of analysis in the hypothesis H1.

The aim of the paper is to analyze the relationship between the unemployment rate and the share of flexible forms of employment. Although many authors have made their contribution in the field of flexibility in the labour market, this work will additionally try to contribute to filling the gap in the literature, the knowledge and conclusions of which sought to perceive the role and significance of incorporating flexible forms of work in the form of reducing the unemployment rate of people on the labour market. The work includes research and analysis of the impact of integrating flexible forms of work in Austria, Croatia, Italy, Hungary and Slovenia in the period from 2008 to 2018, in a sample of 447,031 people[2].

Internal coherence in the research process in the paper is achieved through a series of six chapters. In the introductory part of the paper, initial considerations are presented, the need for research, its justification and relevance are explained. Also, a research question is asked and the basic hypothesis of the work is defined on the basis of which the research is conducted. In this chapter, the goal of the research is defined. The second chapter provides an overview of the main achievements in the field of labour market flexibility and its impact on unemployment rates in the European Union based on scientific and professional literature, referring to eminent authors in the said field. In the third chapter, the variables that will be used in the work and the methodology of their calculation will be defined. Furthermore, in the results and discussion chapter, the research sample will be analyzed and the research data will be statistically processed and analyzed. Likewise, the subject and problem of the research will be discussed, analyzing the existing information and its sources, checking the set hypothesis with the obtained results of the conducted research.

After the fourth chapter, there is a conclusion in which the results of the research will be summarized, the connection between the contributions and the goals will be shown, and suggestions for future research on the described issue will be presented. After the conclusion, the literature will be cited.

LITERATURE OVERVIEW

Several authors deal with the subject of labour market flexibility, employment

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1 SENSSH = the total number of people who work in one of the following flexible forms of work: in shifts/evening work/night work/work on Saturdays and Sundays/work from home

2 The data presented in this paper are a segment of the empirical part of the author's doctoral dissertation in which the unemployment rate in the EU is analyzed in the context of the increase / decrease in the share of flexible forms of work: shift work, evening work, night work, work on Saturdays, work on Sundays and work from home.

and unemployment rates. One of the most relevant authors is certainly (Baráth & Wojčák, 2020) who in their work analyzed the effects of changes in the unemployment rate, GDP per capita and reduced working hours in selected European countries. At the same time, in the same article, they assert which of the economic indicators significantly directly or indirectly affect the flexibility of employee selection and work-life balance in the selected countries. The same authors (Baráth & Wojčák, 2017) wrote three years earlier about the differences in the application of part-time working hours in EU countries, their advantages and disadvantages. Baráth and Wojčák summarized the positive and negative aspects of fixed-term work, its applications in organizations, advantages and disadvantages for employees in EU countries. (Sweet & Meiksins, 2012) state that the new economy requires more flexible forms of work. Likewise, (Avram, 2020) points out that jobs with unstable working hours and wages are part of the long-term trend towards deregulation of the labor market. In his work, (Zieliński, 2019) examines the correlation between changes in the level of employment and the unemployment rate and the share of non-standard (flexible) forms of employment in the countries of the European Union in a long-term perspective. The results of the analysis show that Germany has become the most flexible economy (both in terms of response to changes in employment levels and unemployment rates) together with Luxembourg, Greece, Spain and Poland, which are also characterized by relatively high flexibility. (Pavlopoulos & Chkalova, 2022) state that part-time working hours are most effective in protecting workers from unemployment in companies that have extended the use of the program to many workers and relatively few hours, and that have either moderately used agency temporary workers or extensively used fixed-term contracts.

On the other hand, employees are reluctant to accept non-standard forms of employment due to the following reasons: the risk of remaining in the flexible segment of the labour market, greater probability of unemployment, worse working conditions, lower levels of wages and social benefits, and fewer opportunities for development and advancement. (Need, Steijn, & Gesthuizen, 2005), (Redpath, Hurst, & Devine, 2009) and (Fouarge, de Grip, Smits, & de Vries, 2011). (Vansteenkiste, Verbruggen, & Sels, 2016) points out that people with adaptable careers are not inclined to search for flexible employment. In addition, the foregoing may in certain cases prevent the likelihood of re-employment of people. People who sought employment more flexibly also became underemployed more often and as such experienced a more negative quality of work.

Job insecurity can be analyzed by investigating non-permanent and part-time employment (Choonara, 2019). Labor relations based on temporary employment are the central dimension of job insecurity, which affects greater job insecurity and encourages the emergence of unemployment. (Almeida & Santos, 2020) and the authors (Dosi, Pereira, Roventini, & Virgillito, 2017) state that more "flexible" and "fluid" labour markets, although they allow a faster redistribution of labour among companies, can also make the entire economic system more fragile, prone to recession and more unstable. Their results show that apparently more rigid labour markets and labour relations are conducive to aligning successes that lead to higher and smoother growth. Likewise, the authors (Kolasa, Rubaszek, & Walerych, 2021) point out that working time flexibility can have certain negative consequences at the macroeconomic level:

it can increase unemployment fluctuations. (Ferreiro & Gómez, 2018) found through the analysis in the paper that greater flexibility is not associated with better results of permanent employment and that less flexibility is not associated with worse results of permanent employment. (Liotti, 2020) points to the fact that labour market reforms, aimed at introducing flexibility measures, contribute to an increase in youth and adult unemployment, analyzed on a sample of twenty Italian regions from 2001 to 2016. (Soidre, 2004) states that resistance to demands for financial flexibility, time and space flexibility is stronger among people in lower socio-economic positions, but not functional flexibility, where resistance is most widespread among professional and qualified categories. (Barbieri, 2009) cites higher risks of unemployment after the contract expires and entry into the framework of insecure employment as the lack of fixed-term work. Barbieri conducted the research in 2009, after which much has changed in the EU in terms of employee protection and employment dynamics. Thus, subsequent authors point out that in their analyses they did not find evidence that less employment protection improves the performance of the labour market. (Bassanini & Duval, 2006) and (Adascalitei & Pignatti, 2015). (Ganßmann, 2000), (Carmeci & Mauro, 2003), (Herwartz & Niebuhr, 2011) and (Ball, Leigh, & Loungani, 2013) believe that a generous social welfare system, a rigid labour market and a restrictive labour law have a negative effect on long-term economic growth and employment work. Likewise, the authors (Andersson, Andersson, Hårsman, & Daghbashyan, 2015) point out that flexible labour market regulations and above-average levels of interpersonal trust are institutional factors that reduce unemployment. (Bande & Karanassou, 2009) study the flexibility of the labour market and the regional dynamics of the unemployment rate. They state that the degree of labour market flexibility differs between regions with high and low unemployment.

The paper analyzed the unemployment rate in the context of the following forms of flexibility on the labour market; work in shifts, evening and night work, work on Saturdays and Sundays and work from home. The results differ in that the analysis of the data in the paper found that the flexibility of the labour market is specific for each country, and the increase in shift work, evening and night work, work on Saturdays and Sundays, and work from home affects the reduction of the unemployment rate in the future countries: Austria, Italy, Hungary and Slovenia.

METHODOLOGY

The research in this paper is based on official data on the labour force survey of the European Union (EU LFS). The paper analyses the data of employed and unemployed persons over the age of 15 and under the age of 64 who live in households in Austria, Croatia, Italy, Hungary and Slovenia in the period from 2008 to 2018 based on the EU LFS official data set from the project RPP 35/2020-LFS. In this chapter, the variables used in the work and the methodology of their calculation are defined, and the research sample is presented. Table 1 shows the analyzed variables and their description.

Table 1. List and decription of the analyzed variables – detailed codification

SHIFTWK		**Work in shifts**
	1	Person works in shifts
	2	Person sometimes works in shifts
	3	Person never works shifts
	9	Not applicable (STAPRO≠3; not employed)
	empty	No answer
EVENWK		**Evening work (4:00 p.m. - midnight)**
	1	Person usually works in the evening
	2	Person sometimes works in the evening
	3	Person never works in the evening
	9	Not applicable (did not work because he was dismissed / was obliged to do compulsory military or community service / Others (15 years or older) who neither worked nor had a job or job during the reference week / a child under 15)
	empty	No answer
NIGHTWK		**Night work**
	1	Person usually works at night
	2	Person sometimes works at night
	3	Person never works at night
	9	Not applicable (did not work because he was dismissed / was obliged to do compulsory military or community service / Others (15 years or older) who neither worked nor had a job or job during the reference week / a child under 15)
	empty	No answer
SATWK		**Working on Saturdays**
	1	Person usually works on Saturdays
	2	Person sometimes works on Saturdays
	3	Person never works on Saturdays
	9	Not applicable (did not work because he was dismissed / was obliged to do compulsory military or community service / Others (15 years or older) who neither worked nor had a job or job during the reference week / a child under 15)
	empty	No answer
SUNWK		**Working on Sundays**
	1	Person usually works on Sundays
	2	Person sometimes works on Sundays
	3	Person never works on Sundays
	9	Not applicable (did not work because he was dismissed / was obliged to do compulsory military or community service / Others (15 years or older) who neither worked nor had a job or job during the reference week / a child under 15)
	empty	No answer
HOMEWK		**Working from home**
	1	Person usually works from home
	2	Person sometimes works from home
	3	Person never works from home
	9	Not applicable (did not work because he was dismissed / was obliged to do compulsory military or community service / Others (15 years or older) who neither worked nor had a job or job during the reference week / a child under 15)
	empty	No answer

Source: the author's elaboration based on (EU Labor Force Survey, 2020)

In hypothesis H1 the *SENSSH* variable and *the unemployment rate* variable were used. Data for *the unemployment rate* variable were taken from the EUROSTAT database for the period from 2008 to 2018 for analysed European Union countries and are presented in table 2. The data refer to the population aged 15 to 74.[3]

Table 2. Unemployment rate in EU countries from 2008 to 2018 (data shown in %)

Year State	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Austria	4,1	5,3	4,8	4,6	4,9	5,4	5,6	5,7	6	5,5	4,9
Croatia	8,6	9,2	11,7	13,7	16	17,3	17,3	16,2	13,1	11,2	8,5
Italy	6,7	7,8	8,4	8,4	10,7	12,2	12,7	11,9	11,7	11,2	10,6
Hungary	7,8	10	11,2	11	11	10,2	7,7	6,8	5,1	4,2	3,7
Slovenia	4,4	5,9	7,3	8,2	8,9	10,1	9,7	9	8	6,6	5,1

Source: author's elaboration based on data from (Eurostat, 2020)

Table 3 shows the total number of respondents in the sample according to classes, that is, age groups and EU countries in the period from 2008 to 2018 - a total of 447,031 respondents.

Table 3. Total number of respondents in the sample according to classes, ie. age groups and EU countries

Class State	15 – 24 years	25 – 54 years	55 – 64 years	Total
	10.895	26.555	3.528	40.978
Croatia	5.698	14.397	2.355	22.450
Italy	53.311	181.234	19.977	254.522
Hungary	20.800	72.087	10.712	103.599
Slovenia	4.484	18.690	2.308	25.482
∑	95.188	312.963	38.880	447.031

Source: author's elaboration based on data from the RPP 35/2020-LFS project

The data from the research sample were processed primarily by statistical procedures for calculation using statistical programs SPSS and Statistica. Statistical significance was set in the analysis at the level of $\alpha = 0.05$. The obtained conclusions refer exclusively to the observed sample, not to the population at all.

In hypothesis H1 linear correlation analysis was used and correlation coefficient, determination coefficient was calculated and statistical significance was attached. Also, regression analysis was used - a multiple regression model, namely multiple linear regression and multiple nonlinear regression, where the significance of the model, the coefficient of determination, the direction of regression and the associated weights of the predictor variables were determined.

[3] According to the guidelines of the International Labor Organization, Eurostat defines an unemployed person as a person aged 15 to 74 (in Italy, Spain, the United Kingdom, Iceland, Norway: 16 to 74) (Eurostat, Unemployment, 2010)

Table 4. Description of labels used in statistical analysis

Label	Label description
R	correlation coefficient
R^2	determination coefficient
t	the test statistic value for the coefficient
F	the test statistic value for the model
p	statistical significance level
SNZ	unemployment rate
SENSSH	the total number of persons who have a flexible form of employment

Source: (Blažević Dević, 2023)

RESULTS AND DISCUSSION

In statistical processing of hypothesis H1 a statistically significant model was generated for analysed EU countries:

a. linear relationship between the criterion variable unemployment rate and the predictor variable *SENSSH*
b. non-linear relationship of the criterion variable unemployment rate with the predictor variable *SENSSH*

The unemployment rate variable under hypothesis H1 it was used for analysis as a decimal number transformed from the amount of the unemployment rate per year for all countries individually. Likewise, a stochastic error variable (residual deviation) marked with the letter *e* is included in each model for each country.

Table 5 shows the results of a linear correlation analysis with one predictor and one criterion and the results of a non-linear regression analysis of the connection between the variable *total number of people who have a flexible form of employment* and *the unemployment rate* variable for Austria. The table also lists the correlation coefficient (R), determination coefficient (R^2), level of statistical significance (p) and other parameters of correlation and regression analysis.

Table 5. Results of linear correlation and non-linear regression analysis of the connection between the predictor variable *the total number of people who have a flexible form of employment* and the criterion for *variable unemployment rate* for Austria

	Linear model $SNZ = b_0 + b_1 \cdot SENSSH + e$		
	$R = -0{,}70$; $R^2 = 0{,}48$; $t = -2{,}90$; $p = 0{,}02$		
	b_0	b_1	
SENSSH	15,90	-0,000206	
	Non-linear model $SNZ = b_1 \cdot SENSSH + b_2 \cdot SENSSH^2 + e$		
	$R = 0{,}70$; $R^2 = 0{,}49$; $F = 4{,}38$; $p = 0{,}05$		
	b_1	b_2	p
SENSSH	0,000000	0,000394	< 0,01

Source: author

The table shows that the linear model is statistically significant. Furthermore, in the linear model, the variable *SENSSH* has a statistically significant influence on the criterion variable of *the unemployment rate*.

It is evident from the table that the nonlinear model is at the limit of statistical significance. In the non-linear model, the variable *SENSSH* has a statistically significant influence on the criterion variable.

Thus, hypothesis H 1 for Austria is confirmed.

Table 6 shows the results of a linear correlation analysis with one predictor and one criterion and the results of a non-linear regression analysis of the connection between the variable *total number of people who have a flexible form of employment* and *the unemployment rate* variable for Croatia. The table also lists the correlation coefficient (R), determination coefficient (R^2), level of statistical significance (p) and other parameters of correlation and regression analysis.

Table 6. Results of linear correlation and non-linear regression analysis of the connection between the predictor variable *the total number of people who have a flexible form of employment* and the criterion for *variable unemployment rate* for Croatia

Linear model $SNZ = b_0 + b_1 \cdot SENSSH + e$			
$R = -0{,}49$; $R^2 = 0{,}24$; $t = -1{,}67$; $p = 0{,}13$			
	b_0	b_1	
SENSSH	25,00	-0,001180	
Non-linear model $SNZ = b_1 \cdot SENSSH + b_2 \cdot SENSSH^2 + e$			
$R = 0{,}56$; $R^2 = 0{,}32$; $F = 2{,}08$; $p = 0{,}18$			
	b_1	b_2	p
SENSSH	0,000000	0,003669	< 0,01

Source: author

The table shows that the linear model is not statistically significant. Furthermore, in the linear model, the variable *SENSSH* does not have a statistically significant influence on the criterion variable of *the unemployment rate*.

It is evident from the table that the nonlinear model is not statistically significant. In the non-linear model, the variable *SENSSH* has a statistically significant influence on the criterion variable.

Thus, hypothesis H 1 for Croatia is rejected.

Table 7 shows the results of a linear correlation analysis with one predictor and one criterion and the results of a non-linear regression analysis of the connection between the variable *total number of people who have a flexible form of employment* and *the unemployment rate* variable for Italy. The table also lists the correlation coefficient (R), determination coefficient (R^2), level of statistical significance (p) and other parameters of correlation and regression analysis.

Table 7. Results of linear correlation and non-linear regression analysis of the connection between the predictor variable *the total number of people who have a flexible form of employment* and the criterion for *variable unemployment rate* for Italy

Linear model $SNZ = b_0 + b_1 \cdot SENSSH + e$			
$R = -0{,}95$; $R^2 = 0{,}90$; $t = -8{,}77$; $p < 0{,}01$			
	b_0	b_1	
SENSSH	31,05	-0,000188	
Non-linear model $SNZ = b_1 \cdot SENSSH + b_2 \cdot SENSSH^2 + e$			
$R = 0{,}91$; $R^2 = 0{,}83$; $F = 21{,}81$; $p < 0{,}01$			
	b_1	b_2	p
SENSSH	0,000000	0,000344	< 0,01

Source: author

The table shows that the linear model is statistically significant. Furthermore, in the linear model, the variable *SENSSH* has a statistically significant influence on the criterion variable of *the unemployment rate*.

It is interesting to point out that the coefficient of determination in the linear model is statistically significant and amounts to 0.90, which indicates that 90% of the variability of the criteria is determined by the used predictor.

In the non-linear model, the coefficient of determination is also statistically significant and amounts to 0.83, which indicates that 83% of the variability of the criteria is determined by the used predictor.

It is evident from the table that the nonlinear model is statistically significant. In the non-linear variable model, *SENSSH* has a statistically significant influence on the criterion variable.

Thus, hypothesis H 1 for Italy is confirmed.

Table 8 shows the results of a linear correlation analysis with one predictor and one criterion and the results of a non-linear regression analysis of the connection between the variable *total number of people who have a flexible form of employment* and *the unemployment rate* variable for Hungary. The table also lists the correlation coefficient (R), determination coefficient (R^2), level of statistical significance (p) and other parameters of correlation and regression analysis.

Table 8. Results of linear correlation and non-linear regression analysis of the connection between the predictor variable *the total number of people who have a flexible form of employment* and the criterion for *variable unemployment rate* for Hungary

Linear model $SNZ = b_0 + b_1 \cdot SENSSH + e$		
$R = 0{,}83$; $R^2 = 0{,}69$; $t = 4{,}44$; $p < 0{,}01$		
	b_0	b_1
SENSSH	-31,24	0,000827
Nonlinear model $SNZ = b_1 \cdot SENSSH + b_2 \cdot SENSSH^2 + e$		
$R = 0{,}82$; $R^2 = 0{,}68$; $F = 9{,}59$; $p < 0{,}01$		

	b_1	b_2	p
SENSSH	0,000000	-0,000508	< 0,01

Source: author

The table shows that the linear model is statistically significant. Furthermore, in the linear model, the variable *SENSSH* has a statistically significant influence on the criterion variable of *the unemployment rate*.

It is evident from the table that the nonlinear model is statistically significant. In the non-linear variable model, *SENSSH* has a statistically significant influence on the criterion variable.

Thus, hypothesis H 1 for Hungary is confirmed.

Table 9 shows the results of a linear correlation analysis with one predictor and one criterion and the results of a non-linear regression analysis of the connection between the variable *total number of people who have a flexible form of employment* and *the unemployment rate* variable for Slovenia. The table also lists the correlation coefficient (R), determination coefficient (R^2), level of statistical significance (p) and other parameters of correlation and regression analysis.

Table 9. Results of linear correlation and non-linear regression analysis of the connection between the predictor variable *the total number of people who have a flexible form of employment* and the criterion for *variable unemployment rate* for Slovenia

Linear model $SNZ = b_0 + b_1 \cdot SENSSH + e$			
$R = -0{,}84$; $R^2 = 0{,}71$; $t = -4{,}65$; $p < 0{,}01$			
	b_0	b_1	
SENSSH	30,96	-0,001144	
Non-linear model $SNZ = b_1 \cdot SENSSH + b_2 \cdot SENSSH^2 + e$			
$R = 0{,}85$; $R^2 = 0{,}72$; $F = 11{,}62$; $p < 0{,}01$			
	b_1	b_2	p
SENSSH	0,000000	0,001879	< 0,01

Source: author

The table shows that the linear model is statistically significant. Furthermore, in the linear model, the variable *SENSSH* has a statistically significant influence on the criterion variable of *the unemployment rate*.

It is evident from the table that the nonlinear model is statistically significant. In the non-linear variable model, *SENSSH* has a statistically significant influence on the criterion variable.

Thus, hypothesis H 1 for Slovenia is confirmed.

The research question in the paper is related to the influence of the increase in the share of flexible forms of work on the unemployment rate. The results point to the fact that in 80% of the analyzed countries there is a noticeable decrease in the unemployment rate with an increase in the share of flexible forms of work such as work in shifts, evening and night work, work on Saturdays and Sundays and work from home,

which confirms hypothesis H1. It is often argued that differences between unemployment rates in countries or regions are partly explainable in terms of different degrees of labor market "rigidity" - or, more positively, "flexibility". It is believed that price shocks arising in conditions of "rigid" labour markets lead to higher structural unemployment, while "flexible" labour markets enable adjustments to such shocks without or with little loss of employment. (Klau & Mittelstadt, 1986) The authors (Bande & Karanassou, 2009) and (Baráth & Wojčák, 2020) also state in their work that differences in regional unemployment rates depend on the degree of regional flexibility of the labour market, which is confirmed by hypothesis H1 in which it is stated that the increase in the share of flexible forms of work reduces the unemployment rate.

What should definitely be highlighted are the limitations of the work and guidelines for future research. First of all, the limitation of the research is reflected in the fact that the observed period is limited to eleven years, more precisely from 2008 to 2018. In the empirical part of the paper, the analysis is limited to flexibility of working hours and flexibility of labour law status in the context of the following variables: shift work, evening work, night work, work on Saturdays, work on Sundays and work from home. The research was not extended to the analysis of the flexibility of the work process and the flexibility of the work organization, which is a recommendation for further research within the framework of the flexibility of the labour market. In hypothesis H1 there is a limitation related to the use of the unemployment rate which, according to the guidelines of the International Labour Organization, refers to persons aged 15 to 74 years (except in Italy, Spain and the United Kingdom from 16 to 74 years). The sample analyzed in the paper includes persons aged 15 to 64 in the period from 2008 to 2018. In that period, the figure related to people over 64 years of age would not significantly influence and contribute to the change, through the analysis of the obtained results, since until 2018 the share of people in the EU who are older than 64 years and still participate in the labour market, is not significant. In the European Union in 2018, rates above 15% were recorded only in Estonia (which also has the highest rate of 26%), Romania, Lithuania, Portugal, the United Kingdom, Ireland, Sweden and Latvia. Therefore, a recommendation for further research would certainly be to analyze the share of the workforce aged over 65 in all EU countries after 2018.

CONCLUSION

Not so long ago, policy makers realized the importance of introducing the concept of flexibility. The core of the concept itself is made up of various flexible forms of the work process, labour law status, working hours and work organization. Various atypical, as well as typical, flexible contractual arrangements ensure more efficient and faster adaptation of workers, as well as entrepreneurs, to new circumstances and conditions on the labour market. By validating the results obtained in hypothesis H1 in relation to the assumption that with an increase in the share of work in shifts, evening and night work, work on Saturdays and Sundays, and work from home, the unemployment rate decreases, an interesting fact was observed that this hypothesis was confirmed for the countries: Austria, Italy, Hungary and Slovenia. The results indicate that in most of the analyzed countries there is a noticeable decrease in the unemployment rate with an increase in the share of flexible forms of work such as shift work, evening and night work, work on Saturdays and Sundays and work from home, which indicates

the fact that people's attitudes have changed related to flexible forms of work. Today, people do not only aim for permanent full-time jobs, as an increasing number of people want to achieve coherence between their business and private lives. Equally, through part-time work, to which young people are increasingly striving recently, people have more time to devote to other activities, or through part-time work, parents are able to devote themselves to children or caring for elderly parents. From the perspective of employers, flexible forms of work enable greater control over employee turnover and influence the reduction of costs related to new hires and training of new employees. Following the detected limitation in this paper, which is reflected in the limitation of the observed period to 11 years, more precisely from 2008 to 2018, it can be reasoned that it would be interesting to analyze these phenomena for the period from 2019 to today in order to investigate the effects of changes created in that period on the operationalization of the concept of flexibility, especially flexible forms of work, and, in comparison, the concept of flexicurity, the postulates of which were formulated and proved by a successful example in Denmark.

Likewise, in the empirical part of the dissertation, the analysis is limited to flexibility of working hours and flexibility of labour law status in the context of the following variables: work in shifts, evening work, night work, work on Saturdays, work on Sundays and work from home. The recommendation for further research in this context, and in the sphere of constant growth and development of digital platforms, is to investigate the implementation and effect of new forms of employment such as: freelancer, group employment, job sharing, temporary management and other types of new forms of work in the digital economy of the EU.

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ORIGINALNI NAUČNI RAD / ORIGINAL SCIENTIFIC PAPER

THE INFLUENCE OF THE AMOUNT OF MATERIAL COMPENSATION PER EMPLOYEE ON THE COMPANY'S BUSINESS

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Abstract: *In order to evaluate the impact of the amount of material compensation per employee on the performance of the company, the authors systematically analysed amount of material compensation per employee, total income, total expenses, net profit margin and return on equity in small, medium and large companies in the five observed counties of the Republic of Croatia. The aim of the paper is to analyse the connection between the amount of material compensation of employees and the performance of the company. The research in the paper was conducted based on data provided by the Financial Agency, a leading Croatian company in the field of providing financial and electronic services. The research was conducted on a sample of 3,914 small, medium and large companies. In the research part of the paper, Spearman's correlation coefficient which is a non-parametric equivalent of Pearson's correlation coefficient (product of rank correlation), was used to assess the relationship between the variables of average monthly net wage and salary per employee, total income, total expenses, net profit margin, return on equity. The results indicate that there are significant differences between the size of the company and the observed parameters (average monthly net wages and salaries per employee, total income, total expenses, net profit margin, and return on equity). Based on an extensive analysis of data, obtained results indicate that the given correlation matrix of the connection between the average monthly net wage and salary per employee with the observed parameters for all years shows that all parameters are statistically significantly correlated. This paper provides an insight into the importance of human resources and their proper management on the company business, regardless of their size. Statistical analysis of research data was performed by statistical software MedCalc® Statistical Software and SPSS Statistics for Windows.*

Key words: *material compensations, motivation, successful business.*

JEL classification: *J24, J33.*

INTRODUCTION

One of the key factors in human resources management is employee motivation. (Buntek, Drožđek, & Kovačić, 2013). Motivation can be defined as "an internal state of the organism that moves people towards a goal and results in the satisfaction of needs and extinguishing of motives" (Kesić, 2006). Therefore, motivation is a process, and it takes place through four stages: the manifestation of a need, activation of the organism, recognition of the need, goal. Motive is defined as "a permanent predisposition that directs behavior towards a certain goal" (Previšić & Ozretić Došen, 2007). Employee motivation is determined by numerous factors, and according to (Tafra, Graovac, & Budimir Šoško, 2017) these are: reward policy within the company, interpersonal relationships, satisfaction of material needs, relationship with superiors, benefits received, suitable working hours, independence in decision-making and advancement opportunities and others. Employees are an integral part of a company's success in multiple dimensions, from driving productivity and innovation to shaping organizational culture and increasing customer satisfaction. Human resources of companies represent their most valuable assets (Hafeez & Abdelmeguid, 2003), which is why, as previously stated, they are noticed, recognized and valued in the market.

The key element of the success of any organization is recognized within human resources (Young & Thyil, 2009) and their potential in terms of competence, creativity, innovation, attitudes and motivation, more precisely, within its human capital. Human resources and human capital are factors of future organizational success and development (Kazlauskaite & Buciuniene, 2008) (Zink, 2008).

This paper is about the importance of employees, the importance of their motivation and the influence of that motivation on the success of the company's business. The aim of the paper is to analyze the connection between the level of material compensation of employees and the success of the company's operations.[1]

LITERATURE REVIEW

Empirical review of the influence of employee motivation on company performance reveals a significant relationship between these two factors. Numerous studies have investigated various aspects of employee motivation and its effects on organizational outcomes, including productivity, profitability, innovation, and overall performance. Here is a summary of key findings from the literature.

Edwin Locke and Gary Latham's research on goal-setting theory has demonstrated that setting specific, challenging goals can significantly increase employee motivation and performance. Their studies have shown that employees who are motivated by clear and challenging goals tend to exhibit higher levels of effort and persistence, leading to improved productivity. (Locke & Latham, 2006) Kulaš Mirosavljević, Martić & Novaković in their research concluded that non-material motivation strategies are often more important to employees than salaries and other material rewards which can also be connected with Frederick Herzberg's Two-factor theory distinguishes between hygiene factors for example working conditions, salary, job security and motivators for

[1] Data presented in this paper are a segment of the empirical part of the author's doctoral dissertation which analyses the influence of material compensation on business operations in the conditions of the economic crisis

example recognition, achievement, and responsibility. (Kulaš Mirosavljević, Martić, & Novaković, 2023) Frederick Herzberg's research suggests that while hygiene factors can prevent dissatisfaction, it is the presence of motivators that leads to higher levels of job satisfaction and productivity. Stošić Mihajlović also concludes that intangible motivational factors do not cost much, but they can greatly contribute to increasing the quality of the economy, and for this reason, it is necessary to pay more attention to them. (Mihajlović Stošić, 2022)

On the other hand, according to Padma et al., the purpose of material compensation is to secure employee rights, provide a sense of justice, obtain qualified employees, retain employees, respect employees, control costs, comply with government regulations, and avoid conflicts. (Padma, Aisyah, Darmawan, Azmi, & Putra, 2018) There are many factors that are taken into consideration while awarding compensation to employees in an organization. Such various factors influence the type and amount of compensation that an organization provides to employees. The results of research by Anjanarko et al. also confirm that the role that shapes work productivity comes from the contribution of workload and compensation. The two independent variables have been proven to significantly form work productivity variables. (Anjanarko, Jahroni, Retnowati, Putra, & Arifin, 2022)

Harsono and Maradona also state in their research that it can be seen from the correlation coefficient obtained from 0.514, that there is a fairly strong level of relationship between material compensation and employee performance, and that the impact of compensation has a contribution to employee performance by 26.4%, while the remaining 73.6% is influenced by other factors that were not examined in this study. (Harsono & Maradona, 2021)

Material compensation as a reward from the employer to the worker for the work or service that has been and will be performed, serves as a guarantee of the adequate survival of humanity and production, expressed or valued in monetary form established according to the agreement, laws and regulations and is paid based on the employment contract between the employer and employee. Koespiadi, Darjanto and Kurniawan in their research The Influence of the Number of Employees and Revenue on Employee Productivity during Covid-19 Pandemic in the Project of PT conducted an employee satisfaction survey in order to better understand the needs and desires of their employees, how employees would feel more satisfied and in order to increase their productivity, they conclude that which show that the number of employees has a more dominant influence than revenue on employee satisfaction. (Koespiadi, Darjanto, & Kurniawan, 2021)

Now that the influence of motivation on the employee has been shown through the review of literature, we move on to the presentation of the influence of the same motivation on the company business.

In their work Analytical study of quality of work life and organizational commitment and their relation with revenue per employee of major IT companies in India, Yadav, Khanna and Panday analyzed the operations of 21 IT companies. In their research, they concluded that organizations that provide better quality of work life and provide better training to employees get efficient and effective results in the form of growth and profitability of the organization. The study proves that quality of work life and organizational commitment increase the financial performance of the organization

in terms of income per employee. (Yadav, Khanna, Panday, & Dasmohapatra, 2019) Also, in their work, The influence of the number of employees and revenue on employee productivity during Covid-19 pandemic in the project of PT Tunas Jaya Sanur Koespiadi, Darjanto and Kurniawan conclude that the main instrument of the company is human resources, and that people are the most important driving factor in the company's wheels. According to their research, there is a significant influence between the numbers of employees on the company's productivity. Therefore, at the same time, it was said that there is a significant simultaneous effect between the independent variables (number of employees and income) on the dependent variable (productivity of employees at PT). (Koespiadi, Darjanto, & Kurniawan, 2021)

In their work, Belak, Aljinović Barać and Tadić state that internal and external users of financial statements use ratio analysis as the main tool in decision-making processes. In their research, they state that a large number of financial ratios are based on an 'ideal' balance sheet structure. Therefore, growing companies with a large share of unrecorded intellectual capital call this type of analysis into question. (Belak, Aljinović Barać, & Tadić, 2009) The aim of the mentioned article was to provide empirical evidence on the impact of different ways of recognizing and measuring human capital expenditures in large high-tech companies on the analysis of financial statements as a measure of their success. The proven research hypothesis implies that in the high-tech industry, financial performance depends on investments in human capital, so companies that invest in human resources will achieve higher financial results. Consequently, the analysis of financial statements provided a truer and fairer representation of the company's performance if human capital expenditures were capitalized in the balance sheet instead of being recognized as expenses in the profit and loss account. (Belak, Aljinović Barać, & Tadić, 2009) The mentioned research can be connected with the research of the authors Tadić and Aljinović Barać, whose main goal was to determine the role of human capital investments and their impact on business excellence of the listed companies in Croatia as an example of a post-transition economy. (Tadić & Aljinovi Barać)

In the paper, the authors state that all findings confirm the correlation between good company performance and high level of investment in human capital through salaries & bonuses and/or training & education costs. Both variables are positively correlated with company excellence. Results also confirm the difference in the mean of salaries per employee between HIIC and MIIC companies, as well as the difference in company business excellence when human capital expenditures are capitalized in the balance sheet rather than recognized as expenses in the P/L account. Summarizing the findings results in an important practical implication: Croatian companies should pay attention to managing human resources and realizing their importance and impact on competitive advantage, and moreover on business excellence. (Tadić & Aljinovi Barać)

Following on from previous research, the importance of the research conducted by the authors Al-Delawi, Raewf and Jameel on 40 companies is manifested in terms of the recognition of human resources as a key factor in enhancing productivity and a source of sustainable competitive advantage and human capital as a source for building the company's assets that will lead to higher financial performance for the company, and the impact of these human resources and human capital on the company's financial performance and value. (Al-Delawi, Raewf, & Jameel)

According to the author, achievement of competitive advantage would not be possible without investing in the skills and knowledge of all employees. (Duspara, Požega, & Crnković, 2017) Importance of workforce has been recognized at the European level. The study "European vision on steel-related skills and supporting actions to solve the skills gap today and tomorrow in Europe" determines the current and future needs for skills in the steel industry and elaborates the causes of skills deficiencies and gaps thus emphasizing the importance of developing new skills for a globally competitive steel industry.

In a knowledge-based economy, human capital culture is considered an important source of long-term competitive advantage. Disclosure of human capital information is most likely to provide various benefits to organizations and institutions based on the expertise of the people and workforce in the company. (Al-Delawi, Raewf, & Jameel)

Companies should pay attention to the income they want to achieve, that is, approach employees in joint meetings to agree on achieving the desired income in order to have a common goal. Because indirectly the company's income will have an impact on the results or incentives that will be distributed to each employee. A lower income value will automatically lower employee opinion. This will affect the work productivity of these employees, and they should be included in decision-making so that they are familiar with the same.

DATA AND METHODOLOGY

Data

The company's analysis are carried out on the basis of data provided by the Financial Agency (FINA), the leading Croatian company in the field of providing financial and electronic services. The companies analyzed are located in Eastern Croatia, they are companies from five counties of Eastern Croatia, Brod - Posavina County, Osijek - Baranja County, Požega - Slavonian County, Virovitica - Podravina County and Vukovar - Srijem County.

Table 1. Structure of small, medium and large companies according to the counties in Eastern Croatia

Company size	Number of companies (cumulative)	Brod - Posavina County	Osijek - Baranja county	Požega - Slavonian County	Virovitica - Podravina County	Vukovar-Srijem County
Small companies	3742	728	1638	353	403	620
Medium companies	133	24	51	14	12	32
Large companies	38	3	21	4	2	8
Σ	3914	755	1710	371	417	660

Source: author's work, based on Financial agency (2017)

Small, medium and large companies are analyzed by size. For the research of large companies, the financial data of all large companies in Eastern Croatia, 38 of them, were used. As a sample of medium-sized companies, as well as large companies, the entire sample of all 133 companies that are registered and active in the Republic of Croatia and belong to the territory of Eastern Croatia were used.

There are 8,982 small businesses in Eastern Croatia, of which there are 1,639 in Brod-Posavina County, 4,208 in Osijek-Baranja County, the largest number of small businesses in that county, 693 small businesses in Požega-Slavonian County, 693 in Virovitica-Podravina County there are 887 of them, while there are 1562 small businesses in the Vukovar-Srijem County. From each county, the sample is proportional to the number of small businesses registered in that county, i.e. the sample is larger in counties with more businesses, and smaller in counties with fewer businesses. For the purposes of statistical processing, from the list of companies from each county, every other company was selected in alphabetical order as a sample. The sample includes only active companies; that is, instead of companies for which no data were provided or no longer active, the next company from the list for which data was recorded was selected. The research included an analysis of the state of 3,914 companies in Eastern Croatia.

METHODOLOGY

For the purposes of hypothesis H1 the difference in parameters will be shown according to the size of the company and the years of follow-up.

To test the differences, the Kruskal Wallis test was used, which is a non-parametric analogue of the *F*-test as part of the analysis of variance. When conducting the Kruskal Wallis test, it is assumed that random and independent samples are chosen from K basic sets, or equivalently, it is a completely randomized experimental design, and that the basic sets are equally distributed; the third starting point is that the measurement values are on a rank, interval or numerical scale. It is assumed that all data taken as a whole (n of them) are ranked according to the corresponding samples. The smallest rank is 1, and the largest is n. If several equal values appear among the data, the average rank is added to each, in which case it is a matter of tied ranks. In the ranking process, the data in the samples do not change their position, that is, they remain in the same samples (groups).

The hypothesis contains the claim that the basic sets have equal medians, and the alternative contains the opposite claim

For the purposes of the test, two assumptions will be made:

H1.1: there are no differences between company size and parameters

H1.2: there are significant differences in company size and parameters

The significance level of the test was set at $\alpha = 0, 05$. So, if the significance level of the test is less than 5% (a significance level of 5% is equal to 95% confidence), the assumption H1.1 will be rejected and the alternative assumption H1.2 will be accepted, i.e. there will be a significant difference between companies of different size and level of material compensation per employee and parameters related to the company's operations.

If the significance is greater than 5%, H1.2 will be rejected and H1.1 will be accepted, that is, no statistically significant difference between companies of different sizes and the level of material compensation per employee and parameters related to the company's operations will be proven.

RESULTS

In this chapter, the variables used in the work and the methodology of their calculation are defined, after which the data collected for the purposes of the research are statistically processed and analysed. The research included an analysis of the state of 3,914 companies in Eastern Croatia. The research included 3,742 small companies, 133 medium and 38 large companies.

Table 2. Mean values of total income and expenses, net profit margin, return on equity and material compensation per employee according to company size in the period from 2013 to 2015

	Median (interquartile range)			P*
	Small-sized companies	Medium-sized companies	Large companies	
Year 2013				
Material compensation per employee	3.007 (2367-4000)	4.378 (3677,75-4913,75)	4.764,5 (3708,5-5749,5)	**<0,001**
Total income	906.400 (283200-2983700)	71,241.350 (43031600-112385075)	345,997.450 (178119000-494197700)	**<0,001**
Total expenses	816.000 (235225-2782900)	68,129.800 (42781225-109612350)	354,660.150 (176153800-490042425)	**<0,001**
Net profit margin	1,33 (0,11-5,36)	1,29 (0,17-4,52)	1,19 (-3,49-4,97)	0,574
Return on equity capital	10,9 (0,7-60)	4,45 (0,3-22,58)	4,7 (0,4-27,4)	**0,001**
Year 2014				
Material compensation per employee	2949 (2388-3913)	4448 (3780-5038)	4599 (3875,5-5778,5)	**<0,001**
Total income	860500 (242650-2733175)	75449000 (42818250-110214200)	370413600 (157998025-558559775)	**<0,001**
Total expenses	822100 (235950-2606000)	74580200 (43200450-109305300)	343321200 (163182650-522000200)	**<0,001**
Net profit margin	1,54 (0,13-6,3)	1,72 (0,27-4,29)	1,04 (-4,16-5,36)	0,775
Return on equity capital	13,9 (1-67,3)	6,3 (0,5-17,73)	4 (-7,45-18,05)	0,001
Year 2015				
Material compensation per employee	2958 (2363-3986)	4598 (3741,5-5166)	4865 (4098,5-5912)	**<0,001**
Total income	885600 (251300-2723250)	80267000 (46993050-114679050)	332374050 (156054825 -539499175)	**<0,001**
Total expenses	849200 (248850-2580200)	78909400 (47298200-111745850)	324460700 (160797600 -535167850)	**<0,001**
Net profit margin	1,73 (0,15-6,27)	2,04 (0,33-4,94)	1,13 (-4,06 - 4,2)	0,387
Return on equity capital	12,2 (0,7-45,95)	6,25 (0,43-16,08)	3,5 (-2,35 - 19,7)	**0,001**

*Kruskal Wallis test

Source: author's work

In 2013, the significantly lowest material compensation per employee of HRK 3,007 (interquartile range HRK 2,367 to HRK 4,000) was found in small companies compared to medium and large ones (Kruskal Wallis test, P < 0.001), as well as the median total income of HRK 906,400 (interquartile range HRK range HRK 283,200 to HRK 2,983,700) compared to medium and large companies. Total expenditures are significantly higher in large companies with a median of HRK 354,660,150 (interquartile range from HRK 178,119,000 to HRK 494,197,700) (Kruskal Wallis test, P < 0.001). There are no significant differences in the net profit margin according to the size of the company, while the return on equity is significantly lowest in large companies and significantly highest in small companies (Kruskal Wallis test, P < 0.001).

Significantly the lowest material compensation per employee in 2014 of HRK 2,949 (interquartile range HRK 2,388 to HRK 3,913) has small companies compared to medium and large ones (Kruskal Wallis test, P < 0.001), as well as the median total revenue of HRK 860,500 (interquartile range ranging from HRK 235,950 to HRK 2,606,000) compared to medium and large companies. Total expenditures are significantly higher in large companies with a median of HRK 343,321,200 (interquartile range from HRK 163,182,650 to HRK 522,000,200) (Kruskal Wallis test, P < 0.001). There are no significant differences in the net profit margin according to company size, while the return on equity is significantly lowest in large companies, median 4 (interquartile range from -7.45 to 18.05), and significantly highest in small companies (Kruskal Wallis test, P < 0.001).

In 2015, small companies had the significantly lowest material compensation per employee of HRK 2,958 (interquartile range HRK 2,363 to HRK 3,986) compared to medium and large ones (Kruskal Wallis test, P < 0.001), as well as the median total revenue of HRK 885,600 (interquartile range ranging from HRK 251,300 to HRK 2,723,250) compared to medium and large companies. Total expenditures are significantly higher in large companies with a median of HRK 332,374,050 (interquartile range from HRK 156,054,825 to HRK 539,499,175) (Kruskal Wallis test, P < 0.001). There are no significant differences in the net profit margin according to company size, while return on equity is significantly lowest in large companies, median 3.5 (interquartile range from -2.35 to 19.7), and significantly highest in small companies (Kruskal Wallis test, P < 0.001) (Table 6.2).

As the significance of the difference in parameters between companies of different sizes is less than 0.05, H1.2 is accepted and H1.1 is rejected, i.e. there is a statistically significant difference between companies of different sizes and observed parameters.

It is still necessary to determine the connection between material compensation per employee and the parameters of the company's operations.

To test the hypothesis H1: The amount of material compensation per employee has a significant positive impact on the company's operations, the Spearman correlation coefficient will be used to evaluate the correlation, which is a non-parametric equivalent to the Pearson correlation coefficient (product of rank correlation) to measure the correlation between the variables of average monthly net salary and salary per employee, total income, total expenses, net profit margin, return on equity).

It is based on measuring the consistency of the relationship between ordered variables, and the form of the relationship (eg. linear form, which is a prerequisite for using the Pearson coefficient) is not important.

Cases in which Spearman's coefficient is used are, for example, when there is no linear relationship between the variables, and it is not possible to apply the appropriate transformation that would translate the relationship into a linear one. As a result, the Spearman correlation coefficient gives an approximate value of the correlation coefficient, which is treated as its sufficiently good approximation. The calculation of the coefficient is done in such a way that the values of the assigned ranks are used. Spearman's coefficient will be denoted by Rho (ρ). The basis of Spearman's rank correlation coefficient is pairs of rank-variable modality or numerical variables transformed into rank-variables. The modalities of each rank-variable are from the set of first n natural numbers. If in each pair the ranks are equal, their differences are equal to zero, and the coefficient takes the value 1, in this case we speak of a complete positive rank correlation. When the order of the modality of one rank-variable is reversed from the order of the other variable in the pair, the coefficient will take the value -1, so the assessment of the connection is complete and negative. If the significance level is 0.05, the decision is made by comparing the test size (sample rank correlation coefficient) with the critical value of the sampling distribution of the rank correlation coefficient for probability, that is, for the significance level and the sample size. The alternative hypothesis contains the opposite statement that there are tendencies that large values of one variable are paired with large values of another variable (positive association) or that large values of one variable are associated with small values of another variable (negative association).

Correlation coefficient values greater than 0.5 and less than -0.5 are said to be good, i.e. the closer the value is to 1 or -1, the connection is excellent.

For the purposes of the test, two assumptions will be made:

H1.1: there is no connection between material compensation per employee and the observed parameters,

H1.2: there is a connection between material compensation per employee and observed parameters,

In doing so, the significance level of the test is set $\alpha = 0, 05$. So, if the significance level of the test is less than 5% (a significance level of 5% is equal to 95% confidence), the assumption H1.1 will be rejected and the alternative assumption H1.2 will be accepted, i.e. there will be a significant connection of material compensations employee and observed parameters. If the significance is greater than 5%, H1.2 will be rejected and H1.1 will be accepted, i.e. a statistically significant connection between material compensation per employee and the observed parameters will not be proven.

The correlation matrix of the connection between the average monthly net wage and salary per employee with the observed parameters shows that all parameters are statistically significantly related to the observed parameters. The highest level of connection with the average monthly net wage and salary per employee is shown by total income (Rho = 0.451) and total expenses (Rho = 0.446), while there are very weak connections (although significant) with net profit margin (Rho = 0.095) and return on equity (Rho = -0.082) where the relationship is negative (Table 6.3).

Table 3. Assessment of the relationship between material compensation per employee, total income and expenses, net profit margin and return on equity capital

Average monthly net wage and salary per employee	Spearman's correlation coefficient	
	Rho	P value
Total income	0,451	**<0,001**
Total expenses	0,446	**<0,001**
Net profit margin	0,095	**<0,001**
Return on equity capital	-0,082	**<0,001**

Source: author's work

The correlation matrix of the connection of the average monthly net salary and wages per employee with the observed parameters for all years shows that all parameters are statistically significantly related to the material compensation per employee.

Total income is most related in 2015 (Rho =0.485), total expenses, also in 2015 (Rho =0.477), net profit margin in 2015 (Rho = 0.122). There is a negative and weak significant relationship between material compensation per employee and return on equity in 2014 (Rho = -0.153), while in 2015 the relationship is not significant (Table 6.4).

Table 4. Assessment of the relationship between material compensation per employee, total income and expenses, net profit margin and return on equity capital by years

Average monthly net wage and salary per employee	Spearman's correlation coefficient	
	Rho	P value
Year 2013		
Total income	0,413	**<0,001**
Total expenses	0,405	**<0,001**
Net profit margin	0,093	**<0,001**
Return on equity capital	-0,080	**<0,001**
Year 2014		
Total income	0,448	**<0,001**
Total expenses	0,444	**<0,001**
Net profit margin	0,068	**<0,001**
Return on equity capital	-0,153	**<0,001**
Year 2015		
Total income	0,482	**<0,001**
Total expenses	0,477	**<0,001**
Net profit margin	0,122	**<0,001**
Return on equity capital	-0,017	0,288

Source: author's work

Spearman's correlation coefficient is used to assess the relationship between the average net salary and total expenses per employee with the observed parameters. A significant correlation (although less than 0.500) of average net salary or total expenses with most parameters was proven. As the correlation coefficient is (Rho) $\rho > 0{,}500$, and the significance is less than 0.05, the assumption H1.2 is accepted that there is a significant impact of material compensation per employee on total income and expenses, net profit margin and return on equity.

From the above, it is clear that the amount of material compensation per employee has a significant positive impact on the business of the company, which confirms hypothesis 1.

CONCLUSION

Motivation gives individuals the impetus to set and achieve goals, whether they are personal, academic, or professional. As shown so far in the paper, motivated individuals are usually more productive and perform their tasks and responsibilities better. They demonstrate greater focus, persistence and effort, leading to higher levels of efficiency and effectiveness in achieving desired results. Also, motivation encourages individuals to seek new knowledge, skills and experiences in order to improve their personal and professional development. It fosters a desire for lifelong learning and growth, enabling individuals to adapt to changing circumstances and seize opportunities for advancement. As shown so far, motivation is necessary for effective leadership.

In short, motivation is essential for personal development, academic achievement, professional success, and general well-being. It encourages ambition, productivity, resilience and creativity, enabling individuals to pursue their goals, overcome obstacles and lead fulfilling lives. As such, understanding and fostering motivation are key components of individual and organizational success.

The empirical part of this paper is based on the analysis of the amount of material compensation per employee, total income, total expenses, net profit margin and return on equity in small, medium and large enterprises in the five observed counties.

To verify the hypothesis H1, the level of material compensation per employee has a significant positive impact on the company's operations, Spearman's correlation coefficient was used to assess the relationship, which is a non-parametric equivalent to the Pearson correlation coefficient (product of rank correlation) to measure the relationship between the variables of average monthly net salary and salary per employee, total income, total expenses, net profit margin, return on equity.

As previously stated, the results indicate an there are significant differences between the size of the company and the observed parameters (average monthly net wages and salaries per employee, total income, total expenses, net profit margin, return on equity).

The correlation matrix of the connection between the average monthly net salary and wages per employee with the observed parameters for all years shows that all parameters are statistically significantly related to the material compensation per employee.

Spearman's correlation coefficient is used to assess the relationship between the average net salary and total expenses per employee with the observed parameters. A significant correlation (although less than 0.500) of average net salary or total expenses

with most parameters was proven. As the correlation coefficient (Rho)ρ > 0,500 and the significance is less than 0.05, the assumption H1.2 is accepted and there is a significant impact of material compensation per employee on total revenues and expenses, net profit margin and return on equity.

Based on obtained results it was concluded that the amount of material compensation per employee has a significant positive impact on the business of the company, thus confirming the hypothesis and proving the importance of material compensation of employees.

A particular limitation of this research is the fact that it was conducted on a sample of companies operating in Eastern Croatia in five selected counties. It would be desirable to apply the same research methodology to a larger sample of companies operating in the European Union and to analyze and compare the obtained results. By applying the same methodology on a larger sample, it would be possible to more accurately investigate the connection between the amount of material compensation per employee and the company's operations. The presented research is based on data obtained by the Financial Agency, a leading Croatian company in the field of providing financial and electronic services that facilitates communication between business entities, the public administration and citizens, which can also be considered a limitation of this research. Also, the research was conducted on the available data from 2013, 2014, and 2015, and it would certainly be recommended to repeat the research using the same methodology with a delay in 2023, 2024, and 2025, in order to investigate and see the connection between the height of material compensation per employee on company operations.

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ORIGINALNI NAUČNI RAD / ORIGINAL SCIENTIFIC PAPER

ANALYSIS OF THE ATTITUDES OF BOSNIA AND HERZEGOVINA RESIDENTS TOWARDS THE PENSION SYSTEM AND PRIVATE PENSION INSURANCE

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Abstract: *This study aims to analyze the opinions of Bosnia and Herzegovina (BiH) citizens regarding mandatory pension insurance and the possibility of incorporating private insurance in future reforms. The research involves evaluating the satisfaction of BiH residents with the current pension system, understanding their perception of the pension fund's risks, and identifying their attitudes towards possible pension system reforms, including the potential involvement of private insurance. The study also seeks to highlight any differences in attitudes towards socio-demographic characteristics, such as gender, employment, length of service, professional qualification, and monthly income. A survey of 812 BiH adults (representative but potentially not fully capturing the entire population) explored these aspects. While acknowledging limitations, the study reveals significant differences in attitudes based on demographics. For example, men are more optimistic about future pensions, while employed individuals are more inclined towards reform. The findings suggest general public support for pension system reform and openness to private insurance. However, the study highlights the need to consider these varying attitudes across different population groups when designing future reforms. This research provides the first quantitative data on BiH residents' views on private insurance reform, contributing to public discourse and informing future policy changes.*

Keywords: *pension system, private insurance, BiH, reform, public opinion.*

JEL classification: *H55, G23.*

INTRODUCTION

The pension system in Bosnia and Herzegovina (BiH) is based on intergenerational solidarity. In this system, active workers finance the pensions of current retirees,

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and the system is faced with growing challenges due to population aging and demographic trends (Lukyanets & Egorova, 2021). In addition to the burden characteristic of many transition countries, such as high contributions and deficits, BiH also has its own challenges, such as the high number of privileged pensions. While increasing the age limit and reducing preferential pensions could partially alleviate the problems, the long-term solution most likely lies in transitioning to a system of capitalized savings, which requires a thorough and extensive approach. In addition, Bazzana (2020); Hinrichs (2021) and Valls Martínez, et al. (2021) point out that every pension system in Europe is burdened with problems arising from contemporary demographic trends and reflected in the aging of the population. The described system is unsustainable in the long term, because it continuously produces deficits with very high pension contributions, especially compared to developed economies. The system could be partially improved by increasing the retirement age, disincentivizing early retirement and reducing privileged pensions. However, even with strong economic growth and the reduction of the pension system to exclusively earned and social pensions, the system of generational solidarity is hardly sustainable in the long term compared to capitalized savings and therefore requires radical changes.

LITERATURE REVIEW

The pension system is an essential element of the social security of every individual and society. This system is a set of legal norms, financial and institutional arrangements that regulate insurance against the risk of old age and disability (Puljiz, 2005). Its financing is one of the fundamental factors that determines every pensioner's living standard and their financial and social security (Sašić & Novaković, 2015). Since the pension system ensures the most significant social risks that can happen to everyone, the importance of its stability is of great importance for the population of a particular country (Vretenar Cobović & Cobović, 2016). In addition, this system is necessary for the balanced functioning of the entire society and the maintenance of its social cohesion, that is, the connection of individuals and groups within society as a whole. Pension insurance models are most often defined based on five criteria: 1) employee insurance vs. universal pensions, 2) public administration vs. private management, 3) mandatory participation vs. voluntary participation, 4) defined benefits vs. defined contributions and 5) current distribution vs. capitalization (Matić & Cobović Vretenar, Impact of Economic and Non-economic Factors on the Sustainability of the Pension System in Croatia, 2017)

Throughout history, insurance against the risk of old age, disability and death was realized through two basic arrangements. The first (informal) type of old-age insurance could be realized within the family, while the second (formal) type of this insurance could be realized within the framework of the organization in which the person was employed (company, professional association, etc.). Families in traditional society represented the so-called "units of production and consumption", but also mutual aid communities that took care of the elderly, sick and disabled (Puljiz, 2005).

Formal forms of pension insurance arose in recent times, and are related to the development of industrial society and new social organization. The so-called mutualistic associations formed mutual aid funds in which money from workers' membership fees, donations, etc. was kept. Authors emphasized the provision of assistance in

case of illness, injury at work, old age and death (Matić & Vretenar, 2009). Later, the first insurance pension funds were created in companies that operated successfully and achieved good business results and at the same time strived for a stable workforce for workers in case of old age, illness, disability or death. During the introduction of pensions, the employer's goal was twofold. On the one hand, they tried to improve social security and thus the productivity of workers, and on the other hand, they wanted to bind workers to the company or the civil service, exercise control over them, strengthen their loyalty and separate them from the influence of the trade union (Puljiz, 2005).

In further social organization, in the late 19th and early 20th centuries, the first public pension systems were created in Western countries, which marked the beginning of their modernization. One of these systems is the Bismarckian social security system based on the principles of several laws enacted in Germany during the reign of Chancellor Otto von Bismarck. The first law on compulsory health insurance was adopted in 1883. This Act introduced mandatory health insurance for industrial workers. The second law was passed in 1884, and it referred to the Law on Accidents at Work, under which employers were obliged to insure their employees in the event of an accident at work and to pay contributions for them to the common coffers from which compensation was paid to workers for the resulting disability, injury at work, etc. (Puljiz, 2005). The third law within the framework of Bismarck's social insurance system is the Law on Compulsory Pension and Disability Insurance adopted in 1889, which was also the first law on compulsory pension and disability insurance in the world. The development of formal forms of the pension system in our area can be seen in the pensions of soldiers and civil servants and the fraternal coffers created in the 19th century. According to Puljiz (2008), the legal regulation of this system was introduced in 1922 in Yugoslavia when the Law on Workers' Insurance was adopted, which regulated workers' pension insurance. Other forms of social insurance were systematically introduced after the Second World War and decentralization was gradually carried out of the pension system (Malinar, 2022).

Today's pension system of Bosnia and Herzegovina is based on intergenerational solidarity and is burdened with many problems, especially demographic and economic ones, and it needs certain reform. For example, Strategy for the reform of the pension system in the Federation of Bosnia and Herzegovina is a document that represents the official policy of the Government of BiH regarding the reform of the pension system (Government-FBIH, 2013). The document identifies the biggest problems and challenges of the pension system, such as the aging of the population, low employment rate, grey economy, inadequate adjustment of pensions, etc. The document also proposes some possible directions for reform, such as changing the method of calculating the pension base, gradually increasing the age limit, tightening the conditions for disability and family pensions, etc. In this regard, the future reform of the pension system implies, in part, the replacement of the system of intergenerational solidarity with a capitalized system. Pensions are the second most important source of income participating with 20.8 per cent in total average household income (2019) and the same can be observed as a replacement income (Stankov, 2021)

There is a whole range of authors who challenge one system over another and vice versa. Thus, Johnson, Conrad and Thomson (1989) point out that the goods and services consumed by retirees are part of the current production of the currently em-

ployed population, regardless of whether the retirees receive a pension from the state from collected taxes or support themselves with their own savings. In addition, Brittan (1996) points out that workers pay taxes and contributions to pay pensions and that all pensions are provided from current national income. (Blake, 1996) believes that all pension systems, regardless of whether they are capitalized or not, are in reality intergenerational systems, because in all systems, new generations work for previous generations. (Bohn, 2022) believes that in designing a pension reform, it is important how the total risks are shared between the working-age population and retirees. An optimal pension policy should implement reforms that share financial risks as equally as possible between generations (Ebbinghaus & Möhring, 2022). Barr (2002) emphasizes the importance of distinguishing risk from uncertainty in the pension system. While risk can be quantified, this is impossible with uncertainty (Samodol, 2020). Also (Barr & Rutkowski, 2005) believe that the introduction of a mandatory capitalized system implies: a sufficiently developed financial market, sufficient public and private administrative capacities and supervision, and the existence of a fiscally sustainable transition cost strategy. Jackson (2009) points out that at the macro level, a capitalized system first helps in reducing the long-term fiscal burden of an aging population and helps in maintaining an adequate level of savings and investments for the future, how pension rights are secured, and only then how they are financed (Kuné, 2006).

In countries in transition, the reforms were most often conceived with the support of the World Bank and included three pillars: Pillar I (compulsory state pension insurance, that is, a system of intergenerational solidarity); Pillar II (mandatory additional savings with private pension funds) and Pillar III (voluntary supplementary pension insurance, intended for all citizens). Also, many countries have a demographic problem that implies an increase in financial resources for future pension payments (Wang & Bohn, 2018). Each country should, according to its characteristics, shape its pension system, but the introduction of a mixed pension system is imposed as a standard, and it is also recommended by the World Bank as an imperative.

STATE AND PERSPECTIVES OF BOSNIA AND HERZEGOVINA PENSION SYSTEM

Demographic changes are often underestimated in the analysis of the age structure of the population (Holzmann & Palmer, 2006). Apart from the European Voluntary Pension Fund in the Republic of Srpska, there are no voluntary pension funds in Bosnia and Herzegovina, although their establishment is envisaged by the Pension System Reform Strategy and other legal acts that are being prepared in the entities of BiH. In addition, even a superficial analysis of market trends shows a lack of specific supply and demand for a large number of securities on domestic stock exchanges in which pension funds could invest (Radivojac & Grujić, 2016) For pension funds, the best opportunities are investing in long-term debt securities issued by entities that carry a yield of 1.5 to 6 percent (Grujić & Baškot, 2020). Papapetrou & Tsalaporta (2020) and Dumiter, Nicoară, Boiță, Loučanová and Stofkova (2023) believe that in most countries in transition at the end of the last century, the share of expenditures for pension and disability insurance in GDP increased. The existing large allocations for pension insurance (in the countries of Central and Eastern Europe range between 10 and 15% of GDP, with unfavorable demographic trends and maintaining the current

situation, could grow to 25% of GDP by 2050 (Grujić, Stanje i perspektive penzijskog osiguranja i ocjena povjerenja u penzijsko osiguranje u Bosni i Hercegovini, 2018).

The pension system of the Republic of Srpska consists of a mandatory public pension fund, the Pension Reserve Fund of the Republic of Srpska (PREF) and one voluntary pension fund. The pension system of the Federation of Bosnia and Herzegovina does not have a voluntary or reserve pension fund, but only the Fund for pension/retirement and disability insurance of the Federation of Bosnia and Herzegovina. These funds "are most often formed to partially finance public pension expenditures, i.e. to cover possible future pension deficits (Dreassi, Miani, & Paltrinieri, 2017).

The basic problem of the pension system in Bosnia and Herzegovina is that the number of employees is decreasing according to the number of pensioners. In addition to other factors that have a negative impact, this system is unsustainable in the long term. The sustainability of the public pension system is called into question due to the negative effects of numerous factors, the dominant ones being: demographic variables, macroeconomic variables, fiscal parameters and parameters of the pension system. From numerous experimental solutions, one model stood out, in which a large number of countries see a possible solution and the direction in which pension systems should be transformed (Piljan & Brzaković, 2017). It is the Chilean model, which implies the complete privatization of pension insurance, the establishment of private pension funds, for which the state is the guarantor, in order to ensure and build the confidence of citizens to invest in private funds (Živković, Piljan, & Piljan). This model should enable workers to determine their own contributions and incomes in the future. The mentioned model should significantly relieve the state budget and enable significant accumulation of capital, as well as positive effects on economic activity (Grujić, Stanje i perspektive penzijskog osiguranja i ocjena povjerenja u penzijsko osiguranje u Bosni i Hercegovini, 2018). In connection with the above, it is expected that reforms of the pension system will happen very quickly and in the direction of tightening of retirement conditions, greater fairness in pension ranges and strengthening of voluntary supplementary pension insurance.

METHODOLOGY

The research aims to evaluate the attitude of the BiH residents towards the existing mandatory pension insurance and the assessment of trust in private insurance. In this regard, the main hypothesis was set:

H_0: Residents are not satisfied with the current situation in the pension insurance system and believe that the pension fund is threatened.

Regardless of whether the research results will confirm or reject the null hypothesis, the research seeks answers to questions such as whether there are significant differences in attitudes:

(1) between female and male populations,
(2) between residents of different working years,
(3) between employed and unemployed residents,
(4) between residents according to the amount of income and
(5) between residents according to the number of years.

Accordingly, the following auxiliary hypotheses were formulated:

H_1: There are no significant differences in the assertion of the null hypothesis between the female and male populations

H_2: There are no significant differences in the assertion of the null hypothesis between residents of different working years

H_3: There are no significant differences in the assertion of the null hypothesis between employed and unemployed residents.

H_4: There are no significant differences in the assertion of the null hypothesis between residents according to the amount of monthly income

H_5: There are no significant differences in the assertion of the null hypothesis between residents according to the number of years

The research was conducted using the method of theoretical analysis and empirical, so-called. research method. The empirical research was carried out in four phases:

- Data collection based on the survey method through an online questionnaire instrument. The survey was conducted in December 2023.
- Data editing and grouping.
- Data processing using the method of statistical analysis (descriptive statistics, ANOVA test).
- Interpretation of the obtained data.

A questionnaire was used to collect data, in the form of a Likert scale for measuring attitudes. The scale, with five levels of gradation, is given to the respondent with the task of expressing their degree of agreement or disagreement for each statement:

(1) I completely disagree/agree,
(2) mostly I do not agree/agree,
(3) I don't have a clear position,
(4) I mostly agree and
(5) I fully agree.

Characteristics of the sample

A total of 812 respondents filled out the survey, of which 403 were men (49.6%) and 409 were women (50.4%). The average age of the respondents is 38.94 years and the median is 40 years. According to work status, 758 respondents are employed and 54 are unemployed. Of the employed, 208 respondents (26.1%) have been working for less than 5 years, 202 respondents (25.0%) have been working between 5 and 10 years, and 326 respondents (40.1%) have been working for more than 10 years. According to professional training, the respondents were distributed as follows: unqualified workers (NK) make up 0.86% of the sample, qualified workers make up 2.22% of the sample, highly qualified workers make up 1.11% of the sample, employees with secondary vocational education - IV degree make up 46.18% of the sample, employees with a higher professional education make up 1.60% of the sample, employees with a university degree make up 40.15% of the sample, employees with a master's degree make up 3.57% of the sample, 2.71% of the respondents have a master's degree, and the title of Doctor of Science has 1.6 examinees. Therefore, 48.03% of the respondents have completed college. According to professional training, the sample is also relatively representative of the adult population of Bosnia and Herzegovina. The largest share of respondents has a secondary vocational education, which is in line with the fact that this is the most common level of education in Bosnia and Herzegovina.

Most of the employees have been working for more than 10 years, which indicates that they are in stable working relationships. However, the proportion of em-

ployees who have worked for less than 5 years is also significant, which can be an indicator of instability in the labour market. According to monthly income, the sample is somewhat less representative. Most respondents have a monthly income of 1,050 to 2,300 KM, which is in line with the average monthly income in Bosnia and Herzegovina. However, the share of respondents with a monthly income above 2,300 KM is somewhat lower than in the adult population of Bosnia and Herzegovina. The largest share of respondents lives in urban areas (Sarajevo, Banja Luka, Zenica, Tuzla, Doboj, Prijedor, Bihać, Zvornik, Trebinje and Bijeljina). Most of the respondents are married and have children.

Overall, the sample is relatively representative of the adult population of Bosnia and Herzegovina. However, some minor differences need to be taken into account when interpreting the research results.

RESEARCH RESULTS

The obtained results will initially be observed in such a way as to show the differences between men and women (Table 1).

Table 1. Values of arithmetic means, standard deviations, standard errors and estimates of the mathematical expectation value for the 95% confidence interval, for the total sample between the female and male populations

Question	Gender	N	Mean value	Standard Deviation	Standard error	The confidence interval (0,05)	95% confidence interval for the medial value	
1. I expect a pension in an amount that allows me to live peacefully from the pension	Female	409	2,491	1,190	0,059	0,12	1,30	3,68
	Male	403	2,692	1,368	0,068	0,13	1,32	4,06
	Total	812	2,591	1,284	0,045	0,09	1,31	3,87
2. The fund from which pensions are now paid is threatened	Female	409	3,482	1,125	0,056	0,11	2,36	4,61
	Male	403	3,591	1,302	0,065	0,13	2,29	4,89
	Total	812	3,536	1,216	0,043	0,08	2,32	4,75
3. It is necessary to reform the system of mandatory pension insurance	Female	409	4,181	1,157	0,057	0,11	3,02	5,34
	Male	403	4,112	1,124	0,056	0,11	2,99	5,24
	Total	812	4,147	1,140	0,040	0,08	3,01	5,29
4. I have confidence in private pension insurance	Female	409	3,430	0,891	0,044	0,09	2,54	4,32
	Male	403	3,886	0,934	0,047	0,09	2,95	4,82
	Total	812	3,656	0,940	0,033	0,06	2,72	4,60
5. I am satisfied with the current pension insurance system	Female	409	2,377	1,076	0,053	0,10	1,30	3,45
	Male	403	2,236	1,305	0,065	0,13	0,93	3,54
	Total	812	2,307	1,196	0,042	0,08	1,11	3,50
6. I believe that investing money in private pension insurance is a smart investment	Female	409	3,562	1,121	0,055	0,11	2,44	4,68
	Male	403	4,084	0,916	0,046	0,09	3,17	5,00
	Total	812	3,821	1,056	0,037	0,07	2,77	4,88
7. Private pension insurance is absolutely necessary	Female	409	4,039	0,862	0,043	0,08	3,18	4,90
	Male	403	3,993	0,907	0,045	0,09	3,09	4,90
	Total	812	4,016	0,884	0,031	0,06	3,13	4,90

8. I don't earn enough to afford to invest in private pension insurance	**Female**	**409**	3,934	0,967	0,048	0,09	2,97	4,90
	Male	**403**	3,725	1,127	0,056	0,11	2,60	4,85
	Total	**812**	3,830	1,053	0,037	0,07	2,78	4,88

Source: authors

The obtained results can be analyzed in such a way as to determine whether there are statistically significant differences between men and women. The obtained results will initially be observed to show the differences between men and women (Table 2).

Table 2. Examination of statistically significant differences between the genders

Question	t-value	p-value	Comment
1. I expect a pension in an amount that allows me to live peacefully from the pension	-1,954	0,051	There is a statistically significant difference in mean values between men and women at the significance level of 0.10 (p<0.10). Men have a higher mean value(2.692) than women (2.491), indicating that men are more optimistic about the amount of their future pension.
2. The fund from which pensions are now paid is threatened	1,425	0,154	There is no statistically significant difference in mean values between men and women (p>0.05).
3. It is necessary to reform the system of mandatory pension insurance	-1,466	0,143	There is no statistically significant difference in mean values between men and women (p>0.05).
4. I have confidence in private pension insurance	6,547	<0,001	There is a statistically significant difference in mean values between men and women (p<0.001). Men have a higher mean value(3.886) than women (3.430), indicating that men have more confidence in private pension insurance than women.
5. I am satisfied with the current pension insurance system	1,465	0,143	There is no statistically significant difference in mean values between men and women (p>0.05).
6. I believe that investing money in private pension insurance is a smart investment	5,546	<0,001	There is a statistically significant difference in mean values between men and women (p<0.001). Men have a higher mean value (4.084) than women (3.562), indicating that men consider investing in private pension insurance a smarter investment than women.
7. Private pension insurance is absolutely necessary	-1,254	0,21	There is no statistically significant difference in mean values between men and women (p>0.05).
8. I don't earn enough to afford to invest in private pension insurance	-2,555	0,011	There is a statistically significant difference in mean values between men and women (p<0.05). Women have a higher mean value (3.934) than men (3.725), which indicates that women are more inclined to think that they do not earn enough to invest in private pension insurance.

Source: authors

The differences between the employed and the unemployed are examined in the same way (Tables 3 and 4).

Table 3. Values of arithmetic mean values, standard deviations, standard errors and estimates of the mathematical expectation value for the 95% confidence interval, for the total sample between the employed and unemployed populations

Question	Employed	N	rithmetic mean value	Standard deviation	Standard error	The confidence interval (0,05)	The confidence interval (95%)	
1. I expect a pension in an amount that allows me to live peacefully from the pension	**Yes**	**758**	2,578	1,305	0,047	0,09	1,27	3,88
	No	**54**	2,778	0,945	0,129	0,25	1,83	3,72
	Total	**812**	2,591	1,284	0,045	0,09	1,31	3,87
2. The fund from which pensions are now paid is threatened	**Yes**	**758**	3,565	1,249	0,045	0,09	2,32	4,81
	No	**54**	3,130	0,436	0,059	0,12	2,69	3,57
	Total	**812**	3,536	1,216	0,043	0,08	2,32	4,75
3. It is necessary to reform the system of mandatory pension insurance	**Yes**	**758**	4,115	1,151	0,042	0,08	2,96	5,27
	No	**54**	4,593	0,880	0,120	0,23	3,71	5,47
	Total	**812**	4,147	1,140	0,040	0,08	3,01	5,29
4. I have confidence in private pension insurance	**Yes**	**758**	3,694	0,930	0,034	0,07	2,76	4,62
	No	**54**	3,130	0,933	0,127	0,25	2,20	4,06
	Total	**812**	3,656	0,940	0,033	0,06	2,72	4,60
5. I am satisfied with the current pension insurance system	**Yes**	**758**	2,257	1,212	0,044	0,09	1,04	3,47
	No	**54**	3,000	0,614	0,084	0,16	2,39	3,61
	Total	**812**	2,307	1,196	0,042	0,08	1,11	3,50
6. I believe that investing money in private pension insurance is a smart investment	**Yes**	**758**	3,861	1,064	0,039	0,08	2,80	4,93
	No	**54**	3,259	0,757	0,103	0,20	2,50	4,02
	Total	**812**	3,821	1,056	0,037	0,07	2,77	4,88
7. Private pension insurance is absolutely necessary	**Yes**	**758**	4,020	0,903	0,033	0,06	3,12	4,92
	No	**54**	3,963	0,582	0,079	0,16	3,38	4,54
	Total	**812**	4,016	0,884	0,031	0,06	3,13	4,90
8. I don't earn enough to afford to invest in private pension insurance	**Yes**	**758**	3,813	1,064	0,039	0,08	2,75	4,88
	No	**54**	4,074	0,866	0,118	0,23	3,21	4,94
	Total	**812**	3,830	1,053	0,037	0,07	2,78	4,88

Source: authors

Table 4. Examination of statistically significant differences between the employed and the unemployed

Question	t-value	p-value	Comment
1. I expect a pension in an amount that allows me to live peacefully from the pension.	-0,367	0,716	There is no statistically significant difference in mean values between employed and unemployed (p>0.05).
2. The fund from which pensions are now paid is threatened	4,458	<0,001	There is a statistically significant difference in mean values between employed and unemployed (p<0.001). Employees are more inclined to think that the fund from which pensions are now paid is threatened.
3.It is necessary to reform the system of mandatory pension insurance	3,279	0,001	There is a statistically significant difference in mean values between employed and unemployed (p<0.001). The employed are more inclined to think that reform of the mandatory pension insurance system is necessary than the unemployed.
4. I have confidence in private pension insurance	1,982	0,05	There is a statistically significant difference in mean values between the employed and the unemployed at a significance level of 0.10 (p<0.10). The employed are more inclined to believe that they have confidence in private pension insurance than the unemployed.
5. I am satisfied with the current pension insurance system	1,725	0,085	There is no statistically significant difference in mean values between employed and unemployed (p>0.05).
6. I believe that investing money in private pension insurance is a smart investment	2,802	0,005	There is a statistically significant difference in mean values between employed and unemployed (p<0.005). The employed are more likely than the unemployed to think that investing money in private pension insurance is a smart investment.
7. Private pension insurance is absolutely necessary	2,012	0,044	There is a statistically significant difference in mean values between the employed and the unemployed at a significance level of 0.10 (p<0.10). The employed are more inclined to think that private pension insurance is necessarily necessary than the unemployed.
8. I don't earn enough to afford to invest in private pension insurance	-2,146	0,032	There is a statistically significant difference in mean values between employed and unemployed (p<0.05). The unemployed are more inclined to think that they do not earn enough to afford investing in private pension insurance than the employed.

Source: authors

For all questions, the value is less than 0.05, which means that there is a statistically significant difference in the answers between groups of respondents with different years of service. In addition, it is possible to observe that there are significant differences between the groups depending on the acquired professional qualification (Table 5).

Table 5. Values of arithmetic mean value, standard deviations, standard errors and estimates of mathematical expectation values for the 95% confidence interval, for the total sample between populations with different levels of professional education

Question	How many years of work experience do you have?	N	Arithmetic medial value	Standard deviation	Standard error	The confidence interval 0,05)	The confidence interval (95%)	
1. I expect a pension in an amount that allows me to live peacefully from the pension	**Unqualified employee (UE)**	**7**	2,143	1,069	0,404	0,79	1,07	3,21
	Qualified employee - QE (secondary education) III degree	**18**	2,833	0,383	0,090	0,18	2,45	3,22
	Secondary education - IV degree	**375**	2,491	1,210	0,062	0,12	1,28	3,70
	Highly qualified employee - HQE	**9**	1,333	0,500	0,167	0,33	0,83	1,83
	Higher professional education - MA	**13**	2,538	0,519	0,144	0,28	2,02	3,06
	Higher professional education - BA	**326**	2,666	1,400	0,078	0,15	1,27	4,07
	Master	**29**	2,655	1,261	0,234	0,46	1,39	3,92
	Master of Science	**22**	2,636	0,953	0,203	0,40	1,68	3,59
	Doctor of Science	**13**	4,231	1,235	0,343	0,67	3,00	5,47
	Total	**812**	2,591	1,284	0,045	0,09	1,31	3,87
2. The fund from which pensions are now paid is threatened	**Unqualified employee (UE)**	**7**	3,571	0,535	0,202	0,40	3,04	4,11
	Qualified employee - QE (secondary education) III degree	**18**	3,833	0,383	0,090	0,18	3,45	4,22
	Secondary education - IV degree	**375**	3,685	1,171	0,060	0,12	2,51	4,86
	Highly qualified employee - HQE	**9**	3,667	1,323	0,441	0,86	2,34	4,99
	Higher professional education	**13**	2,462	0,519	0,144	0,28	1,94	2,98
	Higher professional education - BA	**326**	3,482	1,222	0,068	0,13	2,26	4,70
	Master	**29**	3,897	0,557	0,103	0,20	3,34	4,45
	Master of Science	**22**	2,273	1,907	0,407	0,80	0,37	4,18
	Doctor of Science	**13**	2,462	1,127	0,312	0,61	1,33	3,59
	Total	**812**	3,536	1,216	0,043	0,08	2,32	4,75

3. It is necessary to reform the system of mandatory pension insurance	**Unqualified employee (UE)**	**7**	4,143	1,069	0,404	0,79	3,07	5,21
	Qualified employee - QE (secondary education) III degree	**18**	2,333	0,767	0,181	0,35	1,57	3,10
	Secondary education - IV degree	**375**	4,261	1,050	0,054	0,11	3,21	5,31
	Highly qualified employee - HQE	**9**	4,667	0,500	0,167	0,33	4,17	5,17
	Higher professional education	**13**	3,462	0,519	0,144	0,28	2,94	3,98
	Higher professional education - BA	**326**	4,255	1,067	0,059	0,12	3,19	5,32
	Master	**29**	4,276	0,591	0,110	0,22	3,68	4,87
	Master of Science	**22**	2,273	1,907	0,407	0,80	0,37	4,18
	Doctor of Science	**13**	3,846	0,899	0,249	0,49	2,95	4,74
	Total	**812**	4,147	1,140	0,040	0,08	3,01	5,29
4. I have confidence in private pension insurance	**Unqualified employee (UE)**	**7**	3,143	1,069	0,404	0,79	2,07	4,21
	Qualified employee - QE (secondary education) III degree	**18**	4,667	0,767	0,181	0,35	3,90	5,43
	Secondary education - IV degree	**375**	3,693	0,849	0,044	0,09	2,84	4,54
	Highly qualified employee - HQE	**9**	4,333	1,000	0,333	0,65	3,33	5,33
	Higher professional education	**13**	3,538	0,519	0,144	0,28	3,02	4,06
	Higher professional education - BA	**326**	3,629	0,996	0,055	0,11	2,63	4,62
	Master	**29**	3,552	0,736	0,137	0,27	2,82	4,29
	Master of Science	**22**	2,318	0,477	0,102	0,20	1,84	2,79
	Doctor of Science	**13**	4,308	0,751	0,208	0,41	3,56	5,06
	Total	**812**	3,656	0,940	0,033	0,06	2,72	4,60

5. I am satisfied with the current pension insurance system	**Unqualified employee (UE)**	**7**	2,000	1,000	0,378	0,74	1,00	3,00
	Qualified employee - QE (secondary education) III degree	**18**	1,389	0,502	0,118	0,23	0,89	1,89
	Secondary education - IV degree	**375**	2,288	1,105	0,057	0,11	1,18	3,39
	Highly qualified employee - HQE	**9**	1,333	0,500	0,167	0,33	0,83	1,83
	Higher professional education	**13**	3,000	1,155	0,320	0,63	1,85	4,15
	Higher professional education - BA	**326**	2,322	1,295	0,072	0,14	1,03	3,62
	Master	**29**	2,207	0,819	0,152	0,30	1,39	3,03
	Master of Science	**22**	2,636	0,953	0,203	0,40	1,68	3,59
	Doctor of Science	**13**	3,538	1,808	0,501	0,98	1,73	5,35
	Total	**812**	2,307	1,196	0,042	0,08	1,11	3,50
6. I believe that investing money in private pension insurance is a smart investment	**Unqualified employee (UE)**	**7**	3,571	0,535	0,202	0,40	3,04	4,11
	Qualified employee - QE (secondary education) III degree	**18**	4,667	0,767	0,181	0,35	3,90	5,43
	Secondary education - IV degree	**375**	3,752	0,967	0,050	0,10	2,78	4,72
	Highly qualified employee - HQE	**9**	4,667	0,500	0,167	0,33	4,17	5,17
	Higher professional education	**13**	3,538	0,519	0,144	0,28	3,02	4,06
	Higher professional education - BA	**326**	3,834	1,170	0,065	0,13	2,66	5,00
	Master	**29**	4,138	0,789	0,147	0,29	3,35	4,93
	Master of Science	**22**	3,091	1,109	0,236	0,46	1,98	4,20
	Doctor of Science	**13**	4,692	0,480	0,133	0,26	4,21	5,17
	Total	**812**	3,821	1,056	0,037	0,07	2,77	4,88

7. Private pension insurance is absolutely necessary	**Unqualified employee (UE)**	**7**	3,571	0,535	0,202	0,40	3,04	4,11
	Qualified employee - QE (secondary education) III degree	**18**	2,167	0,383	0,090	0,18	1,78	2,55
	Secondary education - IV degree	**375**	4,011	0,791	0,041	0,08	3,22	4,80
	Highly qualified employee - HQE	**9**	4,000	0,866	0,289	0,57	3,13	4,87
	Higher professional education	**13**	3,692	0,855	0,237	0,46	2,84	4,55
	Higher professional education - BA	**326**	4,163	0,874	0,048	0,09	3,29	5,04
	Master	**29**	4,000	0,964	0,179	0,35	3,04	4,96
	Master of Science	**22**	3,409	0,959	0,204	0,40	2,45	4,37
	Doctor of Science	**13**	4,692	0,480	0,133	0,26	4,21	5,17
	Total	**812**	4,016	0,884	0,031	0,06	3,13	4,90
8. I don't earn enough to afford to invest in private pension insurance	**Unqualified employee (UE)**	**7**	3,714	0,756	0,286	0,56	2,96	4,47
	Qualified employee - QE (secondary education) III degree	**18**	4,000	0,907	0,214	0,42	3,09	4,91
	Secondary education - IV degree	**375**	3,976	0,906	0,047	0,09	3,07	4,88
	Highly qualified employee - HQE	**9**	3,333	1,414	0,471	0,92	1,92	4,75
	Higher professional education	**13**	3,308	1,182	0,328	0,64	2,13	4,49
	Higher professional education - BA	**326**	3,739	1,116	0,062	0,12	2,62	4,86
	Master	**29**	3,310	1,365	0,254	0,50	1,94	4,68
	Master of Science	**22**	4,000	1,024	0,218	0,43	2,98	5,02
	Doctor of Science	**13**	3,462	1,761	0,489	0,96	1,70	5,22
	Total	**812**	3,830	1,053	0,037	0,07	2,78	4,88

Source: authors

There are significant differences in the answers to some questions, but not all. For example, a total of 59.1% of the respondents answered that they expect a pension in an amount that allows them to live comfortably from the pension. However, there is a significant difference in the answers between the vocational education groups. Respondents with a higher vocational education are more likely to expect a pension in a sufficient amount than respondents with a lower vocational education. A total of 77.3% of respondents answered that they believe that the fund from which pensions are now paid is threatened. This opinion is present in all groups of vocational education, but it is somewhat more pronounced among respondents with a higher vocational education.

A total of 92.7% of respondents answered that they believe that reform of the mandatory pension insurance system is necessary. This opinion is present in all groups

of vocational education, but it is somewhat more pronounced among respondents with a higher vocational education. A total of 63.2% of respondents answered that they have confidence in private pension insurance. However, there is a significant difference in the answers between the vocational education groups. Respondents with a higher education are more likely to have confidence in private pension insurance than respondents with a lower level of education. A total of 31.5% of respondents answered that they were satisfied with the current pension insurance system. However, there is a significant difference in the answers between the vocational education groups. Respondents with a lower level of professional education are more satisfied with the current pension insurance system than respondents with a higher professional education. A total of 72.3% of the respondents answered that they believe that investing money in private pension insurance is a smart investment. However, there is a significant difference in the answers between the vocational education groups. Respondents with a higher professional education are more inclined to consider that investing money in private pension insurance is a smart investment than respondents with a lower degree of professional education. A total of 82.6% of respondents answered that they believe that private pension insurance is absolutely necessary. This opinion is present in all groups of vocational education, but it is somewhat more pronounced among respondents with a higher vocational education. A total of 39.5% of respondents answered that they do not earn enough to afford investing in private pension insurance. This opinion is present in all groups of vocational education, but it is somewhat more pronounced among respondents with a lower degree of vocational education.

DISCUSSION

There are marked similarities, but also differences in attitudes towards the pension system and private pension insurance between the research conducted in 2018 (Grujić, Stanje i perspektive penzijskog osiguranja i ocjena povjerenja u penzijsko osiguranje u Bosni i Hercegovini, 2018) and the results obtained now (Table 6). Respondents in 2023 generally express more positive attitudes towards the pension system and private insurance compared to 2018. They have higher expectations regarding the adequacy of the pension, less concern about the risk of the fund, greater trust in private insurance and greater satisfaction with the current system. In addition, it is possible to see a significant increase in the assessment of smart investment in private insurance and the necessity of private insurance in 2023. The similarities are the need for reforms and the influence of age and income and distrust in the pension insurance fund. Both surveys show that the majority of respondents believe that the reform of the pension system is necessary. The average scores in both surveys indicate a general agreement on this. Also, both studies identify the influence of age and income on attitudes towards the pension system and private insurance. Respondents with more seniority and income tend to express more scepticism towards private insurance and a greater need for reforms. Both surveys reveal that the respondents consider the pension insurance fund to be at risk to a large extent. The differences are reflected in the given average grades. Although both surveys indicate similar understandings, the average scores on individual questions differ. For example, in 2018, the score for the need for private insurance was 3.28, while in this survey it is 3.83. Significant differences exist in subgroups. While both studies observe statistically significant differences in atti-

tudes depending on age, income, and length of service, the precise amounts of p-values and differences in average scores between subgroups differ.

Table 6. The comparison of 2018 and 2023 results

Question:	Average grade in 2023.	Average grade in 2018.	The difference	Comment
I expect a pension in an amount that allows me to live peacefully from the pension	2,59	2,44	0,15	Increase - Respondents in 2023 have slightly higher expectations regarding pension adequacy.
The fund from which pensions are now paid is threatened	3,54	4,28	-0,74	Decrease - Respondents in 2023 express less concern about the threat to the pension fund.
It is necessary to reform the system of mandatory pension insurance	4,15	4,27	-0,12	Minimal difference - Respondents in both surveys generally believe that reform is necessary.
I have confidence in private pension insurance	3,66	3,08	0,58	Increase - Respondents in 2023 show greater confidence in private insurance.
I am satisfied with the current pension insurance system	3,82	3,4	0,42	Increase - Respondents in 2023 express greater satisfaction with the current system.
I believe that investing money in private pension insurance is a smart investment	4,02	3,33	0,69	Significant increase - Respondents in 2023 consider investing in private insurance significantly smarter.
Private pension insurance is absolutely necessary	3,83	3,28	0,55	Increase - Respondents in 2023 consider private insurance more necessary.

Source: authors

By analyzing the collected research results, certain circumstances were noticed that may influence the answers of the respondents. For example, older respondents often do not have "related" work experience, which results in a disproportionate number of years of experience compared to recognized experience. Furthermore, being in the war in Bosnia and Herzegovina can affect the length of service, which means that some respondents have more years of insurance than actual length of service. In addition, part of the monthly fee is paid in cash, outside the official account. Furthermore, those who are already paying for life insurance or saving expect a pension that enables them to live more comfortably. Similarly, respondents who have confidence in private pension insurance often already pay into life insurance and plan to pay into the third pillar. Finally, there are respondents who do not trust private pension insurance, but still expect to maintain the same standard of living in the third age due to disciplined savings or investments.

CONCLUSION

Research analysis indicates significant differences in attitudes towards the pension system and private insurance depending on gender and employment status, length

of service, professional qualification and income level. Understanding these differences is important for designing pension system policies and reforms that respond to the needs and preferences of different population groups. There are no statistically significant differences in attitudes towards pension adequacy, satisfaction with the current system or the necessity of reform between men and women. Also, there are no statistically significant differences in satisfaction with the current pension insurance system between the employed and the unemployed.

It is possible to indicate clear differences in attitudes according to gender, taking into account t-values and p-values. For example, men are more optimistic about the amount of their future pension compared to women ($p < 0.10$). Men have more confidence in private pension insurance and consider it a smarter investment than women ($p < 0.001$). However, women are more inclined to think that they do not earn enough to afford to invest in private pension insurance ($p < 0.05$).

It is also possible to express differences in attitudes according to the employed status. Employees are more inclined to the opinion that the fund from which pensions are paid is threatened and that a reform of the mandatory pension insurance system is necessary ($p < 0.001$). Employees have more confidence in private pension insurance, and consider it a smarter investment and more often consider it necessary ($p < 0.05$ or $p < 0.10$). The unemployed are more inclined to think that they do not earn enough to afford to invest in private pension insurance ($p < 0.05$).

The research reveals significant differences in attitudes towards the pension system and private insurance in BiH compared to 2018. Respondents in 2023 expressed higher expectations regarding pensions, less concern about the risk of the fund and greater trust in private insurance. Satisfaction with the current system and the perception of investing in private insurance as a smart investment has also increased. These findings indicate a potential increase in public support for pension system reforms that include elements of private insurance.

The results of this research contribute to the understanding of current public opinion and may have significant implications for planning future reforms of the pension system in Bosnia and Herzegovina. Support for reforms that increase the role of private insurance may be greater than previously assumed. However, there are also open questions regarding the design of reforms that would suit different demographic groups and their financial capabilities.

However, further research is needed to gain a deeper understanding of the factors influencing these differences in attitudes. In addition, further research is needed to gain a deeper understanding of the factors that influence attitudes towards the pension system and private insurance. Analyses by subgroups (age, income, length of service) and exploration of specific preferences regarding reform options can provide more detailed information for policy making. In addition, it is necessary to monitor how public attitudes change over time and in the context of future reforms.

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DIGITAL TRANSFORMATION IN BOSNIA AND HERZEGOVINA COMPANIES: ANALYSIS OF THE DEGREE OF INTEGRATION AND IMPACT ON BUSINESS

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Abstract: *This study investigates the digital transformation within companies in Bosnia and Herzegovina, aiming to assess the level of digital integration and its impact on business operations across manufacturing, trade, and services sectors. Employing a quantitative analysis of responses from 82 managers or owners, the research focused on attitudes towards digitalization, the adoption of software solutions (ERP, CRM, DMS, WMS, eCommerce), and the impact of digitalization technical aspects. The findings reveal significant disparities in digitalization levels across sectors, reflecting a diverse digital landscape within the Bosnian economy. Despite the initiation of digital transformation efforts, a considerable gap remains between recognizing its importance and its practical implementation. The study underscores the urgent need for continued efforts towards embracing digital transformation to enhance operational efficiency, competitiveness, and adaptability to changing market demands and consumer expectations, highlighting the critical role of digital transformation in securing a competitive edge and ensuring responsiveness to market and consumer dynamics.*

Keywords: *digitalization of business, indicators of digitalization, degree of digitalization.*

JEL Classification: *M15, M21.*

INTRODUCTION

Digital transformation has become imperative for companies around the world, enabling them to improve efficiency, innovation, and competitiveness in an increasingly digital business environment. (Mia, Hossain, & Sangwan, 2024) high-

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light that digitalization allows companies to leverage advanced technologies to enhance business processes, products, and services, thereby achieving significant improvements in operational performance. According to (Jaganjac & Lukić Nikolić, Organizaciono ponašanje: Izazovi digitalnog doba, 2023), organizations aim to achieve increased operational efficiency, reduced costs, and improved user experience through digital transformation. (Adeoye & al., 2024) emphasize the importance of integrating digital technologies into all aspects of business, enabling companies to respond to rapidly changing market demands and consumer expectations. Research by (Zangiacomi & al., 2020) points to the significant role of digital transformation in achieving sustainable growth and development, especially in the context of global economic and ecological uncertainty. (Adam, Badia, & Yuliani, 2024) note that digital transformation is not just a technological shift but also requires profound changes in corporate culture, organizational structures, and business models. In this paper, the specific challenges and opportunities of digital transformation within the context of Bosnian companies are investigated, analyzing how theoretical concepts are applied in practice. Based on a detailed analysis of recent literature, the goal is to offer a comprehensive overview of the current state of digital transformation, identifying key success factors and recommendations for companies striving for digital excellence. The development of digital technologies is crucial for enhancing business operations in Bosnia and Herzegovina, and adapting to the digital environment becomes a fundamental prerequisite for market survival. The research shows that companies from different sectors (manufacturing, trade, services) perceive the need and degree of digitalization of their business operations differently (Zangiacomi & al., 2020). Although some companies have already recognized the importance and have begun the process of digital transformation, there is a gap between this awareness and the actual application of digital technologies in business. Given the specificities of the Bosnian market, challenges include adapting corporate culture, organizational structures, and business models to new digital trends.

The integration of digital technologies into business represents a transformational change, crucial for improving operational efficiency and competitive advantage in today's dynamic market environment (Vaz, 2021). The impact of digitalization components such as ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), DMS (Document Management Systems), WMS (Warehouse Management Systems), and e-commerce platforms on company efficiency attracts significant attention in recent research. For example, (Godbole, 2023) highlighted the critical role of ERP systems in streamlining business processes and improving data accuracy, significantly contributing to operational efficiency. Similarly, (Guerola-Navarro & al., 2022) emphasize how CRM systems enhance customer relationships, boosting sales and customer loyalty. Additional studies by (Khan & Ayesha, 2024) are focused on the transformative potential of AI and machine learning, highlighting their ability to predict consumer behavior and optimize inventory management, ultimately improving business outcomes. This research aims to provide a comprehensive overview of the current level of digitalization and the challenges companies face, contributing to a deeper understanding of the needs and opportunities for digital transformation in the Bosnian market.

LITERATURE REVIEW

Foundations of digital transformation

Digital transformation represents "the use of new digital technologies (social media, mobile devices, analytics, or embedded devices) to enable significant improvements in business, such as enhancing user experience, streamlining operations, or creating new business models" (Warner & Wäger, 2019). This reimagined approach to business in the digital age assists organizations in leveraging technology not only to improve existing business processes but also to introduce new business models and strategies that can provide a competitive advantage and sustainable growth. The history of digital transformation began with the advent of the first computers and the internet, enabling digital processing and data storage (Gong & Ribiere, 2023). The development of web technologies during the 1990s and early 2000s further accelerated this process, enabling online business and e-commerce (Kenney & Curry, 2000) In more recent times, advances in cloud technology, mobile devices, artificial intelligence, and the Internet of Things (IoT) have transformed businesses, allowing organizations to become more agile, efficient, and customer-oriented (Behrendt, de Boer, Kasah, & Koerber, 2021). Digital transformation encompasses the integration of digital technologies into all aspects of business, resulting in fundamental changes in the way organizations operate and deliver value to their customers (Vial, 2021). It is fundamental in promoting innovation, improving efficiency, and increasing competitive advantage (Azeem, Ahmed, & Sajjad, 2021). As (Schneider & Kokshagina, 2021) point out, the development of digital transformation follows the evolution of technologies such as the internet, mobile devices, cloud computing, big data, and artificial intelligence, which are key drivers of changes in business models, corporate culture, and market strategies. This process enables organizations to be more agile, efficient, and customer-focused, adapting to rapidly changing market conditions. Digital transformation is not just a technological change but also a strategic transformation that requires a new way of thinking. Key technologies such as artificial intelligence, the Internet of Things (IoT), blockchain, and big data analytics enable organizations to analyze market trends in real-time, improve decision-making, and personalize the customer experience (Rane, 2023). The development and application of these technologies foster innovation, opening new opportunities for growth and development in a competitive market (Chesbrough, 2003). Digital transformation, therefore, represents a crucial step towards achieving long-term sustainability and success in the digital age (Minh-Nhat, Nguyen, & Mondal, 2022).

Digital technologies such as artificial intelligence, cloud computing, and the Internet of Things (IoT) offer numerous advantages to organizations, including improved agility that enables faster adaptation to market changes, greater scalability that facilitates growth without significant additional costs, and fostering innovation through new opportunities for product and service development. For example, research by (Bencheva, Mihova, & Manevski, 2019) shows how digital transformation can increase business efficiency and open up new market opportunities. Furthermore, the application of these technologies can significantly improve operational efficiency through process automation and resource optimization, leading to a reduction in operational costs and an increase in productivity, as documented in the work of (Schiavone, 2017). However, on the flip side, data security becomes increasingly important as reliance on digital

systems grows. With the rise of cyber threats, organizations must invest in advanced security measures and protocols to protect their data and infrastructure, as emphasized in the report by Cybersecurity Ventures 2020, which predicts that global cybersecurity costs will reach 6 trillion dollars by 2021.

The substantial investments required for the implementation and maintenance of advanced technologies can be a barrier for some organizations, especially for small and medium-sized enterprises that may not have the necessary financial resources. This issue was explored in the study by (Koumas, Dossou, & Didier, 2021)which thoroughly examines the financial and operational challenges faced by SMEs during digital transformation. Additionally, the risk of skill obsolescence requires continuous education and adaptation of the workforce (Caratozzolo, Sirkis, Piloto, & Correa, 2020) Given the rapid development of technology, there is a need for ongoing training of employees to ensure they possess the relevant skills needed to work in a digitally transformed environment (Colbert, Yee, & George, 2016). This also includes cultivating a culture of innovation within the organization, where experimentation and embracing new technologies are encouraged (Nuryanto, Basrowi, Quraysin, Pratiwi, & Utami, 2024). Balancing these positive aspects and challenges is crucial for maximizing the potential of digital transformation. Organizations can explore strategies such as partnerships with technology firms, utilizing cloud services to reduce infrastructural costs, and implementing lifelong learning policies for employees (Chen & Popovich, 2003). Additionally, it is important to develop a comprehensive approach to risk management that encompasses both cybersecurity and business continuity (Kure, Islam, & Abdur, 2018). Through a strategic approach that includes investing in technology, training employees, and adopting advanced security measures (Zhu & Ahamat, 2023), organizations can not only overcome challenges associated with digital transformation but also fully leverage its benefits to achieve long-term success and market competitiveness (Brunetti, i dr., 2020).

Role and impact of digitalization on business processes

The digitalization of business processes is key to enhancing the operational efficiency of companies (Mendling, Pentland, & Recker, 2020) Companies that have adopted digital technologies into their business processes have recorded significant improvements in operational efficiency, resulting in reduced costs and increased profits (Wamba-Taguimdje, Wamba, Kamdjoug, & Wanko, 2020). This shift is not just technological, but also cultural. Companies that have successfully integrated digital tools into their business tend to develop more agile and innovative work environments (Maja, Oreški, & Tominc, 2023). However, (Karimi, Somers, & Bhattacherjee, 2007) provide a somewhat different perspective. While they agree that integrated ERP systems play an important role in automating operational processes, they emphasize that successful implementation of such systems requires significant investments and time resources. (Reimann, Schilke, & Thomas, 2010) highlight the importance of CRM systems in facilitating the management of critical resources. Their research underscores how CRM systems contribute to better coordination between different departments within a company, resulting in increased productivity and reduced costs.

However, other authors, like (Jami Pour & Hosseinzadeh, 2021), suggest that the application of CRM systems can face challenges, such as difficulties in integrating

with existing systems or employee resistance to changes. It's important to explore other significant aspects of digitalizing business processes, including the implementation of cloud-based tools for collaboration. (Jami Pour & Hosseinzadeh, 2021) highlight that the use of these tools can improve internal and external communication flows within the company. According to their findings, these tools enable faster information exchange and collaboration among teams, resulting in accelerated business processes. On the other hand, (Soveizi, Turkmen, & Karastoyanova, 2023) suggest that transitioning to cloud-based tools can create challenges regarding data security and integration with existing systems. According to their findings, it is necessary to carefully consider potential risks and implement appropriate security measures to ensure the protection of sensitive data. Therefore, while cloud-based collaboration tools can offer numerous benefits in terms of speeding up business processes, it's crucial to carefully consider all aspects before making a decision on implementation.

User experience is a key area where the digitalization of business processes plays an important role. Some authors emphasize how personalized interactions through CRM systems enable companies to improve customer experience (Chen & Popovich, 2003). Through customized services and products, companies can create deeper connections with customers, which can result in customer loyalty and long-term relationships. However, other authors present a different perspective. (Lee & Lee, 2020) argue that digitalization provides tools for a better understanding of customer needs, but they highlight that merely collecting data is not enough. According to their research, companies must carefully analyze this data and implement strategies that will provide relevant and valuable services to customers. On the contrary, (Zouari & Abdelhedi, 2021) suggest that while digitalization can provide a better understanding of customer needs, it does not automatically guarantee an increase in customer satisfaction. According to their findings, it's important to ensure consistent quality of service and communication with customers to ensure their satisfaction. Therefore, although there is a general consensus on how digitalization can improve customer experience, different authors emphasize different aspects and challenges in this process. By critically examining these perspectives, companies can make informed decisions on the implementation of digital strategies that will best suit their needs and objectives. (Jerković & Arnaut, E-COMMERCE: Nova paradigma trgovine i održivog razvoja u Bosni i Hercegovini, , 2024) state that there is no doubt that in the next decade, companies that are not online with their products and services will have significantly less chance of successful business operations. One of the reasons for this statement is also the trend of customer digitalization. New generations of customers live with digital technology and accept it as a usual mode of communication, information, and a wide range of its applications in everyday life. As (Jerković, Digitalni marketing, 2022) points out, such e-customers have relatively higher expectations than traditional customers. Resource management is a key component in the business operations of companies, and digitalization through ERP systems plays a significant role in this context. (Zheng, Yen, & Tarn, 2000) highlight that ERP systems enable companies to better manage resources such as human resources, finances, and the supply chain.

The integration of these systems allows for centralized monitoring and management of different business aspects, resulting in resource optimization and cost reduction. Similarly, (Lubis, Tasia, Lubis, & Al-Khowarizmi, 2021) emphasize that inte-

grated ERP systems facilitate real-time tracking and management of inventories. This real-time analytics enables companies to have a more accurate insight into their inventories, resulting in better supply chain management and reduction of losses. However, (Morrisson, 2020) suggests that while ERP systems provide tools for efficient resource management, their implementation can be challenging. According to their findings, introducing new ERP systems may require significant changes in business processes and company culture, which can be challenging for some organizations. Although ERP systems offer numerous benefits in terms of resource management, it's important to consider the challenges that companies may face during their implementation. Through comprehensive analysis, companies can make informed decisions on the application of ERP systems that best suit their business needs and objectives.

Challenges and opportunities of digital transformation in the context of Bosnia and Herzegovina

The implementation of digital transformation in the business sector of Bosnia and Herzegovina (BiH) represents a challenge that requires a fundamental analysis of specific barriers, but it also provides significant opportunities for development and progress. Key aspects that affect this process include the lack of skilled labor, adaptation of corporate culture, and access to European Union markets, as well as aspects of financial constraints, legal-regulatory framework, and the development of digital education ((Salkić, Omerović, Salkić, & Kvasina, 2023). The lack of skilled labor represents one of the key challenges for digital transformation in BiH. The shortage of highly qualified IT professionals, as (Korjenić, 2022)points out, complicates the process of implementing and maintaining digital solutions. Adapting corporate culture becomes key to successfully implementing digital transformation in BiH, and it is necessary to ensure that companies are ready for the innovations and changes brought by the digital era. According to (Playán, i dr., 2024), many companies in BiH still prefer conservative approaches to business and are not ready for the innovations and changes brought by digital transformation. This fact indicates the need for fundamental changes in corporate culture to facilitate the adoption of new technologies and practices. On the other hand, opportunities for adapting corporate culture in BiH can be viewed through the development of technological startups and innovative companies (Głowacki, 2021). The presence of these entities in the country creates potential for collaboration and the development of new technological products and services. This collaboration can encourage changes in corporate culture, opening the door to more innovative approaches to business and greater readiness for digital transformation. Additionally, adapting corporate culture represents an additional challenge, as many companies prefer traditional approaches to business and are not prepared for the innovations and changes brought by digital transformation (Playán, i dr., 2024). Despite these challenges, there are numerous opportunities offered by the introduction of digital transformation.

The growing technological ecosystem in BiH provides significant possibilities for implementing digital solutions, while BiH's membership in the European Union opens doors to access EU markets and increase the export of digital products and services. Additional opportunities include the digitalization of the public sector (Demir, 2019) which paves the way for more efficient administration and better citizen user experience, and the development of e-commerce which offers the possibility to expand

the market and increase sales through digital channels (Jaganjac, Obhodaš, & Jerković, Forecast of e-commerce growth in Bosnia and Hercegovina, 2020). The lack of resources for investing in infrastructure and staff education represents a key challenge for companies in BiH when implementing digital technologies. Limited financial resources can slow down the digital transformation process (Gavrić, Mlakić, & Ćosić, 2021). The misalignment of domestic legal regulations with European standards is an additional challenge that can complicate digital transformation. An adapted legal-regulatory framework is crucial for facilitating the implementation of digital innovations (Minich, 2023). On the other hand, digital transformation opens the doors to global markets, allowing companies in BiH to expand their business beyond national borders. Through online platforms and digital channels, companies can reach a wider consumer base around the world.

The development of technological startups and innovative companies in BiH provides opportunities for collaboration and the development of new technological products and services. Partnerships with local innovators enable established companies to exploit the market's innovation potential, as highlighted by (Domljan & Domljan, 2020). Considering the specific challenges and opportunities, it's important to emphasize that successful digital transformation in Bosnia and Herzegovina is not just a matter of economic development, but also a key factor in ensuring competitiveness in the global market. Creating a conducive environment for the development of digital technologies, supporting innovations, and the continuous education of the workforce will be key elements of success in this process. Successful digital transformation in BiH requires collaboration among all relevant stakeholders to overcome challenges and seize the opportunities that digitalization brings. It's crucial to recognize these challenges and opportunities and develop strategies that will enable successful digital transformation and long-term prosperity for the country.

RESEARCH METHODOLOGY

Sample and research description

During the period of November-December 2023, a survey of managers and owners of BiH companies was conducted on a sample of 82 companies, members of BUM – Business Union of Managers. This union gathers successful managers and company owners from across Bosnia and Herzegovina. The survey used a questionnaire with questions covering several areas:

- Characteristics of the companies participating in the survey (type of activity, number of employees, total annual revenue in the last fiscal year, number of years the company has been in existence, and the position of the respondent in the company's management or ownership);
- Companies' views on the importance of digital transformation (13 questions);
- Companies' views on the technical aspects of digitalization (6 questions with corresponding sub-questions);
- Companies' views on software indicators of the degree of digitalization implementation (5 questions with corresponding sub-questions);
- Companies' views on the effects of digitalization of business operations (14 questions).

As a basis for classifying the size of companies, the criteria of the new Law on Accounting and Auditing of the Federation of BiH from the year 2021 („Official Gazette of FBiH number 15/2021") were used, according to which micro, small, medium, and large enterprises are categorized as follows:

Table 1. Criteria for categorizing the size of enterprises in the Federation of BiH

Category	Number of Employees	Annual Revenue in KM	Average Value of Business Assets in KM
Micro Enterprises	Below 9	Below 700,000	Below 350,000
Small Enterprises	10-49	700,000-8,000,000	350,000-4,000,000
Medium Enterprises	50-249	8,000,000-40,000,000	4,000,000-20,000,000
Large Enterprises	Over 250	Over 40,000,000	Over 20,000,000

Source: Article 5 (Classification of Legal Entities) of the Law on Accounting and Auditing of the Federation of Bosnia and Herzegovina ("Official Gazette of FBiH No. 15/2021" dated 24.02.2021).

According to the provisions of the mentioned law, for an enterprise to be classified into one of the listed categories, it must meet at least two of the three specified conditions. Types of activities covered the broadest sense: (a) manufacturing, (b) trade, and (c) services. The fourth option (d) other refers to all other activities that respondents believe do not belong to the three fundamental types. The survey showed that out of a total of 82 companies, only two declared themselves to belong to other types of activities beyond the three fundamental ones. Furthermore, companies reported on the number of years of operation, which included the following classes: (a) up to two years of operation, (b) 2-10 years of operation, (c) 10-25 years of operation, and (d) over 25 years of operation. This criterion is necessary to determine the correlation between the age of companies and the degree of their digitalization. The survey showed that in the first class of up to two years of operation, none of the surveyed companies were included. The last criterion in this part of the research is the function of the respondent within the company, where three key options were offered: (a) professional manager, (b) owner senior, and (c) owner successor. The fourth option (d) other functions, includes all those positions that respondents could not recognize in the first three key groups of respondents. An overview of respondents from different types of activities, by all the mentioned criteria, is given in Table 2. From the table, it's apparent that the representation of different activities in the total sample is approximately equal: manufacturing 31.7%, trade 36.6%, and services 29.3%. Other activities, with 2.4% participation, are not relevant for the research. The equal representation of the fundamental types of activities justifies further research and verification of respondents' attitudes from different industries. Medium-sized companies dominate the sample.

According to the number of employees, their participation amounts to 46.3%, and by the total revenue, their participation is even higher, amounting to 51.2%. Therefore, it can be stated that almost half of all surveyed companies fall into the group of medium-sized companies. Small companies constitute approximately ¼ of the surveyed companies (by the criterion of the number of employees 25.6%, and by the criterion of revenue size 20.7%). Large companies participate with less than 1/5 of the

total number (14.6% according to the number of employees and 19.5% according to the revenue class). From the aspect of the length of operation, the largest participation is from companies that have been present in the market for 10 to 25 years (almost half, or 48.8%). A significant share also comes from those that have been on the market the longest, over 25 years (participation 40.2%). These two groups together comprise 89% of all surveyed companies. Based on this, it can be concluded that the research predominantly included companies that have been operating for more than 10 years in the BiH market.

Table 2. Overview of characteristics of surveyed companies

Criteria		Manufac-turing	Trade	Services	Other	Total compa-nies	Participa-tion in total number
Number of employees	Over 250	7	4	1	0	12	14.6%
	50-249	16	14	8	0	38	46.3%
	10-49	3	9	8	1	21	25.6%
	Below 9						
	Total Number of Employees	26	30	24	2	82	100,0%
Total revenue	Over 40 mil. KM	7	7	2	0	16	19.5%
	8-40 mil. KM	16	17	8	1	42	51.2%
	0.7-8 mil. KM	3	4	10	0	17	20.7%
	Below 0.7 mil. KM	0	2	4	1	7	8.5%
	Total Revenue Combined	26	30	24	2	82	100,0%
Years of existence	Over 25 years	15	11	7	0	33	40.2%
	10-25 years	10	18	11	1	40	48.8%
	2-10 years	1	1	6	1	9	11.0%
	Below 2 years	0	0	0	0	0	0.0%
	Total: Years of existence	26	30	24	2	82	100,0%
Position in company	Professional manager	7	11	7	0	25	30.5%
	Senior owner	3	5	7	1	16	19.5%
	Owner successor	12	10	5	0	27	32.9%
	Other functions	4	4	5	1	14	17.1%
	Total: Positions in company	26	30	24	2	82	100,0%
	Participation in total number	31,7%	36,6%	29,3%	2,4%	100,0%	

Source: Own editing

The participation of the roles that respondents perform or have in companies is relatively equal: 32.9% are younger owners (successors), 30.5% are professional managers who are not related to the owners in any way, and 19.5% are older owners. All other roles, beyond these three key ones, participate with 17.1%. Based on the pro-

vided data, it can be concluded that the structure of the surveyed companies, observed according to different criteria, is adequate for researching attitudes and opinions on the significance and effects of digitalization of business operations in BiH. This can conditionally be projected onto the state of BiH's economy as a whole.

RESEARCH OBJECTIVES

The fundamental goal of the research is to determine the achieved level of digitalization in BiH companies through the processes of digitalization within the companies themselves, changes in the digital business environment, and business applications used by companies. This level will be investigated across different sectors (manufacturing, trade, services) so that the results from individual sectors can be generalized for the BiH economy as a whole. Therefore, the main research hypothesis states:

- P.H.0: The degree of digital transformation in BiH companies significantly varies depending on the sector.

The first objective of this work is related to the processes of digital transformation. This transformation of business is recognized as a necessity and need in the operation of every company. For illustration, it is one of the strategic development directions of the European Union by 2030, where the digital transformation of business is identified as one of four areas. This is confirmed by the key policy areas of the EU's digital strategy for 2030. "The key policy areas related to the EU's digital strategy, which encourage digital transformation, include: (1) Digital Decade, (2) European Declaration of Digital Rights and Principles, (3) Digital Services, (4) Data Economy, (5) Taxation of the Digital Economy, (6) Artificial Intelligence, (7) Connectivity, (8) Cybersecurity, (9) European Digital Identification (eID), (10) Digitalization of Justice, and (11) Digital Information Exchange." The research on respondents' attitudes was intended to determine their own assessment of the current stage of digital transformation of their business and their attitudes towards the significance of this transformation for their business. The auxiliary research hypotheses related to this goal are:

- P.H.1: Although companies in BiH from various sectors are aware of the importance of digital transformation, there is a gap between this awareness and the actual application of digital technologies in business.
- P.H.2: Companies in BiH have a positive perception of the necessity and significance of digital transformation for their business, regardless of the sector they operate in.

The digitalization of business can encompass various areas in the operation and management of a company. The first indicator of digitalization is the level of application of various software or applications in operation, starting from the indispensable ERP system, basic business software used by almost all companies regardless of size or number of employees, to applications used in specific business segments such as CRM (Customer Relationship Manager), DMS (Document Management System), WMS (Warehouse Management System), Ecom Platform (such as Shopify or BigCommerce), Payment, Delivery, POS, API (Application Programming Interface), KCRM (Knowledge-enabled Customer Relationship Management), and many others. Which of these applications will be used and to what extent primarily depends on the company's sector, its size, and development strategy.

Bearing in mind the above, one of the objectives of this work is to check the level of application of several basic applications, which, by their purpose, can be used by almost all companies regardless of the type of activity. These include ERP as the fundamental software, then CRM (software that represents the central customer database, where all data related to cooperation are connected. It ensures organized information about the complete interaction with the client, available in one place and at any time.), DMS (document management software, which serves to establish paperless business. DMS tracks a document from the moment of its creation on a computer, through sending and sharing with colleagues, customers, or clients, to processing and digital archiving), WMS (warehouse software that allows the management of various logistic parameters: receiving, moving, packing, picking, dispatching of goods...) and e-commerce (software for the presentation and sale of products and services over the Internet). Respondents were asked to state whether they use each of these applications, how long they have been using them, and the benefits or advantages their application has brought to the business. The fundamental research assumption is that a higher degree of digitalization of BiH companies is in direct correlation with a higher level of application of these applications, regardless of the type of activity. The auxiliary research hypothesis for this goal states:

- P.H.3: Regardless of the type of activity, BiH companies intensively use key business software applications, which are an indicator of significant digitalization of business.

The third research objective relates to the technical aspects of digitalization, namely improving the digital environment in which companies operate. These are aspects of digitalization that are not directly within the companies' own purview but can have a minor or major impact on their business. Respondents were asked to express their views on electronic seals and signatures, Electronic Data Interchange (EDI) capabilities, the application of barcodes, and Artificial Intelligence (AI). The research assumption is that progress in the digital environment of companies has different implications for their business, regardless of the company's sector. In other words, the goal of the research is to determine whether changes in the digital business environment manifest differently across various types of activities. The auxiliary research hypothesis for this goal states:

- P.H.4: BiH companies from different sectors have positive perceptions towards changes in business conditions in the digital environment.

By analyzing the three stated research objectives and testing all the auxiliary hypotheses related to them, across different sectors, key arguments will be created for testing the main hypothesis and achieving the fundamental research objective at the level of the BiH economy as a whole. The processing of respondents' attitudes will be conducted in the statistical program SPSS 21, where, in addition to descriptive statistics for each of the three types of activities, ANOVA one-way test and T-test will also be used to determine statistically significant differences between individual groups. The ANOVA test is used when it is desired to test whether there is a statistically significant difference between the arithmetic means of more than two basic sets or so-called groups, and a conclusion is drawn whether the samples (groups) belong to the same population. In this specific case, the average responses of companies belonging to the "manufacturing," "trade," and "services" groups are tested. If the results of the

ANOVA test show mutual homogeneity in the responses of the mentioned groups, conclusions can be generalized for all companies and the economy as a whole. If there is no homogeneity, the T-test (which tests the arithmetic mean) will be used to determine between which pair of groups there are significant differences.

The degree of digital transformation in companies can be viewed through three dimensions: (a) subjective attitudes of company management on the need for business digitalization and its estimated impact on operations; (b) levels of application of modern software and applications in this field; and (c) the impact of changes in the digital environment of companies. Analyzing the first dimension, respondents were asked two direct questions related to digital transformation. These questions and the respondents' answers are presented in Table 2. Evaluating the degree of digitalization, a large majority of respondents from all three sectors together believe that minor (42.7% of respondents) or major (41.5% of respondents) improvements are needed. A relatively small portion of companies, precisely 7 out of a total of 82 companies (or 8.5%), believe they have an exceptionally high degree of digitalization. An even smaller portion of them rate the degree as relatively small or extremely low. Based on the responses, it can be concluded that most companies have started digital transformation but disagree on the level of necessary improvements. In the manufacturing sector, the majority (15 out of 26 or 57.7%) believe that minor improvements are needed, while in service sectors, the largest share believes that major improvements are needed (12 out of 26 or 46.2%). Traders are divided with an equal share of those who believe minor improvements and those who believe major improvements are necessary (13 in each group out of a total of 30 companies).

Table 3: Respondents' answers regarding the degree of digitalization of their companies

Question	Response Option	Manufacturing	Trade	Services	Total	Percentage
„What is your general assessment of the current level of digitalization of your company, in your opinion?"	1 - Exceptionally high	2	3	2	7	8.5%
	2 - Minor improvements needed	15	13	7	35	42.7%
	3 - Major improvements needed	9	13	12	34	41.5%
	4 - Relatively low	0	1	4	5	6.1%
	5 - Exceptionally low	0	0	0	0	0.0%
	6 - No need for digitalization	0	0	1	1	1.2%
	Total	26	30	26	82	100,0%
"Do you believe that your company has undergone digital transformation to a large extent?"	1 – NO	13	16	16	45	54,9%
	2 – YES	13	14	10	37	45,1%
	Total	26	30	26	82	100,0%

Source: Own editing

This confirms the average values presented in Table 4. For the "manufacturing" sector, the average score is 2.27 (closest to the rating of 2 - minor improvements needed), while for the "services" sector, it is 2.85 (closest to the rating of 3 - major improvements needed). In assessing the current degree of digital transformation, 50%

of manufacturers, 46.7% of traders, and 38.5% of service providers consider that they have implemented it to a greater extent. There is a more significant discrepancy in the attitudes of manufacturers and service providers, with traders positioned in between them. This was also confirmed by the results of the ANOVA test, presented in Table 5.

Table 4: Average responses of respondents regarding the degree of digital transformation in companies

Descriptives		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean
						Lower Bound
„What is your general assessment of the current level of digitalization of your company, in your opinion?“	Manufacturing	26	2,2692	,60383	,11842	2,0253
	Trade	30	2,4000	,72397	,13218	2,1297
	Service	26	2,8462	1,04661	,20526	2,4234
	Total	82	2,5000	,83518	,09223	2,3165
„Do you believe that your company has undergone digital transformation to a large extent?“	Manufacturing	26	1,5000	,50990	,10000	1,2940
	Trade	30	1,4667	,50742	,09264	1,2772
	Service	26	1,3846	,49614	,09730	1,1842
	Total	82	1,4512	,50068	,05529	1,3412

Source: Own editing in SPSS 21

Table 5: ANOVA Test results for P.H.1

ANOVA		Sum of Squares	Df	Mean Square	F	Sig.
„What is your general assessment of the current level of digitalization of your company, in your opinion?“	Between Groups	4,800	2	2,400	3,667	,030
	Within Groups	51,700	79	,654		
	Total	56,500	81			
„ Do you believe that your company has undergone digital transformation to a large extent?“	Between Groups	,184	2	,092	,362	,697
	Within Groups	20,121	79	,255		
	Total	20,305	81			

Source: Own editing in SPSS 21

Given that the significance value (Sig.) for the first claim regarding the current degree of digitalization is 0.030, which is less than 0.05, it can be concluded that there is a statistically significant difference between the groups in the general assessment of the current degree of digitalization of companies. Thus, the ANOVA test has shown that there are significant differences between the groups, primarily between manufacturers and service providers. The T-test for these two groups, “manufacturing” and “services,” confirmed the results of the ANOVA test (the p-value is 0.019 < 0.05).

Table 6: T-test Results for "Manufacturing" and "Services" Groups (P.H.1)

Independent Samples Test za PH1		t-test for Equality of Means		
		df	Sig. (2-tailed)	Mean Difference
The current degree of business digitalization	Equal variances assumed	50	,019	-,57692
	Equal variances not assumed	39,983	,019	-,57692

Source: Own editing in SPSS 21

Based on the presented results, the first auxiliary hypothesis stating *"Although companies in BiH from various sectors are aware of the importance of digital transformation, there is a gap between this awareness and the actual application of digital technologies in business"* can be considered proven for the following reasons:

- All types of activities have mostly started the processes of digital transformation of business (where the current degree is neither "exceptionally high" nor "relatively low", but improvements are needed);
- Manufacturers have gone a step further in digitalization and consider that minor improvements are necessary, while service sectors believe they need to do significantly more in this area in the future. Traders, as the third group, are evenly divided about the degree of future improvements.

In addition to assessing the current degree, it was necessary to explore respondents' attitudes about the impact of digitalization on their future business. The results are presented in Table 7.

Table 7: Respondents' opinions on the impact of digital transformation on Future Business

Question	Response Option	Manufacturing	Trade	Services	Total	Percentage
"Digital transformation is extremely important for the future success of our company."	1 - I completely disagree	0	0	0	0	0,0%
	2 - I disagree	0	0	0	0	0,0%
	3 - Neither disagree nor agree	1	1	0	2	2,4%
	4 - I agree	10	12	13	35	42,7%
	5 - I absolutely agree	15	17	13	45	54,9%
	Total	26	30	26	82	100,0%
"Investments in digitalization will affect our own competitive position in the future."	1 - I completely disagree	0	0	0	0	0,0%
	2 - I disagree	0	0	0	0	0,0%
	3 - Neither disagree nor agree	1	2	3	6	7,3%
	4 - I agree	10	13	10	33	40,2%
	5 - I absolutely agree	15	15	13	43	52,4%
	Total	26	30	26	82	100,0%

Source: Own editing

Average response values for all three groups of respondents are provided in Table 8. The arithmetic mean for both statements ranges between 4.38 and 4.54 for each type of industry. This indicates that companies from different sectors have very

positive attitudes towards the importance of digital transformation for future success and the necessity of investing in it.

Table 8: Respondents' opinions on the impact of digital transformation on future business

Descriptives		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean
						Lower Bound
"Digital transformation is extremely important for the future success of our company."	Manufacturing	26	4,5385	,58177	,11410	4,3035
	Trade	30	4,5333	,57135	,10431	4,3200
	Service	26	4,5000	,50990	,10000	4,2940
	Total	82	4,5244	,54942	,06067	4,4037
„ Investments in digitalization will affect our own competitive position in the future."	Manufacturing	26	4,5385	,58177	,11410	4,3035
	Trade	30	4,4333	,62606	,11430	4,1996
	Service	26	4,3846	,69725	,13674	4,1030
	Total	82	4,4512	,63153	,06974	4,3125

Source: Own editing in SPSS 21

Similar attitudes were confirmed by the ANOVA test results (Table 9), as the p-values for both statements are greater than 0.05 (Sig. values in the last column). Given these values, there was no need to conduct T-tests between different pairs of the three types of industries.

Table 9. ANOVA Test results for P.H.2

ANOVA test for PH2		Sum of Squares	df	Mean Square	F	Sig.
"Digital transformation is extremely important for the future success of our company."	Between Groups	,023	2	,012	,037	,963
	Within Groups	24,428	79	,309		
	Total	24,451	81			
"Investments in digitalization will affect our own competitive position in the future."	Between Groups	,323	2	,161	,399	,673
	Within Groups	31,982	79	,405		
	Total	32,305	81			

Source: Own editing in SPSS 21

Based on the obtained results, it can be concluded that regardless of the type of activity, companies have very positive attitudes about the importance of digital transformation for their future business, as well as that investments in it are necessary in order to maintain or strengthen their own competitive position. This proves the second auxiliary hypothesis. The third auxiliary hypothesis: *Regardless of the type of activity, BiH companies intensively use key business software applications,* which are indicators of significant digitalization of business, is based on the assumption that companies

that have digitalized their business to a greater extent or have started these processes actually use certain business applications and software solutions that reflect the technical aspect of digitalization. In addition to the direct question of whether they use certain software, they were asked to state how long they have been using it. The duration of the use of this software is a clear indicator of the current degree of digitalization. Evaluating all five software, companies from different types of activities were asked to state how the application of each of them has impacted their business. The results of the technical aspect of companies' digitalization are presented in Table 10.

Table 10: Application of various software in different types of activities

Software	Software application				Length of software usage			Impact on business			
	Sector	Uses it	Total number of companies	Share in total number	Over 10 years	2-10 years	Under 2 years	None	Small	Large	Don't know
ERP	Manufacturing	21	26	80,8%	16	5	0	0	1	16	4
	Trade	22	30	73,3%	19	2	1	0	1	17	4
	Service	20	26	76,9%	7	11	2	0	1	12	7
	Total	63	82	76,8%	42	18	3	0	3	45	15
	Participation	76,8%		Share in assets	66,7%	28,6%	4,8%	0,0%	4,8%	71,4%	23,8%
CRM	Manufacturing	5	26	19,2%	2	2	1	0	0	4	1
	Trade	9	30	30,0%	4	3	2	0	2	6	1
	Service	10	26	38,5%	4	4	2	0	3	6	1
	Total	24	82	29,3%	10	9	5	0	5	16	3
	Participation	29,3%		Share in assets	41,7%	37,5%	20,8%	0,0%	20,8%	66,7%	12,5%
DMS	Manufacturing	10	26	38,5%	2	5	3	1	0	8	1
	Trade	9	30	30,0%	1	5	3	1	2	6	0
	Service	9	26	34,6%	2	5	2	0	1	6	2
	Total	28	82	34,1%	5	15	8	2	3	20	3
	Participation	34,1%		Share in assets	17,9%	53,6%	28,6%	7,1%	10,7%	71,4%	10,7%
WMS	Manufacturing	13	26	50,0%	2	7	4	0	1	7	5
	Trade	10	30	33,3%	3	4	3	0	1	6	3
	Service	4	26	15,4%	1	3	0	0	2	0	2
	Total	27	82	32,9%	6	14	7	0	4	13	10
	Participation	32,9%		Share in assets	22,2%	51,9%	25,9%	0,0%	14,8%	48,1%	37,0%
E-COM	Manufacturing	9	26	34,6%	1	4	4	0	1	4	4
	Trade	12	30	40,0%	3	6	3	0	3	7	2
	Service	4	26	15,4%	2	1	1	0	1	3	0
	Total	**25**	**82**	30,5%	**6**	**11**	**8**	**0**	**5**	**14**	**6**
	Participation	30,5%		Share in assets	24,0%	44,0%	32,0%	0,0%	20,0%	56,0%	24,0%

Source: Own editing

Unlike the other four applications, which cover specific segments of business, ERP mainly covers the basic areas of business (primarily, inventory-material and financial operations). Therefore, the results obtained for this software were expected. 76.8% of all surveyed companies use ERP. Two-thirds of all respondents have been using it for more than 10 years, and its impact on the business is mostly significant (as agreed by 71.4% of all surveyed). Similar proportions are seen across each individual sector, so it can be generalized that BiH companies largely use ERP in their operations. However, the remaining four software solutions (CRM, DMS, WMS, and E-commerce) show significantly more modest levels of implementation. The participation of those using them ranges from 29.3% to 34.1%, meaning that 1/3 of all surveyed use the mentioned applications. This indicates that they are not widely used. Taking into account the length of use, it is visible that the most common answer is a period of 2-10 years. This implies that even those who use these applications have relatively little experience working with them, namely, that they have only recently started using them. Positively, those who use these four applications consider that they mostly have a significant impact on the business.

Analyzing by individual sectors, it is evident that service industries are more focused on CRM (38.5% of respondents from this group), manufacturers on DMS (38.5%) and WMS (50.0%), and trade on e-commerce (40.0%). However, no sector records participation greater than 50% for any application, indicating insufficient application in general. Based on the obtained responses, P.H.3, which stated: *Regardless of the type of activity, BiH companies intensively use key business software applications, which are indicators of significant digitalization of business, cannot be considered proven.* The reasons for refuting this hypothesis are as follows:

- Regardless of size, companies mainly intensively use only ERP, which is expected given its fundamental purposes;
- The remaining four, CRM, DMS, WMS, and e-commerce, are mainly used by about one-third of the surveyed companies. There are variations in participation between small, medium, and large companies, but they are below half.
- Positively, those companies that stated they use these applications have positive perceptions of their impact on their own business, although the period of application is relatively short (the period of 2-10 years dominates).

The final hypothesis, P.H.4: *Companies in BiH from different sectors have positive perceptions towards changes in business conditions in the digital environment, tests respondents' attitudes about changes in the digital environment.* The assumption is that these changes can also encourage companies to engage in digital transformation processes of their own business. The results are listed in Table 11. Analyzing attitudes towards electronic seals and signatures, which are still not applied in the BiH market, all three sectors overwhelmingly, at 93.9%, agree that their introduction will have positive implications on business and its digitalization. The lack of experience in the application of electronic signatures and seals is visible in the assessment of their impact on their business because only 42.9% - 46.8% of respondents believe that it will have a significant impact on business. One fifth believes that this impact will be small, while one third cannot assess this impact. Similar participations are evident within each individual sector. In general, companies support the introduction of electronic

signatures and seals but are uncertain about the reflections it will have on their business in the future.

Unlike electronic signatures and seals, the remaining three segments of the digital environment (use of barcodes, EDI, and artificial intelligence) have a significantly lower representation, ranging from 32.9% to 37.8% of those who apply them. Barcodes are more used by manufacturers and traders; half of them believe that barcodes have a significant impact on business, but the percentage of those who cannot assess is surprisingly high (38.7% of all respondents). There are no majorities indicating insufficient application of barcodes in business. EDI data exchange is used by 1/3 of all respondents. Its application is slightly higher among manufacturers but still below 40%. Evaluating the significance of EDI, it is visible that 51.7% of those who use it cannot assess its impact on business. As in the case of barcodes, this indicates insufficient knowledge and application of this system. Artificial intelligence has emerged recently. For these reasons, it is difficult to expect it to be widely used in business. According to survey results, service industries use it the most (38.5%), while the other two sectors are at the level of 30%. Evaluating how much AI can impact their own business, generally speaking, it is visible that assessments are quite diverse, and there is no dominant rating of impact on business. Service industries that use AI in business the most, mainly (5 out of 10 companies) consider that the impact of AI on business is relatively small, while an additional 4 cannot assess this impact. Generally, there are no dominant views on how much AI can affect business, which is a direct consequence of the fact that it has appeared in the last few years.

Table 11: Company attitudes towards the digital environment

Software	Approval and application				Impact on business			
	Sector	Approves/ uses	Total number of companies	Share in total number	None	Small	Large	Don't know
Electronic seal	Manufacturing	24	26	92,3%	0	5	11	8
	Trade	29	30	96,7%	0	7	13	9
	Service	24	26	92,3%	1	4	9	10
	Total	**77**	**82**	93,9%	1	16	33	27
	Participation	***93,9%***		Share in assets	*1,3%*	*20,8%*	*42,9%*	*35,1%*
Electronic signature	Manufacturing	24	26	92,3%	0	4	12	8
	Trade	29	30	96,7%	0	7	14	8
	Service	24	26	92,3%	1	3	10	10
	Total	**77**	**82**	93,9%	**1**	**14**	**36**	**26**
	Participation	***93,9%***		Share in assets	*1,3%*	*18,2%*	*46,8%*	*33,8%*
Barcode	Manufacturing	12	26	46,2%	0	0	7	5
	Trade	13	30	43,3%	0	2	7	4
	Service	6	26	23,1%	0	1	2	3
	Total	**31**	**82**	37,8%	**0**	**3**	**16**	**12**
	Participation	***37,8%***		Share in assets	*0,0%*	9,7%	51,6%	38,7%

EDI (electronic data interchange)	Manufacturing	10	26	38,5%	0	1	3	6
	Trade	11	30	36,7%	0	2	5	4
	Service	8	26	30,8%	0	0	3	5
	Total	**29**	**82**	35,4%	**0**	**3**	**11**	**15**
	Participation	***35,4%***		Share in assets	*0,0%*	*10,3%*	*37,9%*	*51,7%*
AI (artificial intelligence)	Manufacturing	8	26	30,8%	0	3	5	0
	Trade	9	30	30,0%	0	2	3	4
	Service	10	26	38,5%	0	5	1	4
	Total	**27**	**82**	32,9%	**0**	10	9	8
	Participation	***32,9%***		Share in assets	*0,0%*	*37,0%*	*33,3%*	*29,6%*

Source: Own editing

Given the obtained results, P.H.4 cannot be considered proven for the following reasons:

- There is almost unanimous support for the introduction of electronic seals and electronic signatures, regardless of the type of activity, but there are variations in the assessment of their impact on one's own business.
- The research results on the application and impact on business of barcodes, EDI, and artificial intelligence show a low level of implementation in all sectors and significant variations in the assessment of their impact on business.

Summarizing the results of proving the auxiliary hypotheses:

Auxiliary Hypothesis	Results
Although companies in BiH from various sectors are aware of the importance of digital transformation, there is a gap between this awareness and the actual application of digital technologies in business.	Proven
Companies in BiH have a positive perception of the necessity and importance of digital transformation for their business, regardless of the type of activity they are involved in.	Proven
Regardless of the type of activity, BiH companies intensively use key business software applications, which are indicators of significant digitalization of business.	Not proven
Companies in BiH from different sectors have positive perceptions towards changes in business conditions in the digital environment.	Not proven

The main hypothesis of the study, which stated: *The degree of digital transformation in BiH companies varies significantly depending on the type of activity,* cannot be considered proven. Companies in BiH, regardless of the type of activity they engage in, are aware of the importance and need for digitalization of their own operations. They believe that investments in it will define their success in the future. However, all this is in the initial stage. Technical aspects expressed through the application of various software applications or physical manifestations of changes in the digital environment are at a low level of implementation. Only 1/3 of the surveyed companies have started with the implementation, regardless of the type of activity. This is equally expressed in each individual activity (with minor variations), so it can be projected onto the economy of BiH as a whole. In other words, there is a willingness among BiH companies, but the process of digitalization is at the beginning.

DISCUSSION AND CONCLUSION

Theoretical implications: This research significantly contributes to the theoretical understanding of digital transformation within the context of transitional economies, such as Bosnia and Herzegovina (BiH). By studying the degree of digital integration and its impact on business operations across different sectors in BiH, this research not only confirms existing theories related to digital transformation but also introduces nuanced insights that challenge and expand them. Firstly, the study aligns with and expands upon the Diffusion of Innovations theory by (Rogers, Singhal, & Quinlan, 2014), providing concrete examples of how digital innovations are adopted across different sectors in a post-conflict, transitional economy. The varying degrees of digital adoption and integration observed among the manufacturing, trade, and services sectors in BiH reflect a complex interplay of factors such as organizational readiness, sectoral challenges, and the socio-economic context influencing the diffusion process. This adds a valuable layer of understanding to the theory by highlighting the heterogeneity of diffusion within and between sectors in transitional economies. Moreover, by exploring organizational readiness and the environmental pressures faced by companies, this research adds depth to the Technology-Organization-Environment (TOE) framework (Lee & Mangalaraj, 2022), suggesting a nuanced role these elements play in a transitional context. Additionally, the findings align with the Resource-Based View (RBV) by illustrating digital technologies as strategic resources that can enhance competitive advantage, while simultaneously indicating the dynamic need for companies to adapt their resource base in response to technological advancements. In summary, this research paper offers significant theoretical implications by applying, testing, and expanding established theories in the context of digital transformation in BiH. It highlights the complexity of the digital transformation process in transitional economies and provides valuable insights for scholars, practitioners, and policymakers aiming to navigate and facilitate digital transformation in similar contexts.

Practical implications: From a practical standpoint, regardless of the type of activity, the research results indicate that companies in BiH are mostly at the very beginning of digital transformation. There is consensus on its importance for their business, especially for the future, but there is a current gap between positive perception and actual application. This is reflected in visible segments of digitalization, the application of specific software solutions, and the adoption of changes in the digital environment. With the exception of ERP software, which has widespread use, all others analyzed are applied in approximately 1/3 of the surveyed companies. The views on the impact of these applications on business are also debatable, which is a clear signal that even companies that apply them do not have enough experience to assess the benefits they can bring. This can partly slow down the digitalization process of business. The research results show that similar tendencies exist in all types of activities and that there are no significant deviations or differences between them. Such results confirm that these observations can be generalized to the entire economy of BiH, taking into account that there are certain limitations related to the representativeness of the sample itself. In an applicative sense, this work can serve as a basic guide for companies wishing to digitalize their business or undergo digital transformation. By examining all four segments, it is possible to assess one's current position and determine which actions need to be taken for this process to be successfully carried out.

Limitations and suggestions for future research: In the study of digital transformation in companies in Bosnia and Herzegovina (BiH), several key limitations have influenced the scope and depth of the insights gained. First, although the sample included companies from various sectors, the size and composition of the sample might not be fully representative of all BiH companies. A limited number of companies from each sector could affect the generalization of the results to the entire BiH economy. Second, the subjective nature of the responses, collected through survey questionnaires from managers and owners, could introduce bias into the data interpretation. There's a possibility that respondents, wishing to portray their companies in a better light, might have unconsciously or consciously provided more optimistic perceptions of digital transformation. Finally, the research focus on the broader picture of digital transformation might have limited the ability to delve deeper into specific challenges and technological needs within individual industries or types of companies. These limitations indicate the need for future research that would employ more diverse methodological approaches to gain more detailed insights into the dynamics of digital transformation in BiH. Future research should focus on sector-specific challenges and opportunities of digital transformation, using in-depth case studies to understand the varied needs and strategies within individual industries. Additionally, it's important to conduct longitudinal research that would track the dynamics of change and the impact of digitalization on companies' business performances over time.

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ZNAČAJ FINANSIJSKOG FORENZIČKOG VEŠTAČENJA U SPOROVIMA ZBOG PROBIJANJA PRAVNE LIČNOSTI

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Sažetak: *Predmet istraživanja je problem dokazivanja zloupotrebe privrednog društva od strane članova društva poznatog kao institut pod nazivom "probijanje pravne ličnosti". Članovi društava kapitala (društva ograničene odgovornosti i akcionarskog društva), u skladu sa principom ograničene odgovornosti, snose rizik za poslovanje društva do visine svog uloga pa se za njih često kaže da su zaštićeni "velom" pravne ličnosti društva. No, ukoliko se u sudskom postupku dokaže da je član zloupotrebio privredno društvo tako što ga je zloupotrebio za nezakonite ili prevarne ciljeve ili je imovinom društva raspolagao kao sa sopstvenom imovinom na način kao da privredno društvo kao pravno lice ne postoji, "veo" se spušta i ulazi se na teren neograničene, solidarne odgovornosti člana društva. Tada član oštećenim poveriocima društva odgovara celokupnom svojom imovinom, a ne samo osnivačkim ulogom. Odlučujuće dokazno sredstvo u ovim sporovima je forenzičko veštačenje po sudskom veštaku ekonomske struke koji raspolaže teoretskim i praktičnim znanjem, ali i iskustvom u oblasti sprečavanja i otkrivanja finansijske patologije.*

Ključne reči: *princip ograničene odgovornosti, zloupotreba privrednog društva, probijanje pravne ličnosti, forenzičko računovodstvo, finansijsko forenzičko veštačenje.*

JEL klasifikacija: *K12, K13.*

UVOD

POJAM PROBIJANJA PRAVNE LIČNOSTI

Pravni institut „probijanje pravne ličnosti", kao najprepoznatljiviji pravni transplant koji je iz anglo-američkog prava uvršten u naše kompanijsko pravo i zakonodavstvo, predstavlja odstupanje od principa ograničene odgovornosti članova za obaveze privrednog društva. Regulisan je odredbom člana 15. Zakona o privrednim društvima ("Službeni glasnik Republike Srpske, broj 127/08 do 17/23), pod nazivom *Zloupotreba pravnog lica,* i to na sledeći način: 1) Komanditori komanditnog društva, kao i

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članovi društva sa ograničenom odgovornošću i akcionari akcionarskog društva mogu prema trećim licima lično odgovarati za obaveze društva ako zloupotrebe privredno društvo za nezakonite ili prevarne ciljeve ili ako sa imovinom privrednog društva raspolažu kao sa sopstvenom imovinom na način kao da privredno društvo kao pravno lice ne postoji. 2) Lica iz stava 1. ovog člana odgovorna su za obaveze društva solidarno. 3) Odgovornost iz st. 1. i 2. ovog člana utvrđuje nadležni sud, pri čemu uzima u obzir sve okolnosti u vezi sa zloupotrebom, a naročito da se opšti princip ograničene odgovornosti ne primenjuje na slučajeve iz stava 1. ovog člana.

Susedne jurisdikcije, koje na gotovo istovetan način uređuju ovaj institut, normiraju ga pod nazivom *odgovornost za obaveze* (FBiH), *probijanje pravne ličnosti* (Srbija), *zloupotreba svojstva pravnog lica* (Crna Gora), *odgovornost članova trgovačkog društva* (Hrvatska), *zanemarivanje pravnog subjektiviteta* (Slovenija), *posebna odgovornost članova društva sa ograničenom odgovornošću i akcionara* (Makedonija).

U teoriji je ova ustanova poznata i pod nazivom *proboj pravne ličnosti* ili *privid pravne ličnosti*, dok je uporednim doktrinama prepoznatljiva po imenu *lifting the veil, piercing the corporate veil* (Pušac, 2024).

Naime, u svim pravnim sistemima, bez izuzetka, važi pravilo da privredna društva organizovana kao društva kapitala (društva sa ograničenom odgovornošću i akcionarska društva) odgovaraju za obaveze prema trećim licima isključivo svojom imovinom, i to neograničeno, celokupnom imovinom kojom raspolažu (pri tome, privredno društvo ne može odgovarati imovinom na kojoj nema svojinska prava poput imovinskih sredstava drugih lica koja društvo koristi po nekom pravnom osnovu, npr. zakup, posluga). Ovo je jedna od posledica *načela odvojenosti pravnog subjektiviteta* privrednog društva od njegovih članova (načelo odvojenosti njihovih imovina) usled čega se društvo posmatra kao „odvojeni entitet“ (Wormser, 1912) u odnosu na svoje članove (Vasiljević M. S., 2020). Osnivači, ali i docniji članovi društva kapitala ne odgovaraju za obaveze društva, već samo snose rizik za poslovanje društva do visine svog uloga (članovi privrednog društva su lica koja su društvo osnovala, kao i ona koja su mu naknadno pristupila, a u svakodnevnom govoru nazivaju se vlasnicima društva ili firme. U tom smislu, pojam „član društva“ upotrebljava se kao zajednički naziv za članove društava lica (od i kd) i društava kapitala (doo i ad). Dakle, članovi društva odgovaraju do visine ugovorenog uloga, a ukoliko ugovoreni ulog nije unet u imovinu društva, odgovaraju do iznosa neunesenog uloga. U praksi to znači da, u slučaju kada društvo posluje sa gubicima, član društva može izgubiti samo onoliko koliko je uložio u društvo prilikom osnivanja, kao i naknadni, dodatni ulog pri povećanju osnovnog kapitala i ništa više. Upravo zbog toga, ove forme su veoma popularne prilikom osnivanja privrednih društava, jer ograničavaju rizik osnivača u slučaju neuspelog poslovnog poduhvata, i to samo do visine uloženog, pa se za članove društva kapitala kaže da su zaštićeni „velom“ pravne ličnosti osnovanog društva. Otuda, sama pravna priroda društva kapitala otvara realnu mogućnost zloupotrebe koja se ogleda u tome da se koristi od poslovanja zadrže za člana društva, a rizik poslovanja prebaci na društvo.

Navedena pojava zloupotrebe privrednih društava prisutna je i u našem poretku pod raznim nazivima kao što su fantomska firma, fiktivna društva, društva za jednokratnu upotrebu, i sl. Veliki broj takvih, fiktivnih privrednih društava osnovanih samo jednim delom radi sticanja dobiti, a prvenstveno radi postizanja drugih ciljeva, društava koja tipično okončavaju privrednu egzistenciju bez imovine i blokadom

bankovnih računa, a njihovi poverioci bez nade da će svoja potraživanja prema tim društvima realizovati, upućuje na zaključak da postoji izvesna sistemska manjkavost koja *de facto* omogućava takvo, u najmanju ruku, nesavesno poslovanje u našoj privredi, bez sankcija. Usled toga, „sigurnost svojine i ugovora kod nas, što je kamen temeljac moderne tržišne privrede, dovedena je do ranga vlastitog privrednog samoubistva" (Vasiljević M. , 2015).

Probijanje pravne ličnosti kao korektiv opšteg principa da članovi društva sa ograničenom odgovornošću ne odgovaraju za obaveze društva, ima za cilj da sankcioniše svako ponašanje članova privrednog društva koji zloupotrebe pravila o odvojenosti imovine privrednog društva i njihove lične imovine (ili na drugi način zloupotrebe društvo), pa stoga ukoliko članovi društva raspolažu imovinom društva kao svojom, solidarno odgovaraju za obaveze društva (Presuda Vrhovnog kasacionog suda Srbije, **Prev-250/2021)**. U pravnom sistemu Republike Srpske, ovaj institut počiva na zloupotrebi prava koja se manifestuje: 1) u zloupotrebi privrednog društva za nezakonite ili prevarne ciljeve, ili 2) u raspolaganju sa imovinom privrednog društva kao sa sopstvenom imovinom, na način kao da privredno društvo kao pravno lice ne postoji. Zloupotreba može biti subjektivna i objektivna. *Subjektivna zloupotreba* postoji kada se društvo koristi za postizanje ciljeva koji su zabranjeni (nezakoniti ili prevarni) sa namerom da se naškodi poveriocima društva. *Objektivna zloupotreba* postoji u slučajevima kada se društvo koristi protivno ciljevima zbog kojih mu je priznat subjektivitet, bez namere da se drugima naškodi. U praksi se objektivna i subjektivna zloupotreba najčešće prepliću u istom slučaju, ali je dovoljno da se dokaže objektivna zloupotreba. *Za odgovornost akcionara ili članova privrednog društva zbog nezakonitog raspolaganja imovinom tog društva nije neophodno da postoji cilj, odnosno namjera da se izigraju povjerioci društva*, iz presude Vrhovnog suda Republike Srpske, 60 0 Ps 024805 19 Rev od 02.10.2019. godine (Paragraf Lex). To znači da je dovoljno da se imovina društva zloupotrebljava nauštrb interesa poverilaca, a sve pod ogradom pravila o ograničenoj odgovornosti za obaveze društva. Dakle, nije od značaja da li je kod člana društva postojala namera činjenja zloupotrebe, jer je obaveza člana društva da se u svakom momentu rukovodi interesima društva (Radović M. , 2022).

Prema tome, probijanje pravne ličnosti predstavlja ličnu, neograničenu odgovornost člana društva zbog zloupotrebe pravila o ograničenoj odgovornosti za obaveze privrednog društva. U slučaju uspeha u sporu povodom probijanja pravne ličnosti, poveriocima se omogućava da od člana društva, na njegovoj ličnoj imovini, naplate potraživanje koje je nastalo prema društvu.

INDICIJE O ZLOUPOTREBI PRIVREDNOG DRUŠTVA

Probijanje pravne ličnosti manifestuje se kroz različite pojavne oblike i radnje: 1) mešanje lične imovine i imovine društva (*Ako mešanjem imovine ili na drugi način osnivač od preduzeća stvara privid pravnog subjektiviteta, onda odgovara i za njegove obaveze. Presuda Vrhovnog suda Srbije, Rev. 5159/2002 od 19.12.2002. godine. U drugom slučaju, sud je utvrdio da je tuženi vlasnik privatne štedionice od novca koji su štediše ulagale na štednju nabavio imovinu velike vrednosti: nekoliko kuća, luksuznih automobila, placeva i sl. Sud je zaključio da je tuženi mešao imovinu štedionice sa svojom ličnom imovinom, da je stvorio privid o postojanju identiteta sa štedionicom, pa je usvojio tužbeni zahtev i obavezao vlasnika štedionice na isplatu uloga tužiocu kao*

štediši, iz presude Opštinskog suda u Vrnjačkoj Banji, P. 633/94 od 24.11.1994. godine), 2) kupovina dobara i usluga za lične potrebe vlasnika i njihovo plaćanje sa računa društva, 3) korišćenje imovine društva za lične svrhe (*Institut privida pravnog identiteta može se primeniti samo za preduzeće osnovano kao društvo kapitala kod koga je odgovornost osnivača za obaveze preduzeća utvrđena do visine osnivačkog uloga (ukoliko se pravna ličnost preduzeća koristi za zakonom nedozvoljene ciljeve - kao u konkretnom slučaju, očitim mešanjem primljenih sredstava na ime uplate za kupovinu sirovnskog vlakna sa imovinom samog vlasnika preduzeća kod neisporuke plaćenog viskoznog prediva)*, iz presude Vrhovnog suda Srbije, Prev. 750/98 od 17.02.1999. (1999) – Sudska praksa privrednih sudova – Bilten br. 4., 4) odobravanje zajmova bez namere da budu vraćeni, 5) prevarna korišćenja društva i njegove imovine i slične radnje praćene neistinitim prikazivanjem stanja u pogledu imovine u poslovnim knjigama i evidencijama, odnosno nepostojanjem takvih knjiga i evidencija, njihovom nepotpunošću i drugim manjkavostima *(Ponašanje direktora preduzeća koji su od klijenta primili narudžbinu i odgovarajući iznos na ime akontacije za koju su potpisali priznanicu, ali istu nisu evidentirali u knjigovodstvu preduzeća, niti su novac predali računovodstvu, niti klijentu isporučili plaćenu robu, ukazuje na njihovu nameru da se ošteti poverilac, pa je došlo do probijanja pravne ličnosti, što dovodi do odgovornosti navedenih lica shodno članu 54. Zakona o preduzećima,* iz presude Vrhovnog suda Srbije, Rev-219/08 od 17.09.2009. godine, Bilten Okružnog suda u Kraljevu, br. 4/1999). Najbolji pokazatelji da se radi o prividnom postojanju društva ogledaju se u nepostojanju poslovne aktivnosti, neurednoj poslovnoj dokumentaciji, kao i u izraženoj prezaduženosti društva (Cheng, 2011).

Indicije postoje i kada *društvo osniva novo društvo* s jedinim ciljem da ošteti svoje poverioce prebacivanjem imovine u drugo društvo ili osnuje novo društvo s neznatnom imovinom pa poslovanje prebaci na novo društvo tako da prvobitno društvo posluje preko računa novog društva. Tada dužnik odgovara i za obaveze društva koje je radi toga osnovao. Sudska praksa poznaje i primere *namerne blokade sopstvenog računa* kako bi se onemogućilo namirenje poverilaca društva pri čemu se obaveze stvaraju jednom društvu, a korist ostvaruje za drugo društvo, tzv. *tuneliranje ili izvlačenje sredstava iz društva.* Ovaj primer je tipičan za društva unutar koncerna kada se sredstva jednog društva koriste za potrebe drugog društva (Barbić, 2009).

Među tipičnim društvima za probijanje pravne ličnosti ističu se jednopresonalna društva, društva bez zaposlenih, društva kod kojih postoji tesna, odnosno bliska veza sa članovima koji su najčešće porodično povezani (ovakva veza se u praksi ogleda u neformalnom pozajmljivanju novca društvu ili od društva), kao i društva kod kojih je matično 100% vlasnik zavisnog društva.

Pored iznetog, probijanje pravne ličnosti je društveno-politički opravdano naročito u slučajevima *potkapitalizacije* privrednog društva, odnosno postojanja „beznačajnog“ kapitala pri osnivanju društva u odnosu na dugove koji realno mogu nastati u obavljanju planirane delatnosti (Presser, 2011). U slučaju visoke potkapitalizacije društva koja kod nas nije retka, postoje osnovane pretpostavke da sud utvrdi da je do tog stanja došlo zloupotrebom pravila o ograničenoj odgovornosti. Ukoliko je, pak, potkapitalizacija društva nastala mimo krivice članova, kao splet poslovnih i finansijskih okolnosti, stanja na tržištu i u poslovnom sektoru ili grani kojoj društvo pripada, probijanje pravne ličnosti ne postoji (Radović M. L., 2017) (Radović M. , 2022).

Takođe, u slučaju *nepostojanja odvojenosti vlasničke strukture i profesionalne uprave,* često biva zanemarena efikasnost društva i tada je jedini cilj društva - briga o ličnim interesima vlasnika. Tada koncept ograničene odgovornosti gubi svoju svrhu pa je takođe opravdana primena instituta probijanja pravne ličnosti.

Osetniji pokušaji izigravanja koncepta ograničene odgovornosti primetni su u slučajevima kada *povezana privredna društva* samo formalno posluju kao odvojena, a u stvarnosti deluju kao jedinstven pravni entitet, tzv. „pomešano" poslovanje zavisnog i matičnog društva. Da bi došlo do proboja pravne ličnosti, potrebno je da matično društvo zloupotrebi svoj položaj na način da raspolaže imovinom zavisnog društva protivno propisima, zbog čega se poverioci zavisnog društva nalaze u nepovoljnijem položaju (Filipović, 2011).

Najzad, da bi se određena radnja člana društva mogla okarakterisati kao zloupotreba, potrebno je analizirati *strukturu i položaj člana/akcionara u društvu,* te način na koji oni u društvu mogu ostvariti određeni uticaj. Iz definicije društava kapitala proizlazi da akcionar u a.d. učestvuje s ulozima u osnovnom kapitalu društva koji je podeljen na akcije, a član d.o.o. učestvuje u unaprijed dogovorenom osnovnom kapitalu koji se deli na udele. Članovi društva na osnovu vlasništva akcija/udela u društvu imaju određena prava i obaveze koja se tradicionalno dele na upravljačka i imovinska. Dakle, kada fizičko, odnosno pravno lice postane član društva, *upravljačka i imovinska prava* su jedini način na koji član može da ostvari uticaj na društvo. Putem upravljačkih prava, član učestvovuje u donošenju odluka društva i tako vrši uticaj na društvo. On može pokušati da utiče na donošenje određenih odluka koje su u njegovom ili interesu drugog lica, a na štetu društva. No, da bi mogao da ostvari određeni uticaj u društvu, mora imati glasačku snagu - određeni procenat akcija/udela s pravom glasa koje mu daju odlučujući, tj. većinski položaj u glasanju. U slučaju nedovoljnog broja akcija/udela, on može da obezbedi donošenje odluke koja je u njegovom interesu tako što će činiti sporazume o glasanju sa drugim akcionarima/članovima društva (pri čemu se stvara društvo unutar društva). Sledom rečenog, dolazi se do zaključka da uticaj člana društva koji mu omogućava uticaj na donošenje konačne odluke društva, *mora biti dominantan*, odnosno, njegov uticaj mora biti preovlađujući nad uticajima drugih članova, jer je to jedini način na koji može delotvorno da utiče na politiku društva. Otuda, iako se zakonskom odredbom o probijanju pravne ličnosti ne propisuje izričito da član društva mora imati preovlađujući uticaj u društvu, ovaj se zaključak nameće kao pravno logičan.

U situaciji kada društvo ima samo jednog člana, nesporno je da on ima preovlađujući uticaj u društvu, pa je tada i dokazivanje činjenice da su radnje i odluke člana društva identične sa radnjama i odlukama samog društva, znatno olakšano.

Teškoće s kojima se suočavaju poverioci zloupotrebljenog društva

Poverilac teško može doći do saznanja da su članovi društva zloupotrebili sopstveno društvo. Ovo je posledica činjenice da poverilac u postupku mora dokazati da postoje nedozvoljeni pravni poslovi i radnje u kojima nije učestvovao tzv. „đavolje dokazivanje" *(probatio diabolica).* Obično su to poslovi koje društvo samostalno preduzima ili ih preduzima u dogovoru sa trećim licima o kojima oštećeni poverilac nije upoznat, niti može biti upoznat (ne samo što ne učestvuje u tim poslovima i radnjama, već se ove redovno sakrivaju od potencijalnog tužioca, odnosno poverioca zloupotre-

bljenog društva). *Odgovornost osnivača za obaveze privrednog društva može postojati samo ako osnivač svojim radnjama ili mešanjem svoje imovine i imovine društva stvori kod drugih lica privid identiteta sa društvom, da bi postigao cilj koji je zabranjen, raspolažući imovinom privrednog društva, kao da je u pitanju njegova lična imovina. U slučaju spora na tužiocu je teret dokazivanja da je osnivač privrednog društva primljeni iznos novca uplatio kao pozajmicu privrednom društvu, da je koristio novac kao svoju ličnu imovinu, odnosno tužilac je dužan da dokaže postojanje jednog od taksativno navedenih razloga iz Zakona o privrednim društvima,* iz presude Privrednog apelacionog suda, Pž. 926/15 od 12.04.2017. godine (Paragraf Lex).

Čak i ako postoje indicije da je do zloupotrebe došlo, postavlja se pitanje kako poverilac može doći do relevantnih dokaza koji će mu omogućiti uspeh u sporu. Eventualna primena odredbe člana 135. Zakona o parničnom postupku ("Službeni glasnik Republike Srpske", broj 58/03 do 27/24, dalje: ZPP), na osnovu koje sud može, na zahtev tužioca, da naloži tuženom dostavljanje isprava (npr. knjigovodstvene dokumentacije) koje se nalaze u njegovom posedu, potpuno je beskorisna, jer ni tužilac, ni sud nisu kvalifikovani za analizu i tumačenje takvih isprava.

FINANSIJSKO FORENZIČKO VEŠTAČENJE

Dokazna građa protiv člana zloupotrebljenog društva

Izvođenje dokaza veštačenjem po veštaku ekonomske struke specijalizovanom za oblast finansijske forenzike, tzv. *sertifikovanom forenzičkom računovođi,* predstavlja metod uspešnog prikupljanja dokaza. Kako je ovaj dokaz moguće izvesti samo u toku sudskog postupka na predlog tužioca, a po nalogu suda (*Sud može, na predlog stranke, odrediti izvođenje dokaza veštačenjem kad je radi utvrđivanja ili razjašnjenja određene činjenice potrebno stručno znanje kojim sud ne raspolaže*, član 147. ZPP. *Stranka koja predlaže veštačenje dužna je u predlogu da naznači predmet i obim veštačenja, kao i da predloži lice koje će da izvrši veštačenje. Protivna stranka će se izjasniti o predloženom veštaku, kao i o predmetu i obimu veštačenja. Ako stranke ne postignu sporazum o licu koje treba biti određeno za veštaka i predmetu i obimu veštačenja, odluku o tome će doneti sud*, član 148. ZPP), jasno je da detaljno i brižljivo prikupljanje indicija o zloupotrebi društva predstavlja prethodni korak koji treba da opravda pokretanje sudskog postupka. No, važno je podsetiti da postoje mnogobrojne sudske odluke kojima je usvojen tužbeni zahtev zbog zloupotrebe pravnog lica na osnovu ostalih provedenih dokaza (čitanje materijalnih isprava, saslušanje svedoka i parničnih stranaka), ali ne i forenzičkog veštačenja, što potvrđuje da se činjenica zloupotrebe ne mora *a priori* u svakom slučaju dokazivati ovim dokaznim sredstvom, već zavisno od prirode i složenosti svakog pojedinog predmeta. U nekim slučajevima biće dovoljno i klasično finansijsko veštačenje.

Naime, Zakonom o računovodstvu i reviziji Republike Srpske, pored računovodstvenih i revizorskih, definisana su i druga zvanja u srodnim profesijama među kojima i zvanje *ovlašćeni forenzički računovođa* (v. član 58. stav 2. tačka 3. Zakona o računovodstvu i reviziji Republike Srpske, "Službeni glasnik Republike Srpske", broj 94/15 do 78/20). Savez računovođa i revizora Republike Srpske je još 2012. godine uveo profesionalno-stručno zvanje „Sertifikovani forenzički računovođa" zbog povećane potrebe za forenzičkim računovodstvom na globalnom nivou, ali i ukazane po-

trebe za njegovu primenu na prostoru Republike Srpske. U tom smislu je 2013. godine usvojen *Pravilnik o uslovima sticanja profesionalnog zvanja i kontinuiranoj edukaciji za sertifikovane forenzičke računovođe* (dalje: Pravilnik), na osnovu kojeg je do danas 72 kandidata steklo ovo zvanje (v. registar sertifikovanih forenzičkih računovođa pri Savezu računovođa i revizora).

Takođe, zanimljivo je da fakulteti, kako u nas tako i u okruženju, već uveliko organizuju akademske studije drugog ciklusa posvećene sticanju ovog novog profesionalnog zvanja iz oblasti računovodstva i revizije, s ciljem da se u javnom i privatnom sektoru doprinese prevenciji, detekciji, istrazi i procesuiranju finansijskih prevara (pored toga što se nastavni predmet *Forenzičko računovodstvo* izučava na IV godini studija pri Ekonomskom fakultetu Univerziteta u Banjaluci, kao izborni predmet, Ekonomski fakultet Univerziteta u Sarajevu, u okviru projekta „Izgradnja kapaciteta forenzičnog računovodstva u BiH“, organizuje studijski program II ciklusa „Forenzično računovodstvo“, a takođe je i Ekonomski fakultet u Beogradu, u akademskoj 2023/2024. godini, akreditovao master studijski program “Forenzičko računovodstvo”).

Sertifikovani forenzički računovođa (prema terminologiji iz Pravilnika) je osoba koja svoja znanja i veštine iz računovodstva, revizije i finansija primenjuje u razrešavanju finansijskih odnosa, činjenica i transakcija, ali i utvrđivanja grešaka, korupcije, krađa, nezakonitih poslova, krivotvorenja i sl. To je ekspert koji poseduje posebna teorijska, praktična i stručna znanja i iskustva iz multidisciplinarnih oblasti kao što su pravo, finansije, računovodstvo, revizija, bankarsko, berzansko i privredno poslovanje, informacione tehnologije, ali i psihologije ličnosti, kao i sertifikat i važeću licencu izdatu od strane profesionalnog udruženja.

Obrazovanje i praktična iskustva koja prethode sticanju licence treba da omoguće kandidatu da shvati i obavlja sledeće poslove: da identifikuje netačne iznose u finansijskim izveštajima, otkrije prevare u preduzeću, utaje poreza i tehnike pranja novca, otkrije lažiranje bankrota, lažne štete radi naplate osiguranja, proceni vrednost poslovnih transakcija, proceni štetu kod štetnih događaja, otkrije lažne dokumente, profesionalne nemare i greške, te krađe od strane zaposlenih, da pruži usluge u parničnom postupku u vezi sa različitim situacijama, otkrije nezakonitosti pri poslovima nabavki, i sl. (v. član 4. Pravilnika).

Forenzično računovodstvo (engl. *forensic accounting*), kao posebna grana računovodstva, bavi se isključivo ocenama zakonitog i stručnog evidentiranja i izveštavanja, a kroz ekonomsko-finansijsko veštačenje omogućava sudu rešavanje spornih pitanja koja se tiču ekonomije, finansija i računovodstva. Finansijski izveštaji (bilans stanja, bilans uspeha, bilans tokova gotovine, izveštaj o promenama na kapitalu, napomene uz finansijske izveštaje) i računovodstvena dokumentacija glavna su svedočanstva o imovinsko-finansijskom položaju, te o poslovnoj uspešnosti jednog privrednog subjekta.

Međutim, finansijsko izveštavanje podložno je manipulacijama što za posledicu može imati lažirane, tj. falsifikovane izveštaje, pa se otuda uz finansijsko izveštavanje često povezuju izrazi „kreativno računovodstvo“, „manipulativno računovodstvo”, „kozmetičko izveštavanje“, „friziranje finansijskih podataka“. Primeri lažnog finansijskog izveštavanja u praksi su mnogobrojni: ispostavljanje lažnih računa, prodaja “na crno” sa terećenjem troškova na rashode ili na zalihe, fiktivne prodaje povezanim društvima, obračuni lažnih putnih naloga, skrivene isplate dobiti, trošenje sredstava

kompanije u privatne svrhe, i sl. Većina manipulacija u finansijskim izveštajima ostvaruje se manipulisanjem rashodima i prihodima u Bilansu uspeha i manipulisanjem obavezama i imovinom u Bilansu stanja (Cvetković & Bošković, 2018). Tako se manipulacijama u računovodstvenom evidentiranju, zapravo, na fiktivan i nepravilan način računovodstveno obrađuju podaci s namerom da se prikrije prava slika o stanju sredstava, izvoru sredstava ili poslovnom rezultatu (Lekić, Bjelajac, & Carić, 2018). Razlikujemo zakonite i nezakonite računovodstvene manipulacije. Zakonite su dopuštene i predstavljaju taktiziranje u računovodstvenim politikama u vezi sa prikazivanjem i izveštavanjem o imovinsko-finansijskom položaju i uspehu. Nezakonite manipulacije su predmet forenzične istrage i nisu dopuštene s pravne i/ili strukovne strane (Koletnik & Koletnik Korošec, 2011).

Upravo su lažno finansijsko izveštavanje i korporativni skandali uslovili razvoj forenzičkog računovodstva i njegove primene u istrazi i otkrivanju različitih vidova prevara u privrednim društvima (Arežina, 2016). Dok je revizija fokusirana na otkrivanje nepravilnosti u sačinjavanju finansijskih izveštaja, fokus forenzike je na otkrivanju kriminalnih radnji i procesuiranju. Interne kontrole su, takođe, korisne, ali i nedovoljne za potpuno sprečavanje finansijskih prevara. Bez obzira što preduzeća imaju strateške planove borbe protiv prevara putem internih kontrola, one ne garantuju otkrivanje finansijske prevare u nastanku. Otuda ove nedostatke uspešno nadomešta forenzičko računovodstvo (Aleksić, Vujnović-Gligorić, & Uremović, Uloga i značaj forenzičkog računovodstva u otkrivanju finansijskih prevara, 2015). Indikatori prevara u preduzećima, a samim tim i u računovodstvu, koji se najčešće pojavljuju u bosansko-hercegovačkim preduzećima, na osnovu podataka dobijenih tokom istraživanja, jesu: veliki neočekivani gubici, opstruisanje (sprečavanje) normalnog rada internih revizora, neobjašnjeni manjkovi na zalihama, neobični otpisi potraživanja, neusklađenost priliva novca s prihodima i potraživanjima, neusklađenost odliva novca s obavezama, neuobičajeno veliki računi za nedefinisane usluge (npr. istraživanje tržišta) koji se plaćaju drugim preduzećima, te fiktivini računi s povezanim preduzećima (Novalija, 2011).

Sledom navedenog, činjenice o tome da je član privrednog društva zloupotrebio društvo zarad ličnih interesa usled čega se imovina člana uvećala, a društvo postalo nelikvidno, mogu biti utvrđene nalazom i mišljenjem sudskog veštaka ekonomske struke koji je po specijalnosti finansijski forenzičar, odnosno sertifikovani forenzički računovođa. Preciznije rečeno, činjenice o tome da je član društva zloupotrebio privredno društvo za nezakonite ili prevarne ciljeve, odnosno činjenice da je sa imovinom privrednog društva raspolagao kao sa sopstvenom imovinom na način kao da privredno društvo ne postoji, mogu biti utvrđene putem finansijskog forenzičkog veštačenja. Uobičajeno ekonomsko veštačenje nije uvek odgovarajuće dokazno sredstvo u ovakvim sporovima s obzirom da sudski veštak ekonomske struke ne raspolaže znanjem koje može detektovati i objasniti osetljive zone finansijske patologije, dok je, s druge strane, sertifikovanom forenzičkom računovođi neophodna licenca stalnog sudskog veštaka iz ekonomske oblasti (sasvim je razumljivo da u sporovima zbog probijanja pravne ličnosti nijedna druga oblast nije prihvatljiva izuzev ekonomske što implicira da sertifikovani forenzički računovođa treba da bude diplomirani ekonomista).

Odredbama člana 149. ZPP, propisano je da veštačenje vrši jedan veštak. Sud može na predlog stranke da odredi više veštaka za različite vrste veštačenja. *Veštaci određuju prvenstveno iz reda imenovanih sudskih veštaka za određenu vrstu vešta-*

čenja (primedba Autora). Složenija veštačenja će se poveriti prvenstveno stručnim ustanovama kao što su: bolnice, hemijski laboratoriji, fakulteti i slično. Ako postoje ustanove za određene vrste veštačenja, kao što su: veštačenje lažnog novca, rukopisa, daktiloskopsko veštačenje i slično, takva veštačenja poveriće se u prvom redu tim ustanovama.

Kada su u pitanju uslovi za obavljanje poslova veštačenja, postupak imenovanja i razrešenja veštaka, postupak upisa i brisanja pravnih subjekata, kao i prava i obaveze lica koja obavljaju veštačenje, oni su uređeni Zakonom o veštacima Republike Srpske ("Službeni glasnik Republike Srpkse", broj 74/17).

Sledom navedenog, proizilazi da simbioza licence sudskog veštaka ekonomske struke i licence forenzičkog računovođe u jednom licu, daju eksperta koji može biti nosilac krucijalnog dokaza u sporovima povodom probijanja pravne ličnosti.

ZAKLJUČAK

Institut probijanja pravne ličnosti predstavlja nužni korektiv principa ograničene odgovornosti koji se ogleda u sankciji prema članu društva za učinjenu zloupotrebu društva, i to u vidu neograničene solidarne odgovornosti za obaveze društva. Uprkos tome što su na našim prostorima dominanta jednočlana i porodična društva sa ograničenom odgovornošću, kao i kompanije sa kontrolnim članom (akcionarom) zbog koncentracije vlasništva u akcionarskim društvima, dakle, društva koja su najpodložnija zloupotrebama, nije primećen poseban interes za razvoj i primenu ovog instituta. Nasuprot tome, usled njegovog nedovoljnog poznavanja i razumevanja, nedovoljan je i broj tužbenih zahteva za probijanje pravne ličnosti, pa otuda sudovi i nisu u prilici da primenjuju ovaj mehanizam zaštite poverilaca ili ga nepravilno primenjuju. Osnovni problem ovakvih parnica je dokazivanje izvršene zloupotrebe društva. U praksi, oštećene poverioce obeshrabruje činjenica da neće uspeti da dokažu zloupotrebu društva od strane njegovog osnivača. Otuda smo mišljenja da je adekvatnim dokaznim sredstvom, finansijskim forenzičkim veštačenjem po sudskom veštaku ekonomske struke koji raspolaže teoretskim i praktičnim znanjem, ali i iskustvom u oblasti sprečavanja i otkrivanja finansijske patologije, moguće dokazati zloupotrebe člana društva prema društvu budući da se one uvek i jedino koncentrišu oko imovine društva. Istina, finansijska forenzika smatra se profesijom novog milenijuma, te će biti potrebno vreme za njeno institucionalno uobličavanje u našem pravnom sistemu uopšte, pa tako i u domenu dokazivanja zloupotrebe društva. No, rekli bismo - važno je početi, u duhu izreke *Acta non verba*.

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THE IMPORTANCE OF FINANCIAL FORENSIC EXPERTISE IN DISPUTES DUE TO THE PIERCING THE CORPORATE VEIL

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Summary: *The subject of this research is the problem of proving the abuse of a company by members of the company. We are talking about a kind of legal phenomenon called "piercing the corporate veil" or "lifting the corporate veil" or, as the legislator calls it, "abuse of legal entity" which, although it was prescribed by law three decades ago, is insufficiently processed in our legal theory, and only exceptionally applied in judicial practice, despite the fact that it is often the only means of protecting creditors against unscrupulous debtors. Namely, members of capital companies (limited liabil-*

ity companies and joint-stock companies), in accordance with the principle of limited liability, bear the risk for the company's operations up to the level of their stake, so they are often said to be protected by the "veil" of the company's legal personality. However, if it is proven in the court proceedings that the member abused the company by abusing it for illegal or fraudulent purposes or disposed of the company's property as if it were his own property in such a way as if the company as a legal entity did not exist, the "veil" comes down and we enter the field of unlimited, joint liability of the member of the company. Then the member is liable to the injured creditors of the company with all of his assets, not just the founding role. Hence, the institute "piercing the corporate veil" or "lifting the corporate veil" represents a necessary corrective to the concept of limited liability, which contributes to raising the awareness of the members of the company, but at the same time strengthens confidence in the legal order. It is reflected in the sanction against the company member for the committed abuse of the company, in the form of unlimited joint and several liability for the obligations of the company, as if it were the obligations of the company member himself. This abuse can only be proven in court proceedings and the decisive evidence tool in these disputes is a forensic expert opinion by a court expert in the economic profession who has theoretical and practical knowledge, but also experience in the field of prevention and detection of financial pathology. True, financial forensics is considered a profession of the new millennium, and it will take time for its institutional formation in our legal system in general, including in the domain of proving abuse of company.

Keywords: *The principle of limited liability, abuse of a company, piercing (lifting) the corporate veil, forensic accounting, financial forensic expertise*

JEL classification: *K12, K13*

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THE CONCEPT OF DIGITAL ENTREPRENEURSHIP AND BRANDING IN CONTEMPORARY BUSINESS

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Abstract: *The study applies a systematic literature review with the aim of providing insight into theoretical approaches to digital entrepreneurship and branding, which represent new and actual concepts that significantly affect the business success of contemporary organisations. When defining the research subject, it was considered that the digital economy is largely conditioned by the emergence of entrepreneurial actions that have produced innovations in the domain of digital technology. Therefore, the study of digital entrepreneurship and branding is of interest for academicians, business practitioners, as well as public and political subjects that support this phenomenon, bearing in mind its positive effects on encouraging employment, social and economic development. The research findings have provided a scientific insight into the conceptualization of digital entrepreneurship and branding, indicating their interrelations with innovations, digital technologies, and creative abilities. The theoretical part of the research was additionally supplemented with a survey that provided an analysis of employees' views on the application of digital entrepreneurship in the Republic of Serbia. The paper has also demonstrated that doing business in a digital environment and digital innovations give the organisations an access to new resources, and above all to quality and up to date information, services, and online communities, which condition their expansion in the markets. However, this study has also emphasised the lack of scientific research related to research instruments, frameworks and models of digital entrepreneurship that could have practical application.*

Keywords*: digital entrepreneurship, digital brand, digital business, business innovation, digital economy.*

JEL Classification: *M1, M13, M31.*

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INTRODUCTION

The development of digital technologies has affected almost every industry and sector. With approximately 5.4 billion internet users worldwide as recorded in 2023, online transactions have become a significant demand of consumers (Petrosyan, 2024).

A systematic literature review applied in this research has demonstrated that the emergence of digital economy is one of the most significant periods of economic development since the industrial revolution, and digital entrepreneurship was identified as its key driver (Zaheer, 2019) (Kraus, 2019). When defining the research subject, it was considered that the digital economy is largely conditioned by the emergence of entrepreneurial actions that produce innovations related to digital technology. In addition, digital innovations, as the driving force of entrepreneurship, encouraged the development of digital brands and companies, which applied business models that have significantly transformed traditional sectors and created added value for modern consumers. Bearing in mind that the business philosophies of successful brands imply constant change, evolution and innovation, the paper has also indicated that digital entrepreneurship is of key importance for brand management since it affects business transformation at the global and local level.

The study of digital entrepreneurship and branding is of interest for academicians, business practitioners, as well as public and political subjects that support this phenomenon, bearing in mind its positive effects on encouraging employment, social and economic development. Therefore, the aim of this research is to provide an insight into theoretical approaches to digital entrepreneurship and branding, which represent new and actual concepts that significantly affect the business success of contemporary organisations. To focus the research scope, the following questions were developed:

RQ1: What are the most significant theoretical approaches to digital entrepreneurship and branding represented in the relevant literature?

RQ2: What is the potential for digital entrepreneurship in the Republic of Serbia and does it differ between industrial sectors?

The theoretical part of the research was additionally supplemented with a survey of employees' views on the application of digital entrepreneurship in the Republic of Serbia.

When formulating the research questions, it was started from the fact that there is a gap in the literature when it comes to different approaches of digital entrepreneurship, as well as the insufficient scientific studies that analyse digital entrepreneurship in the Republic of Serbia

LITERATURE OVERVIEW

Over the past years, the digital economy has made a significant progress in various countries, encouraging the integration of digital technologies and traditional economic activities (Koyluoglu, 2023) (Li, 2020). The expansion of digital economy contributes to the development of business since the application of innovative technology has provided new opportunities for companies to create added value and expand their reach in the market. According to OECD, the digital economy includes all economic activities that rely on the use of digital inputs or are enhanced by their use, including digital technologies, infrastructure, services, and data (OECD, 2024). Bukht and Heeks have demonstrated that this part of the economy refers to results originat-

ing exclusively or primarily from digital technologies with business models based on digital products, or emerging digital and platform services (Bukht, 2017). Similar, Steininger has indicated that digital business models have important role in leveraging digital technologies for economic value creation (Steininger, 2019).

At the World Economic Forum, it was stated that digital entrepreneurship is the essential pillar of digital economy, which contributes to the sustainable transformation of industries and sectors, opens new ways to generate income, and reduces operational costs associated with business activities (World Economic Forum, 2024).

Considering the new opportunities that are provided by digitalization, current literature sources use a broader definition of entrepreneurship that is not only based on starting a new business but includes any situation in which a risk-taker identifies and takes advantage of an opportunity to create something new that has value, and that will last. In the digital environment, there is a true wealth of new resources that entrepreneurs can apply, from collections of open data, content, codes, and services to online contributions from users and communities within digital platforms on a global scale (Allen, 2019).

In general terms, digital entrepreneurship can be defined as the search for business and economic opportunities based on the use of digital technology (Beckman, 2012). In addition to digital entrepreneurship, in earlier periods, the terms such as internet entrepreneurship, cyber entrepreneurship and e- entrepreneurship were more prevalent in the literature. For comparison, e – entrepreneurship was defined as the establishment of a new company with an innovative business idea, which offers its products/ services based on purely electronic value creation. This value proposition was created primarily by the development of information technologies (Paul, 2023).

In some studies (Hull, 2006) digital entrepreneurship is considered as a subcategory of entrepreneurship that involves digitalization of all or just some physical aspects of activities and processes in a traditional organisation. Davidson & Vaast have indicated that digital entrepreneurship involves the pursue for new venture opportunities presented by new media and internet technologies (Davidson, 2010, January). Similar, Le Dinh et al. believe that digital entrepreneurship is the reconciliation of traditional entrepreneurship that provides new ways of creating and doing business based on digital technology (Le Dinh, 2018). Another widely accepted definition was presented at the European Commission emphasising that digital entrepreneurship refers to all new ventures and business transformations that drive economic and/or social value by creating and using novel digital technologies (European Commission, 2015). According to Van Welsum, the term digital entrepreneurship is explained as the process of creating a new business, product or service based on the application of the Internet (Van Welsum, 2016). The definition includes start-up companies that bring a new digital product or service to the market as well as the digital transformation of existing business activities within the company or the public sector. Consequently, Kraus et al. consider that any entrepreneurial activity that transfers an asset, service, or major part of the business into digital can be characterised as digital entrepreneurship (Kraus S. R.-T., 2019). In addition, Soltanifar et al. stated that the purpose of digital entrepreneurship is to find the way in which digital technologies and digital transformation can create new sources of value and wealth (Soltanifar, 2021). Similar perspective of digital entrepreneurship is given by Sahut et al. who define it as a process of entre-

preneurial creation of digital value based on the use of socio-technical digital enablers that support effective acquisition, processing, distribution, and consumption of digital information (Sahut, 2021). Brynjolfsson & McAfee have also considered the role of digital entrepreneurship in creating digital value and enabling effective use of digital information (Brynjolfsson, 2014).

In studying digital entrepreneurship, Zaheer et al. have pointed out its interdisciplinary, since it involves knowledge of developing software and information systems, conceptualising business models, strategic management, and creating new ventures that are related with entrepreneurship (Zaheer, 2019).

Relevant research studies on entrepreneurship and digital innovation have shown that digital technology provides diverse opportunities to companies at different stages of their evolution and, accordingly, digital entrepreneurship has progressed into an increasingly important research area and a current topic with scientific and practical implications (Ghezzi, 2020). The contribution of digital entrepreneurship to the transformation of business models is evident today in various sectors, and not only in companies that offer digital products. According to McKinsey research, the following digital technologies are important in digital transformation: web technologies, cloud services, mobile internet technologies, Internet of Things, Artificial Intelligence tools, robotics, advanced neural machine-learning, augmented reality, and additive manufacturing (McKinsey, 2018). Going digital has become important aspect of contemporary business that depend on the models such as online reservations, automation of order processing, online logistics and shipping, e- CRM, online booking, cloud computing and other technology related processes (Samara, 2021). In addition, the findings presented in a study conducted by Franco et al. have demonstrated that digital entrepreneurship has positive effects on the management of small and medium-sized enterprises, which is particularly reflected in work efficiency, customer relations and collaboration (Franco, 2021).

Encouraged by the ideas of digital entrepreneurship and innovations, over the past twenty years numerous companies have been established and introduced in digital economy. Digital companies use technology to create new value in business models, customer experiences and internal capabilities that support their core operations. The term includes both digital brands and traditional organisations that are transforming their business with digital technologies.

In understanding the essence of digital branding there are two distinguished contexts. The first one perceives digital branding from the context of physical products, which thanks to the development of digital technologies are connecting traditional branding with digital environment. Therefore, developing a digital brand means adding new benefits/values to products. The second context of digital brand refers to virtual brands, such as Amazon, E-bay, or Facebook. Compared to traditional brands, online brands are dynamic, rich in information, and technologically innovative (Grzesiak, 2018).

The appearance of digital brands was conditioned by the Web 2.0 concept that has provided interactivity and enabled the emergence of social media. Social networking has become the backbone of the entire Web 2.0 philosophy, but also the digital environment in which global digital brands have developed (Tuten, 2023). The popularity and reach of social media have evolved in line with the expansion of the global

digital population. Online platforms that have provided access to unlimited sources of information, became an integral part of modern life, and have changed the way people communicate on a global level. The largest social networks are usually available in multiple languages and provide users with the opportunity to connect worldwide. Particularly in the period from 2010 to 2019, there was a rapid expansion of social media companies that have applied for initial public offering (IPO) or were acquired by larger public companies, generating significant amounts of wealth for their founders. One of the most frequently cited examples in the literature is the case of Mark Zuckerberg, the founder of global brand Facebook, who is currently the richest entrepreneur on social networks with a personal property value of 67.3 billion US dollars (Statista, 2024).

According to literature review, the relationship between digital entrepreneurship and branding has been recognised in certain studies. For instance, Bahcecik et al. have indicated the corelation between digital entrepreneurship and branding in a study that explored the brand strategies of virtual organisations (Bahcecik, 2019). In addition, significant contribution was made in research conducted by Rahimi et al. who used the term entrepreneurial branding to underline its importance in brand-centric approaches that are applied in cyberspace start-up companies (Rahimi, 2024).

The relationship between entrepreneurship and branding can be also seen in the following list of characteristics relating to strong brands (Kotler, 2006):

- Brand offers benefits that consumers really want. It is necessary to constantly improve the brand in accordance with the needs of consumers.
- Brand relevance is constant. It is necessary for the company to follow customer tastes, current demands.
- The price formation strategy is based on value perceptions from the consumer's point of view.
- The brand is well positioned and consistent.
- The brand uses and coordinates a whole series of marketing activities with the aim of creating value.

In all the mentioned characteristics, digital technologies represent a significant factor that contributes to brand strengthening, and digital entrepreneurship finds new business opportunities and encourages innovations that create additional value for the consumer.

Another study provided by Bahcecik et al. has also indicated the significance of interaction between digital brand management, internet entrepreneurs and customers (Bahcecik, 2019). Further considerations in the literature highlight the importance of digital entrepreneurship for brand management in the following contexts: adapting to market demands and consumer needs through digital business transformation (Westerman, 2015), developing start-ups and corporate brands based on community business models (Mingione, 2020) (Hajli, 2017) , strengthening relations with consumers (Juntunen, 2012).

METHODOLOGY

The theoretical research presented in this paper was based on the application of a systematic literature review of articles from relevant academic research databases such as: Web of Science, Scopus, Eric and ScienceDirect. This method was suitable for finding answers to the Research Question 1.

To address the Research Question 2 empirical research was conducted. It was based on a survey of 77 employees (N=77), who answered different questions related to digital entrepreneurship. The research was performed in the Republic of Serbia in 2023. The questionary was designed in accordance with the model developed by Stachel & Musante who investigated how companies apply corporate entrepreneurship to advance innovation (Stachel, 2022).

The tested variables related to different aspects of digital entrepreneurship such as: digital innovation management (VAR 1, VAR 2, VAR 3), knowledge of digital innovation (VAR 4, VAR 5), IT competencies (VAR 6, VAR 7), and availability of IT Infrastructure (VAR 8, VAR 9, VAR 10). The variables were examined in the form of closed questions using a Likert scale with the following values: 1=disagree, 2=slightly disagree, 3=neither agree or disagree, 4= slightly agree, 5= agree.

RESULTS AND DISCUSSION

The research sample has included 77 employees (N=77) working in different sectors in the Republic of Serbia. In the age structure of respondents, the category from 36 to 45 years was the most represented (46.8%), as illustrated in table 1.

Table 1: Age structure of the sample

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25-35	27	35.1	35.1	35.1
	36-45	36	46.8	46.8	81.8
	46-55	14	18.2	18.2	100.0
	Total	77	100.0	100.0	

Source: Authors' calculations in SPSS

The gender structure of the sample (table 2) shows a slightly higher representation of the male population (55.8%) in comparison with female respondents (44.2%).

Table 2: Respondents by gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	43	55.8	55.8	55.8
	Female	34	44.2	44.2	100.0
	Total	77	100.0	100.0	

Source: Authors' calculations in SPSS

Regarding the industry, the sample has included employees from five sectors: hospitality and tourism, financial services, manufacturing, retail, and technology (table 3). The largest number of respondents were employed in the technology sector (27.3%).

Table 3: Industries included in the sample

Industry					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hospitality and tourism	16	20.8	20.8	20.8
	Financial services	14	18.2	18.2	39.0
	Manufacturing	13	16.9	16.9	55.8
	Retail	13	16.9	16.9	72.7
	Technology	21	27.3	27.3	100.0
	Total	77	100.0	100.0	

Source: Authors' calculations in SPSS

According to Hafezieh et al. the digital economy provides different opportunities for entrepreneurs allowing them to create new business ventures in various industries by using electronic commerce models (Hafezieh, 2011). Furthermore, Modgil et al. have pointed out the possibilities for digital entrepreneurship in different sectors such as: e-commerce, entertainment, healthcare, finance, marketing, and technology (Modgil, 2022).

To determine the relation between the respondent's industry and the potential for digital entrepreneurship, the method of Pearson correlation analysis was applied in this study. Data analysis was performed for the variables Industry and Var 2: My organisation implements a profitable digital business. The results, presented in table 5, demonstrate the strong correlation ($r = 0.817$) between the tested variables, which is statistically significant, $p<0.05$.

Table 4: Correlation between Industry and Var 2: My organisation implements a profitable digital business

Correlations			
		Industry	Var 2: My organisation implements a profitable digital business.
Industry	Pearson Correlation	1	.817**
	Sig. (2-tailed)		.000
	N	77	77
Var 2: My organisation implements a profitable digital business.	Pearson Correlation	.817**	1
	Sig. (2-tailed)	.000	
	N	77	77

Source: Authors' calculations in SPSS

The comparison of means within the industry, presented in table 5, has indicated the highest values for three variables (Var 8, Total industry M=4.246; Var 9, Total industry M=4.155; and Var 10, Total industry M=4.155) related to the availability of IT Infrastructure. These findings are in line with the study conducted by Steininger et al. who demonstrated that digital infrastructure is essential for digital entrepreneurs to create value (Steininger D. M., 2022).

Across the sectors, the data showed the highest mean values for manufacturing ($4.23 \leq M \leq 5$), retail ($3.76 \leq M \leq 4.46$), and technology ($4.09 \leq M \leq 5$). However,

the medium mean values were recorded within the sector of financial services (3.35 ≤ M ≤ 3.85), while the lowest means were demonstrated among the respondents from the hospitality and tourism industry (2.12 ≤ M ≤ 4). The findings are in accordance with the p-values ($p<0.05$) demonstrated in the output of the ANOVA table 6. A more detailed interpretation of the results is given in table 7, which shows the measures of association with Eta squared scores. In general, it can be concluded that there is a strong association between all tested variables (Eta squared > 0.14). However, the strength of the associations between the industry and the variables that relate to digital innovation management (Var 1, Var 2 and Var 3) is particularly noteworthy.

Table 5: Compared Means between the industry sectors

Report											
Industry		**Var 1**	**Var 2:**	**Var 3**	**Var 4**	**Var 5**	**Var 6**	**Var 7**	**Var 8.**	**Var 9**	**Var 10:**
Hospitality and tourism	Mean	2.1250	2.1250	2.1250	3.0000	3.0000	3.0000	3.0000	4.0000	4.0000	4.0000
	N	16	16	16	16	16	16	16	16	16	16
	Std. Deviation	.61914	.61914	.61914	.00000	.00000	.00000	.00000	.00000	.00000	.00000
Financial services	Mean	3.8571	3.8571	3.8571	3.3571	3.3571	3.3571	3.8571	3.8571	3.8571	3.8571
	N	14	14	14	14	14	14	14	14	14	14
	Std. Deviation	.94926	.94926	.94926	1.44686	1.44686	1.44686	.94926	.94926	.94926	.94926
Manufacturing	Mean	4.2308	4.2308	**5.0000**	**5.0000**	4.2308	4.2308	4.2308	**4.7692**	**4.7692**	**4.7692**
	N	13	13	13	13	13	13	13	13	13	13
	Std. Deviation	.43853	.43853	.00000	.00000	.43853	.43853	.43853	.43853	.43853	.43853
Retail	Mean	**4.4615**	4.3846	4.3846	3.7692	3.7692	**4.3846**	4.3077	4.3077	3.7692	3.7692
	N	13	13	13	13	13	13	13	13	13	13
	Std. Deviation	.51887	.50637	.50637	1.01274	1.01274	.50637	.63043	.63043	1.01274	1.01274
Technology	Mean	4.0952	**5.0000**	4.0000	4.3333	**4.3333**	4.3333	**4.3333**	4.3333	4.3333	4.3333
	N	21	21	21	21	21	21	21	21	21	21
	Std. Deviation	.30079	.00000	.00000	.48305	.48305	.48305	.48305	.48305	.48305	.48305
Total	Mean	3.7273	3.9610	3.8182	3.8961	3.7662	3.8701	3.9481	**4.2468**	**4.1558**	**4.1558**
	N	77	77	77	77	77	77	77	77	77	77
	Std. Deviation	1.02130	1.16350	1.08491	1.03345	.94446	.90830	.75909	.63154	.72665	.72665

Source: Authors' calculations in SPSS

Table 6: The ANOVA table of Compared Means

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Var 1: My organisation has an efficient and flexible approach to development projects.	Between Groups	54.460	4	13.615	39.508	.000
	Within Groups	24.812	72	.345		
	Total	79.273	76			
Var 2: My organisation implements a profitable digital business.	Between Groups	80.034	4	20.009	63.050	.000
	Within Groups	22.849	72	.317		
	Total	102.883	76			
Var 3: My organisation makes quick consistent and clear digital business decisions.	Between Groups	68.913	4	17.228	60.388	.000
	Within Groups	20.541	72	.285		
	Total	89.455	76			
Var 4: New digital technology is readily accepted in my organisation.	Between Groups	36.980	4	9.245	15.064	.000
	Within Groups	44.189	72	.614		
	Total	81.169	76			
Var 5: We always look out for opportunities to use digital technology in our innovation.	Between Groups	21.296	4	5.324	8.244	.000
	Within Groups	46.496	72	.646		
	Total	67.792	76			
Var 6: My organisation ensures proactive awareness of trends and relevant opportunities.	Between Groups	25.436	4	6.359	12.286	.000
	Within Groups	37.266	72	.518		
	Total	62.701	76			
Var 7: My organisation is adaptable to digital transformation.	Between Groups	20.334	4	5.084	15.603	.000
	Within Groups	23.458	72	.326		
	Total	43.792	76			
Var 8: My organisation has business-unit-specific applications, usually on a chargeback or contractual basis.	Between Groups	6.854	4	1.713	5.259	.001
	Within Groups	23.458	72	.326		
	Total	30.312	76			
Var 9: My organisation has a firm-wide communication network services	Between Groups	9.134	4	2.283	5.304	.001
	Within Groups	30.996	72	.431		
	Total	40.130	76			
Var 10: My organization has the electronic provision of management information e.g. EIS or DSS	Between Groups	9.134	4	2.283	5.304	.001
	Within Groups	30.996	72	.431		
	Total	40.130	76			

Source: Authors' calculations in SPSS

Table 7: Eta Squared

Measures of Association		
	Eta	**Eta Squared**
Var 1: My organisation has an efficient and flexible approach to development projects. * Industry	.829	.687
Var 2: My organisation implements a profitable digital business. * Industry	.882	.778
Var 3: My organisation makes quick consistent and clear digital business decisions. * Industry	.878	.770
Var 4: New digital technology is readily accepted in my organisation. * Industry	.675	.456
Var 5: We always look out for opportunities to use digital technology in our innovation. * Industry	.560	.314
Var 6: My organisation ensures proactive awareness of trends and relevant opportunities. * Industry	.637	.406
Var 7: My organisation is adaptable to digital transformation. * Industry	.681	.464
Var 8: My organisation has business-unit-specific applications, usually on a chargeback or contractual basis. * Industry	.476	.226
Var 9: My organisation has a firm-wide communication network services * Industry	.477	.228
Var 10: My organization has the electronic provision of management information e.g. EIS or DSS * Industry	.477	.228

Source: Authors' calculations in SPSS

The results presented in this research can be compared with the study conducted by Battisti et al. who explored the role of digital entrepreneurship and digital platforms in Italy, Germany, and Finland based on a longitudinal case study (Battisti, 2022). The authors demonstrated the importance of digital entrepreneurship in B2B and B2C models that apply digital innovations in retail firms. Furthermore, Visković explored the application of digital solutions in the work of logistics operators in Southeast Europe (Višković, 2022). In addition, Dicuonzo et al. have indicated that digital entrepreneurship uses digital platforms to affect brand value in retail sector (Dicuonzo, 2022). Similar results were presented in a study conducted by Pfau & Rimpp who explored digital entrepreneurship based on AI business models and explained their application in retail sector (Pfau, 2021).

The findings provided by Balocco et al. show the importance of digital entrepreneurship in lean manufacturing from the perspective of business model change (Balocco, 2019), while Ghosh et al. pointed out that digital business innovation and transformation have significantly affected manufacturing value chains (Ghosh, 2021). In addition, Qian Qiu & Mok have recognised the opportunities that digital entrepreneurship platforms have created for manufacturers (Qian Qiu, 2021). The findings presented in this study indicated that manufacturing firms from the sample have great capacity for digital entrepreneurship in the Republic of Serbia. The highest means were recorded for variables referring to digital innovation management, knowledge of digital innovation and availability of IT Infrastructure (table 5). Slightly lower mean values were registered among respondents from the technology sector. However, the highest means in their answers were demonstrated within the variables related to IT competences, which is in line with their basic activities. Furthermore, high mean (M=5) in answers

of respondents belonging to technology sector were also registered for VAR 2: My organisation implements a profitable digital business. In earlier literature, the Elfring & Hulsink pointed out the importance of applying entrepreneurship based on networks in high technology companies (Elfring, 2003). They have identified three main entrepreneurial processes in new venture development: search of opportunities, securing resources, and obtaining legitimacy. In recent studies, Beliaeva et al. have indicated the role of digital entrepreneurship in IT companies in Brazil (Beliaeva, 2019), Oliveira & Trento demonstrated the benefits of technological innovation and entrepreneurship for digital enterprises in Italy, based on correlation method (Oliveira, 2023).

CONCLUSION

This paper provides an overview of the most relevant theoretical approaches to the concepts of digital entrepreneurship and digital branding, which are represented in the literature. It was indicated that digital entrepreneurship represents an important subcategory of entrepreneurship that creates new business opportunities, supports an innovative climate, and contributes to the digital transformation of business models. The development of digital entrepreneurship led to the emergence of digital brands that were created by expanding the additional values of products and services based on the application of digital technology, and particularly digital media. The connection between digital entrepreneurship and brand is especially evident in the following contexts: adapting to market demands and consumer needs through digital business transformation, developing digital brands based on community business models, customer relationship management and business collaboration.

The empirical part of the research included the analysis of a sample of 77 respondents (N=77) who are employed in different sectors in the Republic of Serbia. The relation between the industry and the potential for digital entrepreneurship was confirmed based on the Pearson correlation analysis, which demonstrated high value ($r = 0.817$) between the tested variables, with statistical significance $p<0.05$. Across the industry sectors, the data showed the highest mean values in manufacturing, retail, and technology firms, and medium mean values in organisations that provide financial services. On the contrary, the lowest means were recorded among the respondents from hospitality and tourism industry.

The findings presented in this study provide a significant insight into the concepts of digital entrepreneurship and branding and constitute a scientific base for further research in this area. In addition, the results of practical research can be used to understand the application of digital entrepreneurship in different sectors, as well as in different social contexts, having in mind the presented example of the Republic of Serbia. However, when interpreting the results, certain limitations should be considered, such as the sample size (N=77), as well as the socio-cultural context, which has its own specificities in the Republic of Serbia. Therefore, it is recommended that future research on this subject additionally confirm the usability of the questionnaire, which has already proven to be suitable in some European countries. Further research should also analyse the impact of digital entrepreneurship on business performance and provide the comparisons between different sectors and countries.

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ORIGINALNI NAUČNI RAD / ORIGINAL SCIENTIFIC PAPER

STABILNOST PLATA U REPUBLICI SRPSKOJ U SVJETLU DUGOROČNE MAKROEKONOMSKE STABILNOSTI

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Sažetak: *U radu se analizira dinamika neto plata u Republici Srpskoj kako bi se ocijenilo u kojoj mjeri određeni element makroekonomske politike može poslužiti kao moćno sredstvo za finansijsku stabilizaciju domaće privrede na dugoročnoj osnovi. U tu svrhu analizirani su podaci o broju zaposlenih i mjesečnim platama u RS od 2012. do 2022. godine, odnosno korelacija između broja zaposlenih po grupama i visine njihove neto plate. Rezultati pokazuju kontinuirani rast ukupne zaposlenosti i mjesečnih zarada, što ukazuje na pozitivan makroekonomski trend. Pearsonov koeficijent korelacije od -0,989 i regresiona analiza potvrđuju snažnu negativnu korelaciju između broja zaposlenih u RS koji zarađuju do 599 KM i onih koji zarađuju preko 2.500 KM, što ukazuje na pomak radne snage prema višim platama. Međutim, dugoročno gledano, brži rast plata od zaposlenosti i inflacija mogu stvoriti pritisak na troškove i na taj način destabilizirati finansije. Međutim, izazovi kao što su održivo finansijsko upravljanje i održivost osoblja ostaju značajni faktori koji se moraju rješavati. Istraživanje se završava preporukama za prilagođavanje postojećih politika kako bi se osigurala dugoročna stabilnost i rast privrede Republike Srpske. Kroz koje se ističe potreba za daljim istraživanjima radi produbljivanja razumijevanja uticaja vladinih mjera u oblasti zarada i njihovog usklađivanja sa svjetskim ekonomskim trendovima na finansijsku stabilnost zemlje. Bilo bi zanimljivo istražiti kretanje plata po grupama sa aspekta njihove održivosti u uslovima inflacije, te u svjetlu potencijalnih migracija u zemlje radi boljeg standarda.*

Ključne riječi*: neto plate, finansijska stabilizacija, zaposlenost.*

JEL klasifikacija*: E60.*

UVOD

Tokom kolapsa globalne ekonomije, globalna komponenta makroekonomske politike evoluirala je u sposobnost održavanja finansijske stabilnosti. Pomenute operacije su započete 2007. godine u Sjedinjenim Američkim Državama, a proširene su i na Republiku Srbiju 2008. Izbijanje COVID-19, u kombinaciji sa nemirima u Ukrajini, ponovo je podstaklo globalnu finansijsku nestabilnost i makroekonomske neravnoteže. Nepovoljni ekonomski trendovi tokom pandemije povećali su podložnost sistemskim rizicima, uzrokujući neravnoteže i nestabilnost. Bankarski sektor RS (Republike Srpske) zadržao je snažnu finansijsku stabilnost, uglavnom zahvaljujući značajnoj kapitalizaciji i, kao rezultat, toleranciji na šokove (Agencija za bankarstvo Republike Srpske, 2023). Sektor privrede je pokazao slabost u pojedinim poslovima, ali je generalno ostao stabilan i ovim kriznim periodima. Najveća ranjivost bila je u poslovima vezanim za energiju jer su cijene rasle na globalnom nivou, što je rezultiralo inflacijom uvoznih troškova. Republika Srpska je, u nastojanju da očuva makroekonomsku stabilnost, doživjela značajne ekonomske promjene u protekloj deceniji. Ove promjene su bile rezultat kombinacije domaćih politika i globalnih ekonomskih trendova. Ovdje se, prije svega misli, na rast inflacije i posljedice koje su nastale usljed njenog udara, te mjere koje su preduzete na njenom reduciranju. Došlo je do naglog povećanja cijena, prvenstveno prehrambene robe, kod kojih je najviši rast zabilježen na voću i povrću. S obzirom da je sa takvim dešavanjima bilo najviše pogođeno građanstvo, očekivalo se da vlada uskladi rast plata sa inflacijom, što je praksa razvijenih zemalja, iako za to nema ekonomskog utemeljenja (Adria_Bloomerg, 2024).

Rast plata bi trebalo isključivo vezivati za produktivnost, što se u slučaju RS nije moglo primjeniti s obzirom na tehnološku zastarjelost u odnosu na prosjek EU. Poslije blagog oporavka od posljedica pandemije, uzimajući u obzir kretanje plata, rast proizvodnje i životnog standarda, vlada RS je donijela odluku da se najniža plata u 2024. godini poveća na 900 KM, što je za 200 KM povećanje u odnosu na predhodnu godinu (RS, 2023). Kao posljedicu takvog povećanja moglo se očekivati otpuštanje određenog broja radnika, zatvaranje firmi ili pak prelijevanje povećanih plata na cijenu koštanja proizvoda i time novi inflacioni udar (Brown, 2018). Upravo je to bio razlog opredjeljenja za ovo istraživanje, čiji je cilj istražiti kretanje broja radnika i neto plata u Republici Srpskoj, u periodu od 2012. do 2022. godine. Za potrebe analize navedena kretanja su praćena, kako na nivou RS, tako i u državnim institucijama. Centralna hipoteza rada je da je u RS izražen brži rast plata u odnosu na rast zaposlenosti i inflacije, koji može stvoriti pritisak na povećanje troškovne inflacije i destabilizovati finansije. Značaj analize dinamike zarada u tranzicionim privredama, poput Republike Srpske, se ne može precijeniti. Kako tvrdi Pasquale Tridico, ekonomije u razvoju i ekonomije u tranziciji su veoma različite jedna od druge, sa mnogo različitih gledišta, istorijski, društveno i ekonomski. (Tridico, 2010). Ovaj rad se bavi direktno vidljivim podacima, uključujući broj zaposlenih i mjesečne plate.

Kontinuirani rast ukupne zaposlenosti i mjesečnih plata tokom posmatranog perioda ukazuje na pozitivnu makroekonomsku putanju, sugerišući da bi vladine mjere mogle dati željene rezultate. Pearsonov koeficijent korelacije (Marković & Markić, 2019, str. 281), koji iznosi -0.989, ukazuje na vrlo jaku negativnu korelaciju između broja zaposlenih koji zarađuju do 599 BAM i onih koji zarađuju preko 2.500 BAM, što znači da kako broj zaposlenih sa višim platama raste, broj zaposlenih sa nižim platama

značajno opada. Regresiona analiza dodatno potvrđuje ovaj trend, pokazujući jasnu tendenciju rasta plata tokom posmatranog perioda. Međutim, ovaj rad uvažava i izazove sa kojima se suočava Republika Srpska, kao što su održivo fiskalno upravljanje zbog velikog učešća plata državnih institucija u budžetskim rashodima i uticaj spoljnih ekonomskih sila. Ovi izazovi naglašavaju da istraživanje fiskalne i finansijske održivosti u dinamičkom kontekstu fiskalne politike otkriva višestruki pejzaž sa nekoliko ključnih uvida. Prvo, literatura naglašava ključnu ulogu fleksibilnosti i prilagodljivosti u oblikovanju dinamike fiskalne politike (William S. Limoa & Christoffel , 2024).

U zaključku se nude preporuke za prilagođavanje postojećih strategija u oblasti plata kako bi se osigurala dugoročna stabilnost i rast privrede Republike Srpske. Takođe su date smjernice za daljnja istraživanja kako bi se produbilo razumijevanje djelovanja vladinih mjera u dijelu zarada zaposlenih i globalnih ekonomskih pokazatelja (Davis & Thompson, 2020). Bilo koje povećanje plata mora biti popraćeno setom mjera koje stvaraju zdrave ekonomske temelje za dugoročnu finansijsku stabilnost. Jedna od njih je, tržišna integracija sa EU može otvoriti nove mogućnosti za izvoz i pristup većem tržištu, što može podstaknuti konkurentnost proizvoda i usluga iz Republike Srpske. Takođe, efikasno upravljanje oskudnim resursima, uključujući obnovljive izvore energije i održivo korišćenje prirodnih resursa, je ključno za dugoročni ekonomski rast i stabilnost. Strategije koje promovišu efikasno korišćenje resursa (Europa, 2024) i smanjenje otpada mogu obezbijediti održivost i smanjiti negativan uticaj na životnu sredinu. (UN, 2024). Kombinacija ovih strategija (World_Bank, What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050., 2018) može pomoći Republici Srpskoj da održi stabilan rast plata, smanji nejednakosti i poboljša životni standard svih građana, istovremeno prilagođavajući se globalnim ekonomskim izazovima i promjenama na tržištu rada.

Jačanje pozicije na globalnom tržištu za sobom povlači i interes za novim investicijama na regionalnom tržištu. Što je integracija veća, to je i interes za novim investicijama veći. Slobodna trgovina otklanja mnoge barijere i ujednačava uslove u zemljama unije što investitorima daje lakši pristup i daje dodatnu sigurnost za njihove investicije. Dodatne investicije u nerazvijenim zemljama će za posljedicu imati veće stope rasta iz razloga djelovanja multiplikacionog faktora na povećanje BDP. Multiplikacioni investicioni faktor za BiH u iznosi 2,9673, što znači da svaka nova investicija u BiH bi povećala približno 2,9 puta BDP. U slučaju kada se radi o izvozno orijentisanom investiranju, BDP bi se dodatno povećao za vrijednost izvoza tako da bi se ukupni multiplikator povećao (Kumalić I. , 2014, p. 124). Plan rasta Evropske komisije za zapadni Balkan (2023-2024) naglašava jačanje ekonomske integracije sa jedinstvenim tržištem EU, što može otvoriti nove mogućnosti za izvoz i pristup većim tržištima. U njemu su navedeni koraci za jačanje konkurentnosti i ekonomskog rasta na zapadnom Balkanu, sa ciljem da se u narednoj deceniji udvostruči veličina ovih ekonomija. Plan također naglašava važnost usklađivanja sa standardima i pravilima EU kako bi se olakšalo slobodno kretanje roba, usluga i radnika, te integriralo u industrijski lanac nabave i tržišta energije (EU, 2023).

Rad je organizovan u sledeće celine: uvod, cilj rada, metodologija, rezultati istraživanja i zaključak.

CILJ RADA

Cilj rada je sistematski prikazati kretanja jedne od najvećih stavki rashoda, neto zarada zaposlenih u RS u posljednjih deset godina, te na osnovu dobijenih analiza dati smjernice ka novim ekonomskim potencijalima razvoja bazirano na otvorenom tržištu kapitala, koji se temelje na radnoj snazi. Savremene ekonomske teorije o razvoju privrede naglašavaju različite aspekte koji, pored institucionalne infrastrukture, tehnološkog napretka i integracija u globalno tržište, potenciraju ljudski kapital kao okosnicu razvoja. U svjetlu dobijenog statusa kandidata za članstvo u Evropskoj uniji, Republika Srpska ima priliku da iskoristi predpristupne fondove EU, kao što je Instrument za predpristupnu pomoć (IPA), koji mogu finansirati projekte u oblastima kao što su infrastruktura, obrazovanje, zdravstvo, ruralni razvoj i zaštita okoline, čije povlačenje zahtijeva adekvatnu profilisanost kadrova, posebno u državnim institucijama (EC, 2020).

Svrha ovog istraživanja je da se, kroz evaluaciju zaposlenosti i mjesečnih plata, utvrdi u kojoj mjeri ove politike mogu poslužiti kao efikasan alat za stabilizaciju finansija i njenu dugoročnu održivost. Analiza je posebno značajna za razumijevanje potencijala vladinih mjera u suočavanju sa globalnim ekonomskim izazovima i održivim finansijama, pružajući smjernice za dalji razvoj i prilagođavanje ekonomskih strategija Republike Srpske. Kao što su Acemoglu & Robinson istakli u svojoj knjizi "Why Nations Fail: The Origins of Power, Prosperity, and Poverty", kako institucije utiču na ponašanje i poticaje u stvarnom životu, one stvaraju uspjeh ili neuspjeh nacija. Individualni talenat je bitan na svakom nivou društva, ali čak i za to je potreban institucionalni okvir koji će ga transformisati u pozitivnu snagu (Daron & Robinson , 2012).

Prema Svjetskoj banci u izvještaju "World Development Report 2020: Trading for Development in the Age of Global Value Chains" (World_Bank, World Bank Group, 2020), efikasne makroekonomske politike, uključujući fiskalne i monetarne strategije, su ključne za podržavanje konkurentnosti i održivosti ekonomije. Ove politike su posebno važne u kontekstu globalizacije, gdje zemlje moraju da se suočavaju sa izazovima i prilikama koje proizlaze iz globalnih vrijednosnih lanaca. Fokusiranje na politike koje poboljšavaju poslovno okruženje, softver (Dakić, 2024), kao i na reforme koje povećavaju produktivnost i inovacije, može značajno doprinijeti dugoročnom ekonomskom prosperitetu u industriji (Dakić, Stupavský, & Todorović, 2024).

METODOLOGIJA

Ovo istraživanje koristi kvantitativni pristup za analizu korelacije zaposlenih i mjesečnih plata u Republici Srpskoj. Podaci obuhvataju period od 2012. do 2022. godine, a prikupljeni su iz zvaničnih statističkih izvještaja Poreske uprave i statističkih godišnjaka Republike Srpske, gde se radi se o podacima javnog karaktera sa dostupnošću na stranicama Poreske uprave. Analizirani su zbirni iznosi plata za svaku godinu, koji su korišteni kao zavisne varijable u analizi linearne regresije, pri čemu je godina služila kao nezavisna varijabla. Urađena je linearna regresiona analiza kako bi se ispitao odnos između ukupne zaposlenosti i mjesečnih plata po godinama.

U okviru metoda istraživanja korišćena su istraživačka pitanja koja će biti obrađena unutar prezentovanih rezultata istraživanja. Definicijom istraživačkih pitanja se jasnije želi definisati okvir koji se istražuje. Na osnovu navedenog definišemo sljedeća istraživačka pitanja:

1. Kolika je prosječna plata u periodu od 10 godina?
2. Koliko je poklapanje i odnos između ukupne zaposlenosti i mjesečnih plata?
3. Koji su iznosi plata po godinama i da li postoje zavisne varijable?

REZULTATI ISTRAŽIVANJA

U nastavku rada su prikazana predviđanja ukupne zaposlenosti za svaku godinu kroz regresijski model. Ova predviđanja pokazuju da je dosljedan godišnji porast ukupne zaposlenosti dobro usklađen sa stvarnim podacima, na što ukazuje visoka vrijednost R^2. Model se može koristiti za predviđanje budućih trendova ukupne zaposlenosti, imajući u vidu da se tačnost predviđanja za godine daleko od raspona podataka može smanjiti. Obrada podataka je realizovana u statističkom paketu SPSS v25.

Model linearne regresije predstavljen je jednačinom (Streipert, 2019):

$Y = \beta_0 + \beta_1 X + \varepsilon$

gdje je:

- Y - zavisna varijabla (ukupna zaposlenost ili mjesečna plata)
- X - nezavisna varijabla (godina)

- β_0 – presjek
- $\beta_1 X$ – nagib linije regresije
- ε – termin greške

Nagib (β_1) označava prosječnu godišnju promjenu plata u RS, dok y-presjek (β_0) predstavlja njenu procijenjenu vrijednost na početku perioda istraživanja (2012). Analiza linearne regresije (S., Džalto; Gusić, L.;, 2017) je provedena korištenjem statističkog softvera SPSS. Ovaj alat je korišten za izvođenje proračuna regresije, generisanje regresione jednačine i dobijanje vrijednosti nagiba, y-presjeka i koeficijenta determinacije (R^2). Vrijednost R^2 ukazuje na proporciju varijanse u zavisnoj varijabli, koja je objašnjena nezavisnom varijablom, pružajući uvid u snagu veze. Analiza pretpostavlja linearnu vezu između godine i plata u RS. Analizom linearne regresije, uz pomoć jednačine regresione linije, prikazan je trend ukupne zaposlenosti u Republici Srpskoj u periodu od 2012. do 2022. godine.

Ukupna zaposlenost = -7,314.217+3,965 x godina

Nagib linije regresije je približno 3.765, što ukazuje da se u prosjeku ukupna zaposlenost povećavala za oko 3,765 jedinica godišnje. Y-presjek je približno -7,314,217, što predstavlja procijenjenu ukupnu zaposlenost na početku perioda istraživanja. Koeficijent determinacije (R^2) je približno 0,908, što ukazuje na vrlo dobro uklapanje modela u podatke. Koeficijent pokazuje tačnosti modela, njegova vrijednost treba da bude $0 \leq R^2 \leq 1$, što upućuje da je tačnost modela veća ukoliko je vrijednost koeficijenta determinacije bliža vrijednosti 1. Povezanost vrijednosti koeficijenta determinacije i tačnosti modela određena je Chadockovom tablicom (Hinkle, D.E.,; Wiersma, , W.; Jurs, , S.G., 2003).

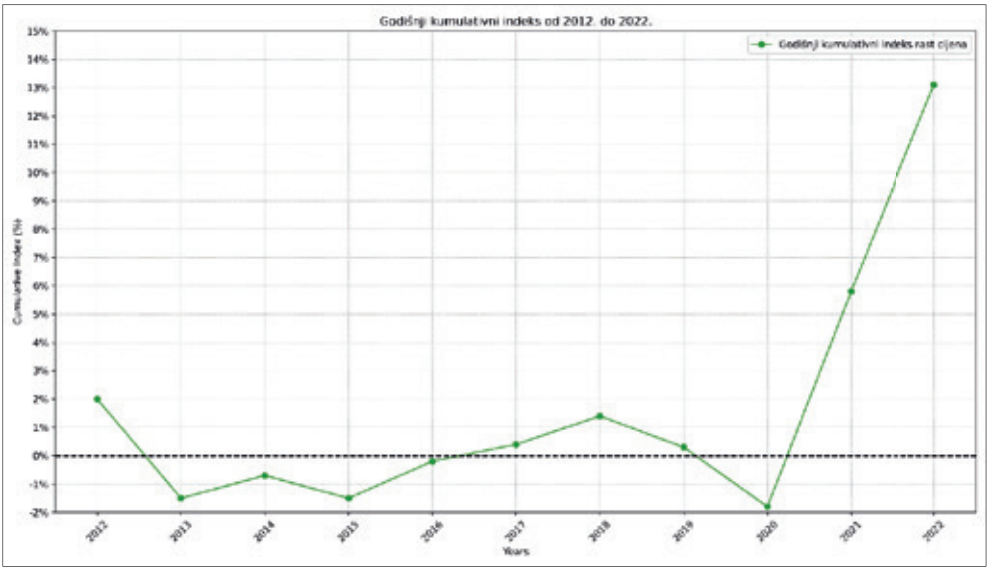
Vrijednost R^2 blizu 1 ukazuje da model objašnjava značajan dio varijanse zavisne varijable. Važno je uvidjeti da i drugi faktori, koji nisu uključeni u ovaj model, mogu uticati na kretanje ukupne zaposlenosti i mjesečne plate. Studija je ograničena na podatke dostupne za navedeni period i neće obuhvatiti sve nijanse dinamike plata Republike Srpske.

Tabela 1. Broj zaposlenih i prosječna plata u RS i njenim državnim institucijama u periodu od 2012. – 2022. godine (u KM)

Godina	Ukupan broj zaposlenih u RS	Prosječna neto plata Zaposlenih u RS	Broj zaposlenih u državnim instituacijama	Prosječna neto plata u državnim institucijama
2022	300,602	1,144	82,491	1,441
2021	295,868	1,004	81,450	1,280
2020	290,001	956	79,212	1,244
2019	291,977	906	78,383	1,167
2018	283,091	857	77,057	1,126
2017	275,316	831	76,063	1,098
2016	274,796	836	75,113	1,115
2015	268,918	831	74,656	1,104
2014	268,918	825	73,723	1,083
2013	264,472	808	74,395	1,027
2012	265,631	818	72,793	1,081

Izvor: Poreska uprava Republike Srpske, (2023), Interna dokumentacija; Statistički godišnjak RS za 2022. i 2023. god. (RZS, Statistički godišnjak Republike Srpske za 2022. godinu, 2022; RZS, Statistički godišnjak Republike Srpske za 2023. godinu, 2023; RZS, Statistički godišnjak Republike Srpske za 2023. godinu - Zaposlenost, nezaposlenost i plate, 2023) (preuzeto 31.05.24.).

Gornja tabela ukazuje da je tokom posmatranog 10-godišnjeg perioda zabilježen brži rast prosječnih plata u odnosu na broj zaposlenih. Rast plata u RS je iznosio 39,85%, a u državnim institucijama 33,30%. Istovremeno, rast zaposlenosti je bio blago umjeren (u RS 13,16, a u državnim institucijama 13,32%). Kakav je uticaj imala inflacija na platu možemo sagledati kroz poređenje indeksa potrošačkih cijena (grafikon 1) i rasta zarada.



Grafikon 1. Mjesečni indeks potrošačkih cijena u RS u periodu 2012.-2022. godina (u %).

Izvor: (RZS, Statistički godišnjak Republike Srpske, 2023, str. 271).

Ocenjuje se pozitivan uticaj rasta plata na ublažavanje negativnih uticaja inflacije i rast standarda kod zaposlenih. Njen negativan uticaj se ogleda kroz ugrožavanje finansijske, a time i makroekonomske stabilnosti, te gubitak konkurentnosti. Ako posmatramo teret djelovanja krize može se zaključiti da je sektor države podnio lakši teret nego privatni sektor, a što govore podaci da je, u tom periodu, prosjek plata bio veći u državnim institucijama u rasponu od 25,96% do 33,37% u odnosu na prosjek plate u RS.

Nesporno je da je poboljšanje ekonomskog statusa vitalnih kategorija društva povoljna tendencija u kriznim i tranzicionim uslovima poslovanja, ali isto tako visoko djelovanje političkih mjera je negativna mjera u RS, posebno sa aspekta dugoročne finansijske stabilnosti. Sada ćemo analizirati regresiju i korelaciju između posmatranih varijabli. U skladu sa tim, linearni regresioni model prilagođen podacima glasi:

Y=−7386489.25+3800.92XY = -7386489.25 + 3800.92XY=−7386489.25+3800.92X

Gdje:

- YYY predstavlja ukupan broj zaposlenih.
- XXX je godina.

U našem slučaju presretanje β0 je približno -7,386,489.25, a nagib β1\beta_1β1 približno 3800.92.

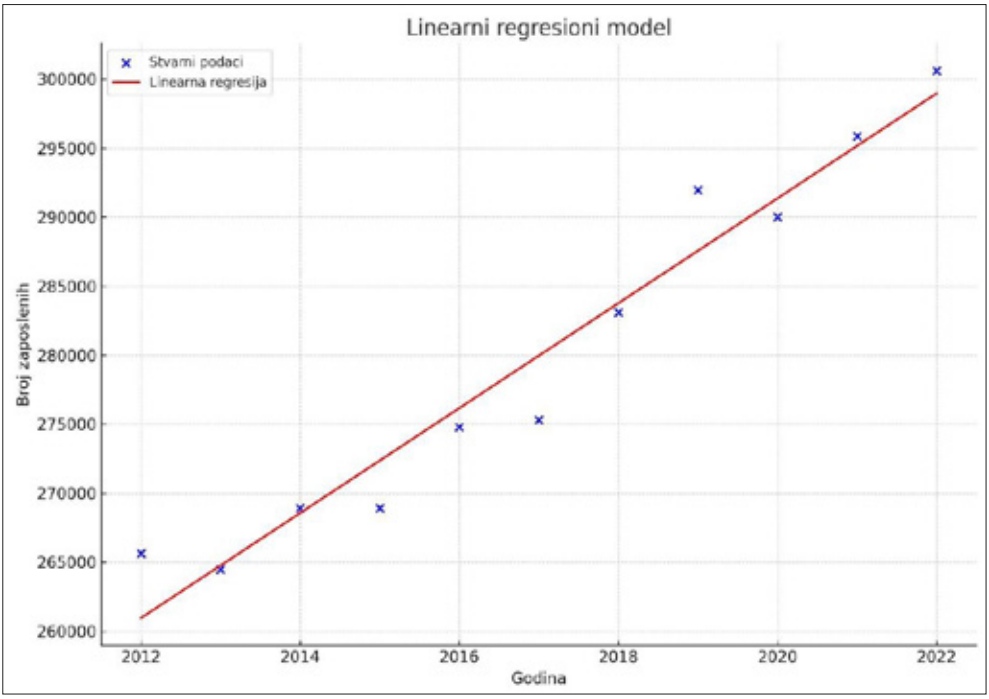
Tumačenje:

- **Presretanje (β0):** Ova vrijednost ukazuje na predikciju modela za ukupan broj zaposlenih u godini 0, što nije praktično smisleno u ovom kontekstu zbog nerealistične vrijednosti godine.
- **Nagib (β1):** Sugeriše da se za svaku godinu očekuje povećanje ukupnog broja zaposlenih za približno 3800.92, pod pretpostavkom da se trend nastavlja prema istorijskim podacima.

Stvarno stanje i modelsko predviđanje dinamike zaposlenih po godinama u RS u periodu od 2012. – 2022. godine predstavljeno je na grafikonu 2.

Iz grafikona 2 se može vidjeti da je odstupanje stvarnog stanja od modelskog predviđanja dinamike zaposlenih, po godinama u RS u periodu od 2012. – 2022. godine, minimalno. Grafikon 2. prikazuje stvarnu zaposlenost u RS (plavo) za svaku godinu i liniju linearne regresije (Benšić & Šuvak, 2014) koja predstavlja modelsko predviđanje trenda ukupne zaposlenosti tokom godina.

Blisko poravnanje tačaka podataka stvarnog stanja sa linijom regresije sugeriše jak linearni odnos, na šta takođe ukazuje visoka vrednost R^2. Dobijeni model može biti vrijedan alat za predviđanje budućih trendova ili za razumijevanje ukupnog smjera promjena u ukupnoj zaposlenosti tokom analiziranog perioda. Koeficijent korelacije (Pearsonov r) između godina i ukupne zaposlenosti je približno 0,953. Ovo ukazuje na veoma jaku pozitivnu korelaciju, što znači da kako se godine povećavaju, ukupna zaposlenost takođe ima tendenciju rasta. Postojanost jake korelacija podržava nalaze iz analize linearne regresije, koju smo imali prilike da vidim na dobijemo modelu. Za potpuniju analizu uticaja zarada na finansijsku stabilnost potrebno je sagledati i kretanje poreza i doprinosa na plate u Republici Srpskoj u period 2012. - 2022. godina, a što je prikazano u tabeli 2.



Grafikon 2. Stvarno stanje i modelsko predviđanje dinamike zaposlenih po godinama u RS u periodu od 2012. – 2022. godine

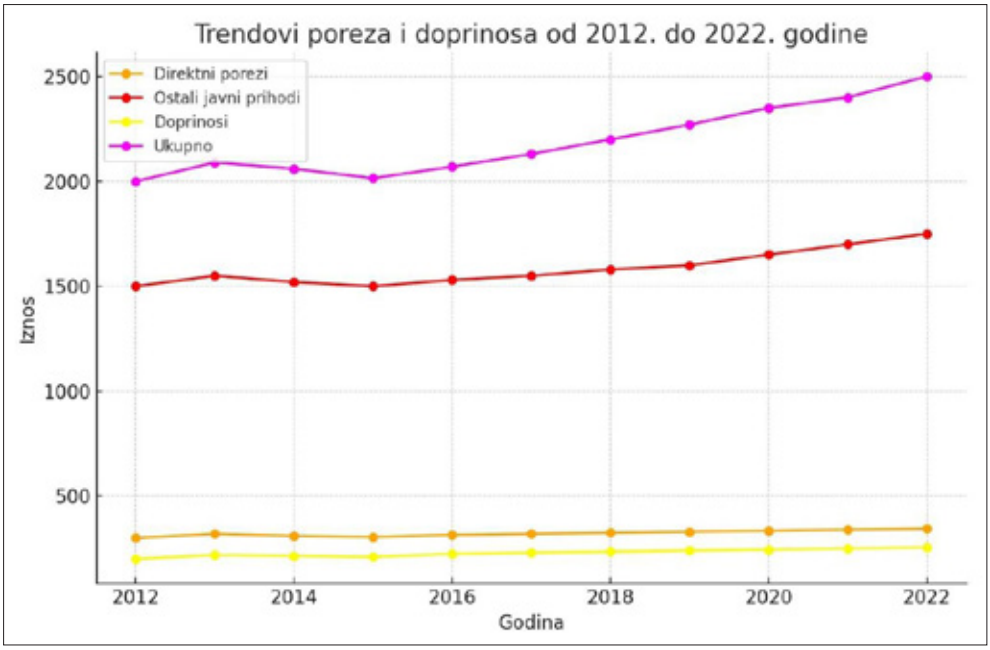
Izvor: autorski doprinos

Tabela 2. Porezi i doprinosi obračunati na plate u RS u periodu od 2012. – 2022. godine (u KM)

Godina	Direktni porezi	Ostali javni prihodi	Doprinosi	Sumirano
2022	643,33	492,37	1.966,83	3.102,53
2021	485,48	462,82	1.792,03	2.740,33
2020	464,42	379,88	1.638,42	2.482,72
2019	473,37	430,72	1.573,97	2.478,06
2018	466,63	395,75	1.476,64	2.339,02
2017	466,63	395,75	1.476,64	2.339,02
2016	409,32	336,61	1.387,11	2.133,04
2015	413,39	345.06	1.389,43	2.147,88
2014	431,53	310,51	1.311,45	2.053,49
2013	418,92	299,49	1.320,8	2.039,21
2012	418,77	303,4	1.328,62	2.050,79

Izvor: Poreska uprava Republike Srpske, (2023), Interna dokumentacija.

Na narednom grafikonu je dat prikaz kretanja poreza i doprinosa na plate zaposlenih po godinama u RS u periodu od 2012. – 2022. godine.



Grafikon 3. Kretanje poreza i doprinosa na plate zaposlenih po godinama u RS u periodu od 2012. – 2022. godine

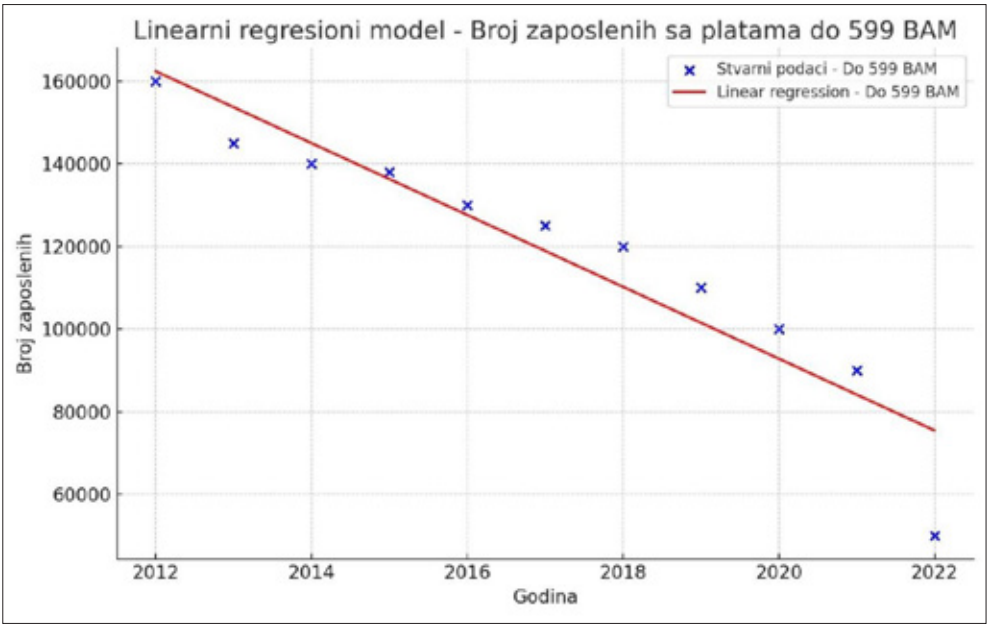
Izvor: autorski doprinos

Na grafikonu se može uočiti stalni rast bruto plata, koje su u 10-ogodišnjem periodu povećane za 51,28%, dok su doprinosi porasli za 48,03%. Sada ćemo posmatrati kretanje broja zaposlenih zaposlenih koji su na marginama primanja, tj. Sa platama ispod 599 KK i preko 2500 KM (tabela 3).

Tabela 3. Broj zaposlenih sa platama ispod 599 KM i iznad 2500 KM u RS, u periodu od 2012. – 2022. godine.

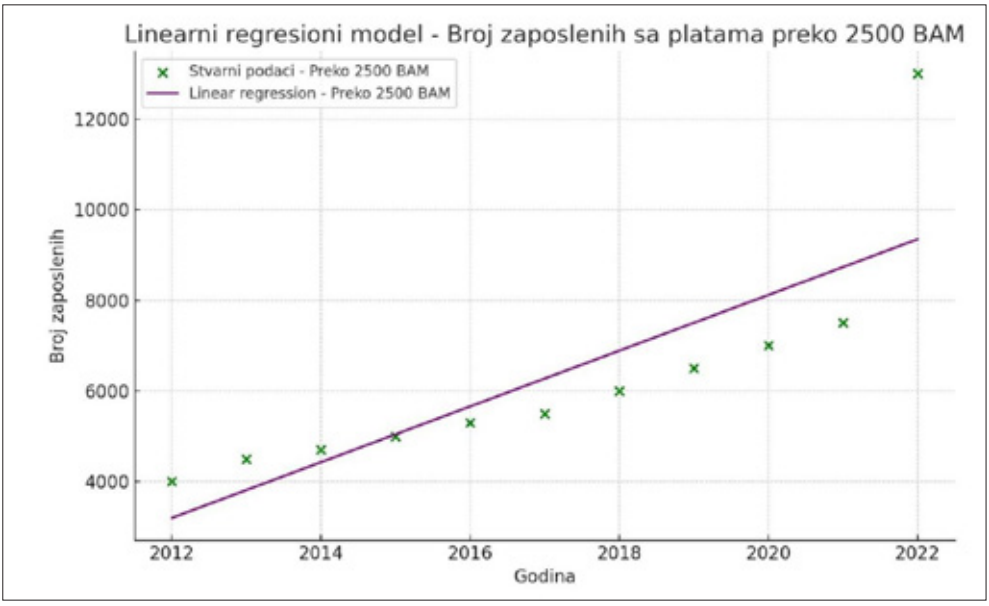
Godina	Broj zaposlenih sa platama do 599 KM	Godina	Broj zaposlenih sa platama preko 2500 KM
2022	13,486	2022	13,572
2021	82,062	2021	9,040
2020	99,730	2020	6,464
2019	111,296	2019	5,882
2018	119,194	2018	5,135
2017	132,365	2017	4,424
2016	141,420	2016	4,733
2015	137,326	2015	4,217
2014	137,326	2014	4,217
2013	137,684	2013	3,896
2012	138,104	2012	4,205

Izvor: Obrada autora u statističkom paketu SPSS, Prilagođeno prema Internoj dokumentaciji PU Banjaluka, 2023. Radi preglednosti, dinamika broja zaposlenih sa platom do 599 KM I preko 2500 KM u RS, u periodu od 2012. – 2022. Godine, je predstavljena i grafikički (grafikon 4 i 5).



Grafikon 4. Broja zaposlenih sa platom do 599 KM u RS, u periodu od 2012. – 2022. godine

Izvor: autorski doprinos



Grafikon 5. Broja zaposlenih sa platom većom od 2500 KM u RS, u periodu od 2012. – 2022. godine

Izvor: autorski doprinos

Za grupe zaposlenih čija je plata do 599 BAM i preko 2500 BAM, od 2012. do 2022. godine, utvrđen je linearni regresioni model, koji glasi:

Y=19048718.31−9387.75XY = 19048718.31 - 9387.75XY=19048718.31−9387.75X

Gdje:

- YYY predstavlja broj zaposlenih sa platom do 599 BAM.
- XXX je godina.

Tumačenje:

- **Presretanje (β0)**: Ova vrijednost ukazuje na predikciju modela za broj zaposlenih sa platom do 599 BAM u godini 0, što nije praktično smisleno zbog nerealistične vrijednosti godine.
- **Nagib (β1)**: Ovo sugeriše da se za svaku godinu očekuje smanjenje broja zaposlenih sa platom do 599 BAM za približno 9.387,75, prema istorijskom trendu.

Linearni regresioni model za broj zaposlenih sa platom preko 2500 BAM, od 2012. do 2022. Godine, ima sljedeći oblik:

Y=−1422128.89+708.04XY = -1422128.89 + 708.04XY=−1422128.89+708.04X

Gdje:

- YYY predstavlja broj zaposlenih sa platom preko 2500 BAM.
- XXX je godina.

Tumačenje:

- **Presretanje (β0\beta_0β0)**: Ova vrijednost ukazuje na predikciju modela za broj zaposlenih sa platom preko 2500 BAM u godini 0, što nije praktično smisleno zbog nerealistične vrijednosti godine.
- **Nagib (β1\beta_1β1)**: Ovo sugeriše da se za svaku godinu očekuje povećanje broja zaposlenih sa platom preko 2.500 BAM za približno 708, prema istorijskom trendu.

Korelaciju između broja zaposlenih sa platom do 599 BAM i preko 2500 BAM utvrdićemo pomoću Pearson-ov koeficijent korelacije

Pearson-ov koeficijent korelacije između broja zaposlenih sa platama do 599 BAM i preko 2.500 BAM, od 2012. do 2022. godine, je približno -0.989. Pearsonov koeficijent korelacije (r) je mjera linearne korelacije između dvije varijable. Njegova vrijednost se kreće od -1 do +1, gde: +1 ukazuje na savršenu pozitivnu linearnu vezu, −1 ukazuje na savršenu negativnu linearnu vezu, i 0 ukazuje na odsustvo linearne veze (Pistatistics, 2024). Rezultat ukazuje na vrlo jaku negativnu korelaciju između ove dvije varijable.

Tumačenje:

- **Negativna korelacija**: Kako se broj zaposlenih koji zarađuju preko 2.500 BAM povećava, broj zaposlenih koji zarađuju do 599 BAM se značajno smanjuje, i obrnuto. Ovaj trend sugeriše da se plate premeštaju iz nižeg u viši obim tokom posmatranog perioda.

Formula za izračunavanje Pearsonovog koeficijenta korelacije između dve varijable, X i Y, je:

$$r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}}$$

1. Srednja vrijednost zaposlenih sa platama do 599 BAM, ($\bar{x}$): 113,635.73
2. Srednja vrijednost zaposlenih sa platom preko 2500 BAM, ($\bar{y}$): 5,980.45
3. Ponovni izračun Pearsonovog koeficijenta korelacije (rrr): −0.989

Ovaj rezultat ukazuje na vrlo jaku negativnu linearnu vezu između broja zaposlenih koji zarađuju do 599 BAM i onih koji zarađuju preko 2.500 BAM, što znači da kako broj zaposlenih sa višim platama raste, broj zaposlenih sa nižim platama značajno opada.

ZAKLJUČAK

Na osnovu analiziranih podataka koji pokazuju jaku pozitivnu linearnu vezu između godina i mjesečne plate u Republici Srpskoj, može se reći da je preporuka za primjenu politika koje podržavaju stabilan rast plata, kako bi se održala dugoročna finansijska stabilnost. Pearsonov koeficijent korelacije, koji iznosi -0.989, ukazuje na vrlo jaku negativnu korelaciju između broja zaposelnih koji zarađuju do 599 BAM i onih koji zarađuju preko 2500 BAM, što znači da kako broj zaposlenih sa višim platama raste, broj zaposlenih sa nižim platama značajno opada. Regresiona analiza dodatno potvrđuje ovaj trend, pokazujući jasnu tendenciju rasta plata tokom posmatranog perioda.

Tokom cijelog posmatranog perioda zabilježen je rast plata u RS (39,85%), i u državnim institucijama institucijama (13,32%). Takav rast zarada nije imao ekonomske temelje, ali je bio, između ostalog, podstaknut i političkim djelovanjem. Ocenjuje se da se visina plata pozitivno odrazila na neutralisanje negativnih uticaja inflacije i rast standarda kod zaposlenih, ali je izraženo i njeno negativno dejstvo kroz ugrožavanje finansijske, a time i makroekonomske stabilnosti i gubitak konkurentnosti. Gledano na visinu prosječne plate, sektor države je podnio znatno manji teret djelovanja krize nego privatni sektor, što se ogleda u činjenici da je u tom periodu prosjek plata bio veći u državnim institucijama u rasponu od 25,96% do 33,37% u odnosu na prosjek plate u RS. Preporučuje se implementacija mjera za stimulisanje ekonomskog rasta, privlačenje investicija i otvaranje radnih mjesta u sektorima s visokom dodatom vrijednošću. Uključivanjem monetarne i fiskalne politike usmjerene na stabilizaciju cijena, osiguraće se uravnoteženost rasta plata sa mjerama kontrole inflacije kako bi se održala kupovna moć plata. Implementiranjem politika za smanjenje nejednakosti u dohotku, uz osiguravanje da se beneficije rasta plata ravnomjerno raspodijele na različite sektore i regije, može uključivati progresivno oporezivanje, mreže socijalne sigurnosti i ciljanu podršku radnicima s niskim primanjima.

Implementacija ovih politika zahtijeva pažljivu ravnotežu između promovisanja ekonomskog rasta, osiguranja socijalne jednakosti i održavanja fiskalne održivosti. Kontinuirano praćenje ekonomskih pokazatelja i trendova na tržištu rada bit će ključno za prilagođavanje politika prema potrebi. Pored ovih mjera, treba uzeti u obzir i globalne ekonomske savremene teorije koje naglašavaju važnost tehnoloških inovacija i digitalne transformacije za dugoročni ekonomski rast. Integracija novih tehnologija može poboljšati produktivnost i stvoriti nove mogućnosti za zapošljavanje u naprednim sektorima ekonomije. Velike migracije stanovništva takođe imaju značajan uticaj na ekonomske trendove. Migracije mogu dovesti do promjena u ponudi radne snage, što može uticati na nivo plata i zaposlenosti. Osiguravanje adekvatnih politika za inte-

graciju migranata u tržište rada može doprinijeti boljem iskorištenju njihovih vještina i potencijala, što može dodatno podržati ekonomski rast i socijalnu koheziju.

Konačno, značaj staranja o oskudnim resursima ne može biti zanemaren u budućem istraživanju. Jer se kroz održivost prirodnih resursa i njihovo efikasno korišćenje dobijaju ključevi dugoročnog ekonomskog rasta i stabilnosti. Politike koje promovišu obnovljive izvore energije, smanjenje otpada i efikasnu upotrebu resursa mogu obezbijediti održivost i smanjenje negativnog uticaja na životnu sredinu. Kombinacija ovih strategija može pomoći Republici Srpskoj da održi stabilan rast plata, smanji nejednakosti i poboljša životni standard svih građana, istovremeno prilagođavajući se globalnim ekonomskim izazovima i promjenama na tržištu rada u budućnosti. Buduće istraživanje bi trebalo da pokrije daljih razvoj prethodno navedenih politika i cirkularne ekonomije.

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WAGE STABILITY IN THE REPUBLIC OF SRPSKA IN THE LIGHT OF LONG-TERM MACROECONOMIC STABILITY

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Summary: *The paper analyzes the dynamics of net wages in Republika Srpska to assess the extent to which a certain element of macroeconomic policy can serve as a powerful tool for the financial stabilization of the domestic economy on a long-term basis. For this purpose, data on the number of employees and monthly salaries in RS from 2012 to 2022 were analyzed, specifically the correlation between the number of employees by group and the amount of their net salary. The results show continuous growth in total employment and monthly wages, indicating a positive macroeconomic trend. Pearson's correlation coefficient of -0.989 and regression analysis confirm a strong negative correlation between the number of employees in RS earning up to 599 BAM and those earning over 2,500 BAM, indicating a shift in the labor force towards higher wages. However, in the long run, faster wage growth than employment and inflation can create pressure on costs and thus destabilize finances. Challenges such as sustainable financial management and staff sustainability remain significant factors that must be addressed. The research ends with recommendations for adapting existing policies to ensure the long-term stability and growth of the Republika Srpska economy. The need for further research is emphasized to deepen the understanding of the effect of government measures in the area of wages and their alignment with global economic trends on the financial stability of the country. It would be interesting to investigate the movement of salaries by the group from the aspect of their sustainability in inflation conditions and in light of potential migrations to countries for a better standard. Additionally, exploring the impact of external economic shocks and regional disparities on wage dynamics would provide a more comprehensive understanding of the financial landscape in Republika Srpska. Future studies could also consider the role of technological advancements and their influence on wage structures and employment patterns, offering valuable insights for policymakers. Moreover, examining the impact of educational and skill development initiatives on wage growth and employment opportunities could help identify strategies to enhance economic resilience.*

Keywords: *public finances, fiscal policies, economy, employment, salary.*

JEL classification: *E60*

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TAXATION OF DIGITAL SERVICES

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Abstract: *Digital services are changing our society and economy, bringing new challenges and problems for tax policy through development of digital economy. Digital companies have new business models, often without a physical presence in different countries, and at the same time they provide services to users whose contribution creates value for these companies that states cannot tax under current rules as traditional services. Also, it is often hard to determine the location of a customer which is important for taxation. There are some important factors influencing taxation of digital service such as significant economic presence from companies and creation of big data by users of different countries. Some countries have introduced their taxes on digital services independently, which means that there is no consensus on the taxation of digital services at the international level. The aim of this paper is to highlight the tax treatment of digital services in the European Union and, consequently, in Croatia. Also, authors will analyze the legal solutions for the taxation of digital services in France, the United Kingdom and the Republic of India, and make proposals for the introduction of taxes on digital services in Croatia.*

Keywords*: taxation, digital services, legislation, EU, Croatia.*

JEL classification: *H20, H21, H25.*

INTRODUCTION

The digital economy is a global network of economic activities enabled by the use of information and communication technologies, i.e., the digital economy is an economy based on digital technologies (United Nations, 2020). In its Action 1 report (OECD, 2015), the Organization for Economic Co-operation and Development (OECD for short) identifies six main characteristics of the digital economy that are po-

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tentially relevant from a tax perspective. The first feature is the mobility of three main factors (OECD, 2015): the mobility of intellectual property (which forms the basis of the digital economy), the mobility of users, and the mobility of business functions as a result of the reduction in the need for local labor to perform certain functions. We live in an ever-changing world fueled by constant innovations where science fiction often becomes science fact. The greatest changes in recent human history are happening in the last few decades. Innovations, technology and digitization have already altered society and continue impacting not just our lives but virtually all business functions and industries (Tolić, Sabljić, & Sabljić, 2022). Another feature is the reliance on data, especially "Big Data." The third characteristic is network effects. Thank you to the network effect, only an increase in the number of users of a network leads to an increase in the value of that network. A simple website for sharing self-made videos is given as an example. The more users there are, the more content there is and the more attractive the site is to new users. The fourth characteristic is the use of "multi-sided" business models, where multiple groups of people interact through intermediaries or platforms, and the decisions of one group of people influence others through positive or negative externalities. An example is the card payment system, which is more valuable to merchants the more users there are, and the more merchants accept said card system, the more valuable it becomes to users. The fifth characteristic is the tendency to monopolies or oligopolies in certain business models based on network effects. The sixth characteristic is high volatility due to low barriers to entry and rapidly evolving technology. The digital economy has enabled the development of a number of new business models (OECD, 2015). Although most of these models have their counterpart in the "regular" economy, the development of digital tools has made it possible to perform many types of work on a larger scale and over greater distances than was previously possible. Some of the business models include e-commerce, app stores, online advertising, cloud business, payment services, ultra-fast e-commerce, and online platforms with user participation (OECD, 2015). For these new digital business models, the problem is how to determine the location of customers (buyers) and revenue. According to Measure 1 (OECD, 2015), revenues are categorized as follows: Advertising revenue, revenue from the sale of digital content, sale of real and virtual goods, subscription revenue, revenue from services, revenue from licensing of content and technologies, revenue from the sale of user data and customized market research, and revenue from "hidden" costs. The diversity of business models and ways to generate revenue and profits makes it difficult to set firm boundaries for the digital economy. We can argue that the entire economy is going digital and that digital tools are becoming essential for the sustainable operation of modern businesses, making it difficult for governments to tax.

The Inclusive Framework on Base Erosion and Profit Shifting (further in the text: BEPS) created by the OECD (OECD, 2020) has the primary goal of preventing corporate tax evasion by exploiting discrepancies in tax systems. More and more companies are operating internationally and globally, so the actions of tax authorities need to be coordinated at the global level. The OECD estimates that the negative practices of tax base reduction and profit shifting through digital services cost tax authorities a total of $100 billion to $240 billion annually, equivalent to four to 10 percent of global corporate tax revenues (OECD, 2020). Although the OECD has taken a number of

measures over the past five years to make the international tax system fairer and more efficient as part of the BEPS program, no concrete action has yet been taken in the area of the digital economy.

Therefore, the aim of this work is to examine the implementation of the taxation of digital services in the United Kingdom, France and the Republic of India, and to research the proposal for Council Directive 2018/0073, which has not been implemented in the European Union. The aim is to find the best practice for the digital services taxation proposal in Croatia.

The paper is divided into six sections. After a brief introduction, the literature review is presented followed by research methodology. Authors have then analyzed examples of good practices regarding the taxation of digital services. In the fifth section, results of conducted research and discussion are presented. The last section refers to conclusion remarks.

LITERATURE OVERVIEW

According to Noonan and Plehakova (Noonan & Plekhanova, 2020), digital services are the services offered by web platforms that facilitate the exchange of goods and services between third parties. The most prominent providers of this type of service are Google, Amazon, Facebook, Apple, and Airbnb. According to Zuboff (Zuboff, 2019), these platforms are highly digitised and operate businesses in different countries without a physical presence. They rely on intangible assets, mainly intellectual property and Big Data, and create value through people's online interactions. For example, American companies pay for Facebook ads that target French consumers. Facebook profits from these companies and receives its payments in the United States. American companies are willing to pay for advertising on Facebook because they expect it to increase sales in France, and that is only possible if Facebook is used by users from France (Cui, 2019). Thus, the use of Facebook by French users makes Facebook a profitable seller of advertising space. In this interpretation, the concept of "customer-created value" identifies the place of profit (France) differently from the place of payment (U.S.) and differently from the place where tangible assets and employees are located. For this reason, Cui (Cui, 2019) advocates the introduction of a tax on revenues from the provision of digital services. In March 2018, the European Commission put forward two proposals primarily aimed at taxing digital businesses. The first initiative aims to reform corporate taxation so that profits are recognised and taxed when companies interact with customers on a significant scale through digital channels. This proposal is also the desired long-term solution of the European Commission. The second proposal is a transitional solution that covers the taxation of the main digital activities that are currently not taxed in the European Union. In addition to the transitional solution providing immediate revenue to member states, it would prevent unilateral solutions that threaten the concept of the European single market. The proposal provides for an indirect tax to be levied on income from activities where users play an important role in creating value and where it is difficult to apply the current tax rules. Income from the sale of online advertising space, income from digital intermediation activities that enable the sale of goods and services between users, and income from the sale of user-generated data would be taxed. The tax would be levied

by member states in which those users are located and would apply only to companies with total worldwide sales of more than €750 million and total sales in the European Union of more than €50 million. At a tax rate of three percent, the total revenue for member states would be estimated at five billion euros (European Commission, 2018).

According to Beebe (Beebe, 2019), the member states opposing the introduction of the said tax are mainly states with smaller export-oriented economies that are threatened by the loss of tax revenues, such as mainly Ireland, the European headquarters of Google, Facebook and a number of other large corporations. They cite potential double taxation and the violation of existing double taxation agreements as arguments. If one country introduces income taxation while another retains the existing system of profit taxation, this leads to double taxation and makes business development in a country with income taxation more expensive and less attractive. On the other hand, large economies such as Italy, Spain, and France support the European Commission's proposal and believe that user activity creates value and that value must be taxed where it is created (Beebe, 2019). (Russo, 2019) believes that the tax on digital services could likely be passed on to end users and would likely have a similar impact as VAT in the form of price increases for end users. He believes that this tax can indeed be considered VAT on digital services, but at a specific higher rate, and that VAT is superior to digital tax services in terms of efficiency, as the latter could influence business decisions and cause cascading or double taxation. He believes that countries could achieve better results if they made an effort to invest in the VAT system, which is applied more efficiently to digital services, instead of a tax on digital services. (Parsons, 2018) comes to similar conclusions, but also offers additional criticisms. Apart from the fact that he considers a special tax regime for the challenges of the digital economy unnecessary and it is unclear to him why the proposed tax could not be implemented through changes in the VAT system, the rules of which are well known, he also believes that it is not certain that there is actually value in any data collection. He also points to the requirements of the General Data Protection Regulation (GDPR) for deletion of data and believes it is unclear how companies could prove the existence of revenue from such data. He adds that there are many user accounts that are actually inactive, so a minimum activity level should be set for them. He also believes that although the digital services tax is presented as a temporary solution, there is actually nothing in his proposal that would repeal it if someone comes up with a permanent solution. For example, VAT rules from the temporary solution in "the European Union have been "temporary" for over two decades (Parsons, 2018). The European Commission does not offer a more in-depth analysis of who will bear the tax burden once the tax on digital services is implemented. (Bauer, 2018) finds that due to the design of the tax itself, network effects, and the current competitive situation of online platforms, the main burden of taxation will be borne by business customers and end users. In his analysis, (Bauer, 2018) concludes that the more mobile the owners, suppliers, and buyers, the lower the tax burden, and that the greater burden falls on the more immobile businesses. Taking into account the fact that online platforms provide micro and small businesses as well as self-employed people with a low-cost and efficient way to advertise, the question arises whether the introduction of such tax will harm small business entities in the member states of the European Union? (Beebe, 2019) warns of another potential problem with the introduction of a tax on revenues from the provision of digital services. If this tax is targeted at

a narrowly defined industry niche, there is a possibility that it will not achieve its goal of neutrality between digital and traditional businesses. If, on the other hand, it covers a broad range of companies, it may lead to large differences in taxation (Beebe, 2019).

As a kind of alternative to income tax, a withholding tax can be levied. In Croatian legislation, withholding tax is defined by the Profit Tax Act as a tax on profit earned by a non-resident in the Republic of Croatia (National Gazzete, 2022). According to the Act, the payer is liable for the tax, and the basis is the gross amount of remuneration paid by the domestic payer to the non-resident - foreign - recipient. Withholding tax is levied on interest, dividends, profit shares, as well as on copyrights and other intellectual property rights. In recent years, withholding tax has also been applied to certain types of digital transactions, such as the taxation of royalties for online music playback or the taxation of online advertising revenues. Malaysia and Thailand are examples of countries that have introduced these measures (Beebe, 2019).

The OECD discusses the opportunities and challenges of introducing a withholding tax on digital transactions as an alternative to complicated profit distribution mechanisms. According to (Olbert & Spangel, 2017), this proposal is referred to in the literature as an "equalization tax" and should be applied to a wide range of online and remote transactions to tax the profits of digital companies based on their significant economic presence.

The OECD envisions two possible forms of said levy (Olbert & Spangel, 2017): in the form of a tax on the total value of all digital transactions by foreign companies with domestic consumers (a type of consumption tax) or as a tax on the value of data provided by users for the purpose of taxing the value added by the collection of user data. The concept itself presents a number of problems, and the OECD points to the difficulty of imposing such a tax on business-to-consumer transactions, the impossibility of recognizing tax deduction costs, and the conflict with European Union free market principles that provide for equal taxation of domestic and foreign businesses.

(Baez & Brauner, 2015) present a detailed argument for the broad application of withholding tax in the digital economy. Their proposal consists of a global withholding tax rate of, say, ten percent on payments that reduce the tax base of non-residents in all transactions between firms. As a result, all payments not related to digital transactions could be exempt from this tax. Transactions between businesses and consumers would be exempt, as they do not usually reduce the tax base. The proposal is very simple and could be included as a new article in the OECD model. However, it would require global coordination and standard setting, which would require a major effort from the relevant institutions.

The (European Commission, 2018) has put forward a proposal that would allow member states to tax profits earned in their territory even if the company has no physical presence. A company has a taxable "digital presence" if it meets one of three criteria: Annual turnover of more than seven million euros in a Member State, more than 100,000 users in a Member State during the financial year, or more than 3,000 concluded business contracts for the provision of digital services between companies and business users during a financial year. The European Commission argues that the aforementioned rule better allocates the profits earned based on where the user is at the time of consumption of digital content and establishes a real link between the place of profit realization and the place of taxation of the profits. (European Commission, 2018)

presents further details on the concept of significant digital presence in its proposal for a Council Directive of the European Union. A wide range of activities, including the development, improvement, maintenance, protection and use of intangible assets, are considered to be economically significant activities of the company and allow the attribution of profits to a particular tax jurisdiction, even if these activities are physically carried out outside the said jurisdiction. The allocation of profits to the economically significant presence is based on the principle of impartial transaction, and traditional methods of profit allocation also take into account factors such as the number of users and the amount of data collected in the Member State.

In his work, (Cui, 2019) analyzes the need for the concept of a significant digital presence. According to the European Commission's proposal, a digital company is considered to have a significant digital presence if it reaches certain numbers in a country (amount of revenue, number of users, or number of contracts). This requires two conceptual steps: Users are considered intangible assets of the company, and activities related to tangible assets (e.g., servers) and activities of employees outside the country are allocated to intangible assets of the first step. In the second step, the profit is attributed to the activities listed in the first step, under the fiction that these activities are performed by a third party, independent of the rest of the firm. (Cui, 2019) raises the question of how this differs from simply identifying a certain number of transactions within a country, determining the amount of profit generated by those transactions, and taxing that profit in that country. Moreover, the concept of significant digital presence does not answer the question of how much profit is generated by the user's participation and how much of that profit should be allocated to the country in which the user resides.

METHODOLOGY

In accordance with the aformentioned problems regarding taxation of digital services, the primary goal of this paper was to provide answers on the following research questions:

RQ1: What is the most appropriate way for taxing digital service?

In order to provide answer on the first research question, the authors examined the legislation of countries that have implemented digital services taxation. Countries such as the United Kingdom, France, and the Republic of India have introduced digital services taxation. To answer the research questions, the authors will use the method of analysis, description, comparison and compilation. The aim is to show the legislative solutions of the mentioned countries based on the main criteria, i.e. the digital services that are legally considered taxable, the thresholds, the tax rate and tax calculation, and the place of service provision. Finally, some suggestions will be made regarding the introduction of a tax on digital services in Croatia.

RQ2 Is it possible to introduce fair taxation of digital services?

To answer the second research questions, the authors will use the method of analysis, synthesis, description, comparison and compilation. Since digital companies have organized their business model to operate in multiple jurisdictions but have no physical presence, rely on intangible assets, and use their own users' free contribution to create value by collecting Big Data, it is important to analyze important factors such as Big Data and physical presence to answer this research question.

EMPIRICAL EVIDENCE

In this chapter, the state of taxation of digital services in the Republic of France, the United Kingdom and the Republic of India is analyzed. In addition, the effects of the application of the aforementioned tax has been analyzed.

Case of Republic of France

The digital economy accounts for 5% of France's GDP, according to 2016 data, and the number of digital companies is estimated at 115,000. The tax on digital services in the Republic of France came into force on July 25, 2019, but will be applied retroactively to revenues generated from January 1, 2019. The government of the Republic of France estimates the annual revenue from the said tax at 500 million euros. Companies whose total annual revenue from taxable activities exceeds 750 million euros worldwide and 25 million euros in France will be taxed. The thresholds set correspond in part to those proposed by the European Commission.

The threshold of the total annual income of over 750 million euros results in the fact that only large international companies that operate successfully on a global level are subject to the said tax (Nappi, 2016). As an example, we can cite the French music streaming platform Deezer, which has over 14 million monthly users and is marketable leader in France, but its total annual revenues are 400 million dollars, and it is not subject to digital services tax.

The digital services tax rate is three percent, which taxes revenues generated in France from the provision of two categories of services: digital interface services and targeted advertising services (United States Trade Representatives, 2019). The following table shows examples of some digital interface services that are taxable, as well as some exemptions from taxation.

Table 1. Examples of taxed digital services

Taxed digital service	Not taxed digital service
A small business sells shoes to individuals through the Amazon platform.	The Amazon platform sells shoes from its own inventory.
A natural person sells a bag to another natural person through the eBay platform.	The company sells bags through its own website.
The driver uses the Uber app to provide the ride service.	The driver uses the app of the taxi company to provide the driving service.
A tourist uses the Airbnb platform to rent an apartment from a third party.	A tourist uses a hotel's website to book accommodation at that hotel.
A small business sells DVDs or CDs to individuals through the Amazon platform.	A music streaming application provides a music listening service to a subscriber.

Source: authors in accordance to United States Trade Representative (2019)

From the table 1, we can conclude that the digital services tax is not subject to services in which there is no transaction between three parties, i.e., in which there is no digital mediator. Also, transactions whose content is digital multimedia (music and film), communication or financial services are not subject to the tax.

A digital interface service is considered to have been provided in France if a person located in France purchases a good or service through a digital interface (foreign

or French) from a third party (foreign or French). Also, the service will be considered to have been provided in France if a foreign person purchases a good or service from a third party through a French digital interface.

When reporting income from the provision of digital interface services, companies can reduce income only by the amount they passed on to third parties, i.e., sellers of services or goods (United States Trade Representatives, 2019). All other costs, such as storage costs or postage, must not reduce the tax base. The tax base is calculated as the total revenue generated from the services multiplied by the percentage share of those transactions that are related to France. Therefore, it is not the value of transactions provided in France that is calculated, but the percentage of users who are in France and that percentage is applied to the total revenue generated worldwide. This method of calculation can lead to an overestimation or underestimation of the realized income, depending on the average amount of the transaction realized in France in relation to the average amount of the transaction at the world level (United States Trade Representatives, 2019).

The question arises of the efficiency and fairness of the mentioned method of calculating the tax base. Calculating the total realized income at the world level from the activities that enter the sphere of taxation with the tax on digital services in France leaves the impression of extensive accounting work (Arcieri, 2019). The logical alternative was to define as the tax base the value of the realized activities that included users from France, and we can argue that the mentioned method would be fairer and more administratively efficient.

The second category of taxable services, targeted advertising services, refers to the following activities: displaying and evaluating targeted advertising based on data about the user to whom the ad is displayed, and selling user data in connection with online advertising (Arcieri, 2019). Emphasis is placed on targeted advertising using data. Therefore, showing the same ad to all visitors to a particular website is not an activity subject to the mentioned tax. This is in accordance with the basic principle of the legitimacy of the tax on digital services. France justifies the legitimacy of the digital services tax by the fact that its residents create value by providing their data and the monetization of that same data must be taxed in France, therefore advertising services that do not use that same data will not be subject to the digital services tax (Chrisafis, 2019).

The targeted advertising service is considered to have been provided in France if the user was in France at the time the ad was displayed or if the data was collected from the user while he was in France (United States Trade Representatives, 2019). An example of a transaction that would be subject to taxation is the following: the American platform Facebook sells advertising space to a Chinese company, and the ad is shown to a Spanish resident who is in France at the time the ad is displayed.

When reporting income from the provision of targeted advertising services, the tax base includes all income from those activities, and the company has no right to reduce the base for amounts paid to third parties for advertising space. The tax base is calculated as the total revenue generated from the services multiplied by the percentage share of those transactions that are related to France (United States Trade Representatives, 2019).

The introduction of a tax on digital services in the described form, which is primarily aimed at large American multinational corporations such as Facebook and

Alphabet, caused a reaction from the American authorities. They announced the introduction of import duties on French goods, including champagne and cheese. The French authorities therefore decided to postpone the collection of the new tax until the end of 2020. If the OECD reaches an international agreement by the end of 2020, the French unilateral tax will not be applied, and if there is no agreement, France will retroactively collect all tax arrears.

The described situation shows the importance of the multilateral and synchronized action of tax authorities around the world. The unilateral introduction of one's own taxes inevitably leads to conflicts between states and potential trade wars. As most of the corporations to which the digital services tax is applied are in the USA, we can expect strong reactions from the American authorities to any introduction of unilateral taxes whose primary goal is to reduce the profits of American companies (BBC News, 2020)

Case of UK

The Internet sector is one of the most important economic sectors of the United Kingdom. According to data from 2016, the Internet sector consisted of almost 80,000 companies that employed 400,000 people. The total value of the internet sector within the UK's gross domestic product is £45 billion, making it twice the size of the arts, entertainment and recreation sector and three times the size of the agriculture, forestry and fisheries sector. The growth of the Internet sector is faster than the growth of the entire economy. The number of companies grew annually by 6.6% in the period from 2012 to 2016, compared to 2.9% growth in the number of companies in the economy (Hooton, 2019).

Although the growth of the Internet sector was strong, it was not adequately accompanied by the growth of tax revenues. Boccia and Leonardi (2016) states that in 2016, Her Majesty's Revenue and Customs reached an agreement with the Google corporation to pay 11.3 million pounds in taxes for a five-year period starting in 2005. If the stated amount is compared with the estimated profit that Google achieved and considering the dividends paid to shareholders, the applied effective tax rate is three percent instead of the standard rate of profit tax which was 28% in the stated period. Another example is Facebook, which paid £4,327 in tax in 2014 and reported a pre-tax loss of £28.5m despite paying out bonuses to all its employees totaling £35.4m. The above shows that multinational corporations have the means and opportunities to use all legal options to reduce tax liability to a minimum with the help of tax and legal experts (Boccia & Leonardi, 2016).

In order to prevent tax manipulations that result in multinational corporations being subject to extremely low effective tax rates, the UK government, as part of the BEPS programe, enacted the Profit Shifting Act. It is a specific measure aimed at preventing profit shifting and entered into force on April 1, 2015. It is aimed at domestic companies or foreign companies with a permanent establishment that use legal entities or transactions without economic substance to exploit tax disputes. The tax rate is 25%, which is higher than the standard rate of corporation tax of 20%, to further incentivize businesses to report their profits within the UK (HM Revenue & Customs, 2019)

From 1 April 2020, the UK government introduced a digital services tax of 2% of revenue from search engines, social networking services and online marketplaces

that extract value from users located in the UK. It will apply to those businesses whose consolidated revenues from digital activities globally exceed £500m per year, with more than £25m coming from UK users. If we compare the mentioned thresholds with those proposed by the European Commission (750 million euros of annual income and 50 million euros of income generated in the European Union), we can notice that it is a similar order of magnitude. The UK government estimates the expected revenue from digital services tax at £280 million in the first year of taxation to £515 million in 2024, and the total cost of taxation is estimated at £8 million per year (UK Government, 2020). The argument is made that the tax on income from digital services is retrograde and unfair to companies that are just entering the market or are not highly profitable. To reduce the retrograde nature of the said tax, the Government of the United Kingdom decided not to tax the first 25 million pounds of income. Also, there is room for bilaterality in the form of regulations on reducing the tax liability by 50 percent if the other party to the digital transaction is in a country that has established a similar tax on digital services (UK Government, 2020). Taxable income from digital services will be considered any income that a company generates related to a social network, online search engine or online market. If one of the parties in the transaction through the online market is a user from the United Kingdom, all income from that transaction will be considered as income generated by extracting value from the user from the United Kingdom. Advertising revenue is generated from UK users if the ad is viewed or otherwise consumed by UK users (UK Government, 2020).

The government presented the mentioned tax as a short-term solution, believing that the optimal sustainable long-term solution is the reform of international corporate tax regulations, and they strongly support the efforts of the OECD in this direction. The tax on digital services will be abolished when an adequate international solution is established (UK Government, 2020).

Case of Republic of India

The Republic of India, the second most populous country in the world, represents a huge market for digital multinationals. As an example, the social network Facebook had over 300 million users from India, according to data from April 2019.

On February 29, 2016, the Government of the Republic of India introduced, following the OECD framework from the Action 1 report, an equalization levy at the rate of six percent on all payments to non-residents by introduced in France and Great Britain, we can argue that it is a simpler measure to apply. Unlike the French model, it does not require an in-depth analysis of the revenue structure on the part of the service provider, instead the responsibility is shifted to the recipient of the service. When paying for services related to online advertising, he is obliged to establish the recipient's residency and, if the annual transactions with that recipient exceed the given threshold, to suspend the six percent payment in the name of equalizing levy. residents or permanent business units for digital advertising services. It only applies to payments between legal entities, if the total value of transactions in a year is over $1,500. If possible, a non-resident can reduce his tax base in the country of residence by the specified amount. The equalization levy functions as a withholding tax; every resident and permanent business unit is required to withhold part of the payment at the rate of six percent when paying a non-resident online advertising service provider (EY, 2016).

Comparing the said levy with taxes on digital services as a further measure to tax the digital economy, the tax authorities of the Republic of India have expanded the scope of the equalization levy. From April 1, 2020, the levy will also apply to income from e-commerce services such as the online sale of goods or the provision of services owned by the e-merchant or in which the e-merchant is only an intermediary. The levy is applicable if the recipient of the good or service is a resident of the Republic of India or uses an IP address located in India and if the e-merchant's gross revenue from the sale of goods and services to residents of India or users of IP addresses located in India exceeds $267,000 (KPMG, 2020).

The equalizing levy represents a short-term tax measure by the Indian tax authorities until a long-term multilateral solution is found, and we can equate it in terms of durability with the taxes on digital services presented in France and Great Britain. One of the possible long-term solutions to the problem of taxation of the digital economy is the introduction into legislation of the concept of significant economic presence, which the tax authorities of the Republic of India did in 2018.

Activities that will constitute a significant economic presence are all transactions related to goods, services and real estate carried out by non-residents, including downloads of data and programs, the total value of which exceeds a certain amount and all types of regular and systematic business activities including interaction with users in India through digital tools (Sarvamangala & Farzana, 2022). The threshold of the total value of business activities after which a significant economic presence would be established has yet to be defined. When drafting the law, the Indian government invited the interested public and experts to a public debate on the height of the thresholds, but these thresholds have not yet been established. Therefore, the concept of significant economic presence is not actively applicable. The reason for this can be found in the fact that it is a bilateral legal concept that requires the coordination of several countries. The Republic of India is postponing the final establishment of the Institute of Significant Economic Presence until consensus is reached by OECD member states (KPMG, 2020).

RESULTS AND DISCUSSION

From the researched literature regarding taxation of digital services and through examples of Republic of France, UK and Republic of India authors can conclude that they are taxing revenues achieved through provided digital services to citizens of their country. And basically, they have introduced some examples of profit tax on revenues from digital service which means that they are not taxing the end consumers of those services. Therefore, based on the good practices of examined countries authors conclude, as answer on the first research question, that taxation of digital services should be based on the revenues from these services.

The limitations of the research are reflected in the fact that, since the legislative solutions in France, United Kingdom and India are more recent, there is not enough data to build on deeper analyzes of the impact of taxes on taxpayers, their decisions or future decisions and plans, nor to the price level for tax-related services, both for the consumers themselves and for companies that use the services of multilateral digital platforms. Also, there are thresholds placed too high and it is not possible to conclude what the actor's behavior would be if they were set to lower levels. Because states

with proposed or adopted taxes concerning digital services obviously are moving in the direction of defining completely new concepts for taxation purposes (expansion of the definition permanent business units with the existence of a significant digital presence in certain criteria and taxation of revenues from digital services), therefore the proposals for the introduction of tax on digital services in Croatia are aimed at criteria and factors that are essential for the introduction, and which Croatia should look at and consider before the potential introduction itself. Croatia should do an analysis and weigh what it is the best thing to do considering many factors:

- If taxation of digital service will be adopted for EU, Croatia would probably not have to do very extensive analyzes because it does not decide on its own but together with others. At the same time, with such solutions, although each vote is equally valid, surely stronger and bigger countries would have a greater influence since Croatia's influence is on the international scene however limited. According to the proposals of two Directives of the European Union which were not accepted, i.e high thresholds, it could be concluded that they are still more tailored, i.e. adapted to larger and economically stronger members. The question is whether with such thresholds we would even found companies that would be taxpayers in Croatia.
- If it will go unilaterally, Croatia needs to decide through which tax form to do so - through some existing, for example, the Profit Tax Law by extension the definition of a permanent business unit or by expanding taxable benefits through withholding tax, or through a new law. It makes no sense to introduce both at the same time. As for the legislative procedures, probably the extension of the existing law would be easier and take less time. Bringing of a completely new law, by the time the whole procedure goes through, it would probably take much longer. Of course, both provided that the Parliament accepts it.
- After determining through which law to introduce it, Croatia should consider the height of the thresholds. If the thresholds are kept high, there would probably be too few taxpayers covered. The question is whether there is any point in introducing such a tax and wasting time of other resources if what will be gained through such a tax will be less than the cost of tax introduction. Croatia could therefore introduce differentiated thresholds, i.e. threshold classes, such as exists in the Profit Tax Law, and apply a progressive rate or even some to each class progressive absolute amount. In this way, perhaps the tax burden would be better distributed. Of course, the opposition and resistance of both small and large companies should be taken into account because nobody likes paying new taxes. Croatia should therefore be sensitive when defining of what would be taxed and the amount of the tax itself. Heavy taxation of the income they generate a large value, with all the existing taxes and levies, could be understood as a penalty for performance on the market and influence over the company's decisions. That's why they should be careful about it because if the tax amounts does not represent an excessive tax burden, companies will perhaps avoid paying taxes less often and run the risk of non-payment less often. Also, Croatia could perhaps drop some of its existing taxable digital services in accepted or adopted laws from

other countries, eg taxation of data transfer from users.

- If the new tax were to be announced as only temporary until consensus is found on international level, it would probably cause resentment and anger from taxpayers who would not saw the sense in adapting their systems for something that is temporary. Also, no one does loves tax uncertainty. The new tax would represent an additional tax burden to taxpayers in the form of increased costs of adaptation and training of their financial employees. However, since the situation shows that this is a tax that certainly awaits Croatia, yes a consensual tax would probably not be much different, if the tax were introduced unilaterally from Croatia as a temporary solution, in fact one should be careful about the rhetoric and choice of words, i.e. emphasize to taxpayers that this is a useful preparation for future "permanent" solution and that, although it will probably incur higher initial costs, once it is introduced international consensual solution, systems and employees of taxpayers will to a large extent be prepared and trained and therefore it will be easier for them.
- When defining the main determinants of the law, IT experts should be included. Admittedly, it would be perhaps a little unusual cooperation, because these experts would participate in setting up a system by which they would be taxed. But without their cooperation taxable services, i.e., their measurement, could be defined by the tax authorities too far from reality, confusing and more difficult to apply in practice. Taxpayers could interpret them in their own way and thus having an open space for manipulation.
- The law should determine the mechanisms of control by the tax authorities, i.e., in what way tax officials, when they came to a company to inspect, would carry out the same and verify the accuracy data, i.e., the amount of taxpayers, for example, control of identification and "counting" of virtual one's user accounts and user devices.

In order to answer on the second research question: *Is it possible to implement fair taxation of digital services*, authors believe that it is hard to comprehend all the problems and solutions on them in order to implement completely fair and objective tax on digital services for all the companies and all the countries, especially if this tax will be implemented internationally. The authors mentioned that factors influencing fairness are big data and physical presence of the digital company in some country. Big data collected by digital companies is digital capital created by users and it is considered as intangible asset of the digital companies. So, that is a key factor of production in digital economy (Koroleva, 2019). So, big dana and physical presence or better significant economic presence are connected to the number of users of digital services. If we look at the criteria for establishing a significant economic presence proposed by the European Commission, which are an annual income of more than seven million euros in a member state, more than 100,000 users in a member state during the business year, or over 3,000 concluded business contracts on the provision of digital services between companies and business users during one business year, based on publicly available data we cannot specify the number of potentially covered companies. As a result of the above, we cannot analyze either the structure of the covered companies or their size and assess the effect of the mentioned thresholds. Also, in its proposal, the Euro-

pean Commission presented a single threshold for all member states, which directly benefits larger member states. The reason for this is that a foreign company is more likely to exceed one of the thresholds for establishing a significant economic presence in a country with 70 million inhabitants (like France) and be subject to taxation in that country compared to the Republic of Croatia and its 4 million inhabitants. The concept of significant economic presence is relative to the size of the economy. The authors opinion is that the taxation threshold should be set lower so that each member state has the option of taxation or the taxation threshold should be adapted to the number of inhabitants. If we adjust the mentioned thresholds to the number of inhabitants, taking into account the fact that the average number of inhabitants of a member state of the European Union is about 18 million, the adjusted and rounded thresholds for constituting a significant economic presence in the Republic of Croatia would amount to: annual income greater than 1,500,000 euros or over 22,000 users or over 650 concluded business contracts on the provision of digital services between companies and business users during one business year. In his work, (Cui, 2019) presents an argument about the archaic nature of the concept of a permanent business unit. It states that opponents of a tax on digital services income fail to provide any valid reason why the UK government does not have the legitimacy to tax income. The only argument is the legal absence of a permanent business unit. But that argument further supports the UK government's actions and their claim that the traditional permanent establishment criterion fails to properly capture income from the digital economy, which can be done without using the permanent establishment concept. An important factor in the determination and taxation of permanent economic presence is the fact whether there is an agreement on the avoidance of double taxation concluded with the country in which the company that achieves a significant economic presence is a resident.

CONCLUSION

Digitalization is the most important trend in the modern economy. Market participants are shifting their business to the virtual world, and the use of social networks for marketing purposes is a prerequisite for most companies to operate successfully. The adaptation of the legal framework, especially tax regulations, to the emergence of the aforementioned social networks and general digitalization is becoming the focus of tax legislation in the countries of the European Union and the world. The tax on digital services represents both an opportunity for tax authorities and a threat for today's largest companies. The estimated billions of dollars in revenue that this tax is expected to bring to state budgets speak to the importance of creating appropriate legal regulations. The responsibility for transforming the tax system adapted to the times of physical business into the tax system of the digital age lies primarily with the multilateral efforts of OECD member countries. As shown in the paper, any unilateral measure taken by one state inevitably leads to restrictive responses from other states and consequently stifles the free market. Consequently, any unilateral measure must be short-term, as an interim solution until the OECD establishes a full tax framework that incorporates the ideas presented of a virtual permanent business entity and changes in the application of transfer pricing. As an appropriate short-term solution, inspired by the examples of the United Kingdom and the Republic of France, and in line with the recommendations of the European Commission, the introduction of a tax on revenues from digital services

is proposed. Such a solution is unilaterally implementable, requires minimal intervention in the legal framework, raises revenue quickly, and is simple to apply. The concept of virtual permanent business entity is a complex tax law institute, the introduction of which requires a clear answer to the question of value creation and the existence of a significant economic presence.

Who creates value in the digital economy and who is more important in the production chain, the consumers or the producers? So far, we have not found an objective answer to this question, but we can conclude that the countries where digital companies are headquartered will have a different position than the countries where these digital companies operate remotely. Significant economic presence, on the other hand, is a digital age concept that will grow in importance over time. Consensus at the international level is necessary to ensure stability for the increasingly numerous and growing digital enterprises.

The authors set up two research questions for their research. The answer on first research question: What is the appropriate way to tax digital services was given through the researched literature regarding taxation of digital services and through examples of Republic of France, UK and Republic of India. Authors can conclude that they are taxing revenues achieved through provided digital services to citizens of their country. Therefore, based on the good practices of examined countries authors conclude, as answer on the first research question, that taxation of digital services should be based on the revenues from these services. In order to answer on the second research question: Is it possible to implement fair taxation of digital services, authors believe that it is hard to comprehend all the problems and solutions on them in order to implement completely fair and objective tax on digital services for all the companies and all the countries, especially if this tax will be implemented internationally.

If we look at the whole issue of taxation of digital services, we can see that this is currently the most important global tax issue. The priority is to create solid foundations, but also to allow the tax system to be flexible and self-developing. Rigid rules and the development of technology are not compatible, but the tax system must provide a complete framework that enables the development of the digital economy, but also allows states a fair share of the revenues generated. As a member of the European Union, Croatia has incorporated all applicable rules on taxation of digital services and trade into its tax system. As for additional taxation of the digital economy, Croatia has the option to wait for a solution at the international level or to introduce the tax unilaterally. Before unilaterally introducing it, Croatia should conduct an analysis and weigh what is best to do, considering many factors, e.g., through an existing or new law. With high thresholds for the application of the tax, as is the case in some countries, there may be no taxpayers in Croatia at all. One option would be to introduce more thresholds, i.e., create tax brackets or earmark the new tax - this would somewhat reduce taxpayer outrage over the new tax. In any case, Croatia should have exercised caution in defining and implementing laws and simultaneously linking the tax and IT professions. The impossibility of reaching a unified solution for the taxation of the digital economy at the level of the European Union, as well as the failure of an international consensus solution at the level of the OECD and even threats of trade wars show how sensitive this issue is.

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MODELIRANJE ELEMENATA PRELOMNE TAČKE U FUNKICIJI PROGRAMIRANJA OPTIMALNE POSLOVNE STRATEGIJE PRIMJER ERGELA "VUČIJAK" PRNJAVOR

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Sažetak: *Preduzeće kao sistemska kategorija osnovano je sa ciljem prekomponovanja ulaznih u izlazne veličine, gdje je osnovni zadatak izlaznih veličina je upravo da svojim svojstvenim karakteristikama zadovolje odgovarajuće, tržišno izražene, ljudske potrebe. U svakoj fazi svoga postojanja poslovni sistemi moraju, integrisanim upravljačkim naporima, da suptilno balansiraju odnosom ulaza i izlaza u procesu reprodukcije, bilo da slijede ekonomičnost, produktivnost i/ili rentabilnost poslovanja, na način da naprijed pomenuti bazični principi budu utkani u njihovo poslovanje. Svako preduzeće ima specifičan koncept u pogledu načina rada, organizacije poslovanja, obima i strukture djelatnosti, ali svi poslovni sistemi kvalitet poslovanja iskazuju i mjere odnosom rezultata poslovanja i ulaganja u njihovu realizaciju. Problem brojnih poslovnih sistema leži u činjenici preopterećenosti troškovima poslovanja čime se onemogućava adekvatno tržišno pozicioniranje. Konkurentska prednost zahtijeva optimalan odnos između rezultata i ulaganja u poslovnom sistemu, kroz maksimiziranje vrijednosti izlaza kroz prihode i/ili minimiziranje vrijednosti ulaza kroz troškove. Poslovne odluke u kompanijama se uglavnom zasnivaju na tokovima troškova i poznavanju njihovih kretanja. Imajući na umu da su ciljevi kompanije da prilagode svoju proizvodnju na način da ostvare najniže moguće troškove, ostvarujući konkurentsku prednost na taj način, možemo da uvidimo posebno interesovanje menadžemnta za praćenje tokova troškova te na osnovu tih informacija i saznanja da baziraju svoje poslovne odluke. Sve odluke menadžmenta a koje ne uključuju saznanje o tokovima troškova može da bude fatalna za kompaniju. Shodno tome, benifiti koje kompanija ima od praćenja tokova trškova su prije svega osvajanje novih tržišta i konkurentsko pozicioniranje na postojećem tržištu. Na ovaj način kompanije održavaju kontinuiran rast i razvoj. Cilj ovoga rada jeste da se ukaže na značaj upravljanja troškovima poslovanja, analitički okvir za njihovu racionalizaciju, te uključivanje dobijenih rezultata na problemima određivanja optimalnog obima poslovne aktivnosti proizvodnih preduzeća na konkretnom primjeru.*

Ključne riječi: *modeliranje, prelona tačka, optimalna strategija.*

JEL klasifikacija: *D0, C1.*

UVODNA RAZMATRANJA

Poznata je činjenica da su prihodi, kao rezultati tržišne realizacije, determinisani bazičnim tržišnim zakonima ponude i tražnje, pri čemu se gotovi proizvodi prodaju, ali i ulazni elementi proizvodnog procesa nabavljaju po cijenama koje diktira tržište. Pored toga, važno je naglasiti da tržišni uslovi vrijede za sve poslovne sisteme. Osnovni pokazatelj poslovnog rasta preduzeća je povećanje prodaje. Rast prodaje se postiže pomoću različitih strategija niskih troškova. (Uremović, 2021) Fizički utrošene vrijednosti elemenata proizvodnje predstavljaju fizičke troškove koji se zovu utrošci. Pošto se u robno-novčanoj provredi vrijednost izražava u cijena, kao tržišnim oblikom vrijednosti, to se pod troškovima podrazumjevaju cjenovno iskazane vrijednosti utroška. (Sorak, 2015)

Suprotno prihodima, troškovi u kompaniji, između ostalog, imaju karakteristiku zakonitosti ponašanja tj. njihovo ponašanje može sa preciznošću da se utvrdi i predvidi. Poznavanje kretanja troškova u kompaniji a koje zahtjeva poznavanje karakteristika poslovnog sistema omogućava postozanje ciljeva kompanije. Ostvarivanje poslovnih ciljeva uveliko ovisi o optimizaciji i adekvatnoj strukturi poslovanja. Postizanje optimalnog odnosa između ulaganja u poslovanje i rezultata poslovanja ima svoje pozitivne posljedice u vidu adekvatnog pozicinorinja na tržištu, izgradnju lojalnog odnosa sa potrošačima i kupcima kao i poslovnim partnerima.

Izbor područja djelovanja zahtijeva da se opredjeli razvojna strategija koja omogućava ostvarivanje poslovnih ciljeva koji svoju realizaciju doživljavaju u turbolentnoj tržišnoj areni.

Promjenljivost sklonosti, ukusa i zahtijeva potrošača, prisustvo i sve egzagtnija borbenost konkurenata, ograničenost sredstava namjenjenih potrošnji korisnika, društveno – ekonomski standardi i ostali faktori poslovanja, otežavaju napore poslovnih sistema u kontekstu tržišnog pozicioniranja. Jedini saveznik u borbi za opstanak preduzeća jeste uvećavanje intelekualnih resursa, gdje svakako prednjači poznavanje razvojnog toka troškova poslovanja i njihovo uključivanje u preduzetnički koncept, kako bi se postigao, održao i permanentno uvećavao poslovni rezultat.

CILJ ISTRAŽIVANJA

Cilj istraživanja u ovom radu jeste da se ukaže na značaj upravljanja troškovima poslovanja, analitički okvir za njihovu racionalizaciju, te uključivanje dobijenih rezultata na problemima određivanja optimalnog obima poslovne aktivnosti proizvodnih preduzeća na konkretnom primjeru.

PRETHODNA ISTRAŽIVANJA

Nema sumnje da je strategija troškovnog liderstva najznačajnija za ostvarivanje i očuvanje konkurentske prednosti. Suština strategije troškovnog liderstva ogleda se u održavanju trajne ili što trajnije konkurentske prednosti proizvodnjom učinaka (proizvoda i/ili usluga) koji su po kvalitetu i funkcionalnim karakteristikama slični konkurentskim, ali sa nižim troškovima, nižom cenom koštanja i koji se mogu prodavati po nižim prodajnim cenama u odnosu na učinke konkurentskih preduzeća. (Malinić, 2010)

Troškovno vodstvo u prvi plan stavlja troškove poslovanja. Cilj navedene strategije je nadvisiti konkurente u proizvodnji proizvoda i usluga najnižim troškovima. Budući da su troškovi poslovanja rezultat produktivnosti proizvodnje, distribucije i cjelokupne „administracije" poduzeća te čine kategoriju na koju poduzeće može utjecati, upravo oni predstavljaju najbolju osnovu poveüanja poslovnog rezultata odnosno profita. (Mikić, 2009)

Analiza prelomne tačke podrazumeva ispunjenost sledećih pretpostavki: 1. Svi troškovi koji nastaju imaju ili isključivo fi ksne ili isključivo varijabilne karakteristike. 2. Prodajne cene, apsolutan iznos fiksnih troškova, varijabilni troškovi po jedinici i proizvodni asortiman su nepromenljivi u svim periodima analize. 3. Nivo zaliha je konstantan (proizvodnja je jednaka prodaji). U praksi, ove pretpostavke su retko ispunjene. (Stanišić N.., 2014)

Ispitivanje ishoda poslovnih procesa u praksi moguće je korištenjem metodologije modeliranja, pri čemu se kao efikasne tehnike koriste matematičko programiranje u funkciji optimizacije utroškla materijala i planiranja termina aktivnosti u funkciji poslovne izvrsnosti (Landika, Šupuković, & Jakupović, Schedulding of activities andoptimization of materijal consumption as thefunctio of improving quality and developing buisiness system, 2017), metode faktorske analize neekonomskih faktora motivacije (Landika, Aleksić, Kondić-Panić, & Peulić, 2022) kao značajan faktor efikasnog upravljanja, modela simulacije u funkciji predikcije cenzurisane tražnje (Landika, Uremović, & Aleksić, Simulation Models in the Functin of censored demand management of Higher education processes in the era of digitalization, 2021), teorije matričnih igara na problemima adekvatnog tržišnog pozicioniranja (Landika, Aleksić, & Jakupović, Matrična forma formulacije poslovno - matričnih opredjeljenja u uslovima vanredne situacije COVID 19, 2021).

ANALIZA TROŠKOVA U FUNKCIJI MENADŽERSKOG ODLUČIVANJA

Proces proizvodnje, u savremenim uslovima privređivanja podrazumijeva:

1. Uspostavljanje kapaciteta, što je oblik pripreme proizvodnje, izražen u angažovanju sredstava za rad.
2. Oganizovanje korištenja proizvodnih mogućnosti uspostavljenih kapaciteta, predstavlja pokretanje korištenja mogućnosti konkretnog sistema.
3. Proizvono izvršenje podrazumijeva nastajanje proizvoda, čijom se realizacijom može reprodukovati ukupno ulaganje elemenata proizvodnje.

Na toj osnovi troškovi se klasifikuju na: (Berberović & Stavrić, 1982)

- **Fiksne troškove** – uslovljeni su instaliranim kapacitetom
- **Mješovite troškove** – uslovljene organizacijonom strukturom korištenja kapaciteta i
- **Varijabilne troškove** – uslovljeni proizvodnim izvršenjem.

Za obavljanje privredne djelatnosti preduzeće mora trošiti sredstva i predmete rada,tuđe usluge i ljudsku energiju, pritom treba paziti na troškove kako bi se održala profitabilnost. (Landika M, 2022) Efikasno upravljanje poslovnim sistemima zahtijeva njihovo razlaganje na varijabilni i fiksni dio ili, zavisno od njihovog pretežnog karaktera, razvrstavanje pojedinih ukupnih iznosa među varijabilne ili među fiksne

troškove. Time bi se troškovi sveli na funkciju koja je realna samo u okviru uskih zona zaposlenosti kapaciteta. Svi kriterijumi klasifikovanja troškova zasnovani su na potrebi upravljanja ovim podsistemom ukupnog ekonomskog sistema, u smislu djelovanja na njihovu veličinu, strukturu i dinamiku. (Stavrić B Š. B., 2006)

ANALIZA PRELOMNE TAČKE U FUNKCIJI MENADŽERSKOG ODLUČIVANJA

Rezultat poslovnog ishoda je, u svojoj suštini, predstavljen vrijednosim ishodima i kombinacijom različitih elemenata koji utiču na poslovni rezultat na konkretnom konkurentskom tržištu. Postavljeni ciljevi, da bi bili ostvarivi, moraju da budu mjerljivi te njegovi rezultati moraju da se vrednuju. Rast, razvoj, pa na kraju krajeva i sama održivost poslovnih subjekata se mejri na osnovu nivoa ostvarivanja tih postavljenih menadžerskih ciljeva.

Poslovni subjekti predstavljaju složen sisteme u smislu praćenja svih stavki koji utiču na poslovne rezultate i njihovu određenost mnoštvom faktora koji uslovljavaju funkciju krivolinijskog karatera ukupnih prihoda i troškova. U smislu brzine analize u kratkoročnom posmatranju prihoda i troškova i orijentacija na različite elemnte korištenja posmatranih kapaciteta, implicira na linearno posmatranje kretanja prihoda i troškova.U tom smislu, po Stevanoviću, navedene pretpostavke donose brojne prednosti: (Stevanović, Sistemi obračuna troškova, 2007)

- Brz prikaz ukupnih troškova u odnosu na prihode a što omogućava alternativne menadžerske aktivnosti;
- Granični troškovi i prihodi se izjednačavju sa prosječnim varijabilnim troškom tj. sa cijenom u prodaji;
- Zaustavljanje dodatnih prosječnih troškova, i sprječavanje smanjenja prosječnih prihoda pri visokim stepenima zaposlenosti, čime se poslovanje poslovnog sistema odvija u okviru raspoloživog kapaciteta, odnosno.

Izučavanje zakonitosti ponašanja troškova pokazuje da se smanjivanjem stepena korištenja kapaciteta ne mogu u istoj srazmeri smanjiti i troškovi elemenata proizvodnje. (Stavrić B Š. b., 2006) Prag rentabilnosti ili prelomna tačka predstavlja menadžerske aktivnosti sa ciljem da se prihodima od prodaje proizvoda ili usluge pokriju svi fiksni troškovi poslovanja. Značaj prelomne tačke se ogleda u tom što kompanije izlaze iz zone poslovanja u gubitku. Sa aspekta menadžerskog odlučivanja, određivanje praga rentabilnosti ide u pravcu njezine vrijednosne (PTv) ili količinske (PTk) identifikacije, a priklanjanje ponuđenoj altenativi opredjeljuje niža vrijednost prelomne tačke.

Točka rentabiliteta se može odrediti na dva načina, računski i/ili grafički, i to:

Vrijednosno izražena točka rentabiliteta, a koja je pogodna za primjenu u multidivizionim kompanijama ili podsistemskim kategorijama koji su nosioci navedenog karaktera, određuje se na sledeći način: (Stevanović, Osnove upravljačkog računovodstva, 1999)

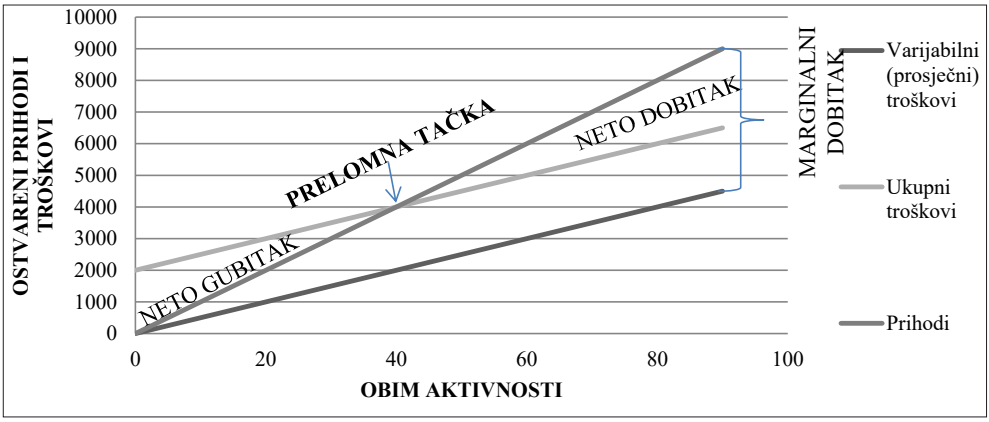
$$PTv = \frac{fiksni\ troškovi\ perioda \cdot 100}{100 - stopa\ varijabilnih\ troškova}$$

gdje je stopa varijabilnih troškova procentni udio varijabilnih troškova u ostvarenom prihodu. Dobija se dijelenjem varijabilnih troškova i ukupnih prihoda preuzetih iz bilansa stanja i njihovo prevođenje u procente.

Količinski izražena prelomna tačka, podesna za primjenu samo u monoproizvodnim poslovnim sistemima ili podsistemskim kategorijama navedenog karaktera, određuje se na sledeći način: (Stevanović, Osnove upravljačkog računovodstva, 1999)

$$PTk = \frac{fiksni\ troškovi\ perioda}{kontribucioni\ (marginalni) dobitak\ po\ jedinici\ proizvoda}$$

Grafički prikaz prelomne tačke ilustruje se na sledeći način:



Slika 1. Grafički prikaz prelomne tačke

Izvor: (Stevanović, Osnove upravljačkog računovodstva, 1999)

Sa aspekta aktivnog upravljanja elementima poslovnog rezultata važno je imati u vidu da obim ostvarenih prihoda (ili obima) ispod prelomne tačke označava poslovanje u zoni gubitka, a iznad nje u zoni pozitivnog poslovnog rezultata – dobitka.

Racionalisanje poslovnim tokovima omogućava odstupanja od planirane realizacije, pri tome je korisno znati kolika je zona tolerancije u pogledu ostvarivanja prihoda od prodaje, bez opasnosti od ulaska u zonu gubitka. Marža sigurnosti (MS) ukazuje na navedeni aspekt poslovanja, a određuje se na sledeći način: (Stevanović, Osnove upravljačkog računovodstva, 1999)

$$MS = \frac{planirani\ obim\ aktivnosti - obim\ prelomne\ tačke}{planirani\ obim\ aktivnosti} \cdot 100$$

Dolaženje do informacija o vrijednostima na nivou tačke rentabiliteta, kao i marže sigurnosti neophodno je uključiti u proces menadžerskih odlučivanja, što je posebno podesno za izbor poslovnih alternativa.

ANALIZA TROŠKOVA POSLOVNIH ALTERNATIVA U FUNKCIJI OPREDJELJENJA RAZVOJNE STRATEGIJE U ERGELI KONJA „VUČIJAK“

Ergela konja „Vučijak“ organizovana je kao uslužno – rekreativni centar na teritoriji opštine Prnjavor. Poslovna orijentacija odnosi se na pružanje usluga rekreativnog bavljenja konjičkim sportom, ali i mogućnost profilisanja i osposobljavanja profesio-

nalnih sportista.

Infrastruktura preduzeća odnosi se na pašnjake, staze za jahanje i prostorije za smještaj/boravak grla, kao i upravljačke zgrade.

Djelatnost se odnosi na pružanje usluga:

- Rekreativnog jahanja (x_1);
- Revijalnog jahanja (x_2) i
- Terenskog jahanja (x_3).

Kako bi komparacija ponuđenih opcija bila adekvatno provedena, potrebno je razviti metodu generisanja poslovnog rezultata na bazi planiranih bilansnih pozicija, što prikazujemo u sledećoj tabeli:

Tabela 1. Projekcija poslovnog rezultata na bazi planskih premise

ELEMENTI	ALTERNATIVA 1	ALTERNATIVA 2
I PRIHOD OD PRODAJE (1+2+3+4+5+6+7)	30.410	1.095.554
1. Stalni članovi	17.100	17.100
2. Mjesečne članarine	11.250	11.250
3. Terensko jahanje	1.800	1.800
4. Revijalno jahanje	260	260
5. Fakultativne posjete osnovne škole		37.900
6. Fakultativne posjete srednje škole		22.100
7. Učeničke članarine		1.005.144
II TROŠKOVI PRODATIH PROIZVODA (1+2+3+4)	829.776	829.776
1. Ishrana i smještaj konja	600.000	600.000
2. Plate radnika	206.376	206.376
3. Vakcinacija i zaštita grla	23.400	23.400
III TROŠKOVI PERIODA	6.000	6.000
1. REŽIJSKI TROŠKOVI	6.000	6.000
IV UKUPNI TROŠKOVI REALIZOVANIH PROIZVODA (II+III)	835.776	835.776
V REZULTAT (I – IV)	-805.366	259.778

Izvor: (Landika & Uremović, Istraživanje i analiza, 2022)

Projektovane bilansne pozicije uvažavaju planske pretpostavke, a poslovni rezultat ponuđenih upravljačkih opcija, dobijen u projektovanom bilansu uspjeha, realna je i relevantna osnova opredjeljenja poslovnog ponašanja, odnosno izbora razvojne strateške alternative. Poslovni rezultat kod upravljačkih opcija označenih kao ALTERNATIVA 1, odnosno ALTERNATIVA 2.iznosi – 814.326, odnosno 259.778 BAM, što jasno ukazuje na izbor poželjnije upravljačke opcije, sa ovog aspekta, a to je ALTERNATIVA 2.

Ponuđene upravljačke opcije i projektovane bilansne pozicije omogućavaju pripremanje elemenata za proračun prelomne tačke, kao što je prikazano u sledećoj tabeli:

Tabela 2. Kalkulacija elemenata za potrebe određivanja prelomne tačke

ELEMENTI	ALTERNATIVA 1	ALTERNATIVA 2
1. PRIHOD OD PRODAJE	30.410	1.095.554
2. VARIJABILNI TROŠKOVI	623.400	623.400
3. KONTRIBUCIONI (MARGINALNI) DOBITAK	-592.990	472.154
4. FIKSNI TROŠKOVI	212.376	212.376
5. NETO DOBITAK	-805.366	259.778
6. STOPA VARIJABILNIH TROŠKOVA	2049,98%	56,90%
7. STOPA KONTRIBUCIONOG (MARGINALNOG) DOBITKA	0,00%	43,10%

Izvor: (Landika & Uremović, Istraživanje i analiza, 2022)

DISKUSIJA REZULTA

Poznavanje povezanosti i uslovljenosti pojedinih relevantnih faktora kojima se opredjeljuje strateška alternativa doprinosi efikasnosti poslovanja, te upućuju na sledeće: (Landika & Uremović, Istraživanje i analiza, 2022)

- Dosadašnja praksa donošenja poslovnih oduka u pogledu izbora poslovnih alternativa nije iskoristila svoje potencijale u pogledu eksploatisanja poslovnog rezultata zasnovanog na poznavanju i uvažavanju troškova realizacije koji doprinosi nivou poslovne efikasnosti, posebno u manjim poslovnim sistemima, gdje je prisutno tradicionalno odlučivanje na bazi iskustva;
- Projektovani bilans uspjeha ukazuje na visinu neto dobitka ponuđenih poslovnih alternativa, čijom komparacijom menadžment ima informacionu podlogu za strateškeo odlučivanje. Poslovni rezultat prve alternative iznosi – 814.326 BAM, a druge 25.674 BAM. Značajno veći dobitak prizilazi iz značajnog povećanja prihoda od prodaje (1065144 KM), bez dodatnih ulaganja;
- Nivo ostvarene realizacije potreban za izlazak iz zone gubitka kod druge alternative iznosi 492.751 BAM , dok kod prve nije moguć (poslovanje je u zoni gubitka). Vremenski okvir za izlazak iz zone gubitka kod druge alternative je 2,32 mjeseca, odnosno kalendarski se podudara sa sredinom mjeseca maja. Kalkulisani elementi projektovanog bilansa uspjeha, kao i prelomne tačke ukazuje na strateško opredjeljenje za drugu alternativu;
- Nivo tolerancije u odnosu na planirani obim realizacije kod druge alternative iznosi 55,02%. Tolerancija u pogledu mogućnosti smanjenja aktivnosti za 55,02 % bez straha od ulaska u zonu gubitka, omogućava određen komfor u pogledu realizacije pozitivnog poslovnog rezultata.

ZAKLJUČNA RAZMATRANJA

Elementi proizvodnje ulaze u tehnološki ili preobražajni proces kao odgovarajući upotrebni kvalitet u potrebnim količinama. Veličina trošenja elemenata poslovnog procesa zahtijeva racionalan pristup i suptilno balansiranje, posebno u slučajevima kada je potrebno izvršiti izbor upravljačke opcije kroz preraspodjelu raspoloživih ili potencijalno raspoloživih operativnih resursa. Efikasno upravljanje trošenjem elemenata poslovnog procesa zahtijeva da se u plansko – analitički informacioni sistem uključe saznanja o determinisanost troškova realizcije planiranim obimom aktivnosti.

Mnoge poslovne odluke se baziraju na poznavanju ponašanja troškova, kao što su izbor između mogućih razvojnih strategija. S obzirom na činjenicu da je cilj svake kompanije da ostvari minimalne troškove poslovanja a koji pozitivno utiču na konkurentsko pouzicioniranje, menadžment je dužan da prati kretanje troškova te na taj način utiče na cijenu svojih proizvoda ne utičući na postavljeni kvalitet. Opšte je poznata zakonitost da niža cijena proizvoda implicira veću potražnju za istim a samim tim i veći obim proizvodnje i prodaju. Praćenje tokova troškova menadžemnt mora da uključi u proces donošenja poslovnih odluka. Svako zanemarivanje tokova troškova može dovesti do donošenja pogrešnih ili čak katastrofalnih poslovnih odluka a koje negativno utiču ne samo na rast i razvoj kompanije nego i na njeno održivo poslovanje.

Modelirane upravljačke informacije omogućavaju racionalno prosuđivanje o poslovnim šansama i njihovim alternativama oslobađajući menadžment od poslovnih iluzija. Pozitivna stopa promjene poslovnog rezultata proizilazi iz formalizacije poslovnog sistema adekvatnom metodologijom, uključivanja relevantnih troškova u projektovane bilansne pozicije ponuđenih strateških opcija.

Projektovani rezultati prilagođavaju se konkretnom poslovnom sistemu, njegovim poslovnim šansama i njihovim alternativama, ali se uz odgovarajuću adaptaciju mogu i trebaju primjenjivati u svim poslovnim sistemima, posebno u maim i srednjim preduzećima gdje je ovaj aspekt vidno zapostavljen.

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MODELING OF BREAKING POINT ELEMENTS IN THE PROGRAMMING FUNCTION OF OPTIMAL BUSINESS STRATEGY EXAMPLE OF ERGEL "VUČIJAK" PRNJAVOR

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Summary: *The company, as a system, was founded with the objective of transforming input sizes into changed output sizes, where the primary task of output sizes is precisely to meet the appropriate, market-expressed needs, desires, preferences, and expectations of consumers with their unique characteristics. Throughout their existence, business systems must balance the ratio of inputs and outputs in the reproduction process through integrated management efforts, aiming to achieve economy, productivity, and profitability. This balance is essential to ensure that the basic principles are an integral part of their business. Each company has a specific concept regarding its way of working, organization, scope, and structure of activities. However, all business systems express and measure the quality of their business by comparing the ratio of business results and investments in their realization and reproduction. The problem facing many business systems lies in overloading, often economically unjustified, business costs,*

which prevents adequate market positioning. One crucial factor affecting a company's competitive advantage is the price of its finished products. The final price of a product is controlled by the company, depending on its desired profit margin, and can be influenced by reducing the price of the finished product at the expense of potential profit. Another way for a company to influence the price of its finished product is through effective cost management. Competitive advantage requires an optimal balance between results and investments in the business system, achieved by maximizing output value through revenues and/or minimizing input value through costs. Every company aims to produce a unit of product at the lowest possible cost or at least not more expensive than the competition. Therefore, company management is expected and required to carefully monitor cost behavior and incorporate this knowledge into its business decisions. Lack of knowledge about cost behavior can lead to serious problems for a company. Understanding cost behavior and flow can enable company management to create a successful business that not only maintains its existing state but also develops and grows. The goals of this paper are to highlight the importance of managing business costs, provide an analytical framework for their rationalization, and include the obtained results in determining the optimal volume of business activity for manufacturing companies on a concrete example. This work is based on scientific knowledge about costs and aims to demonstrate models of different business alternatives and include information about costs in the decision-making process.

Key words: *modeling, turning wheel, optimal strategy*

JEL classification: *D0, C1*

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PREGLEDNI NAUČNI RAD / OVERVIEW SCIENTIFIC PAPER

COMPETITIVENESS AND BUSINESS EXCELLENCE OF LARGE CROATIAN COMPANIES WITH A SPECIAL FOCUS ON STOCK MARKET VALUE

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Abstract: *Competitiveness is one of the most significant challenges faced by companies to position themselves in the market and achieve excellence, thereby differentiating themselves from the competition. The Republic of Croatia is a developing country with a majority of small companies in its company structure. In terms of profits and employee numbers, large companies dominate the industry and economy as a whole. This paper aims to provide a theoretical basis and investigate the structure of companies in the Republic of Croatia, with a special focus on large companies listed on the stock exchange. Large companies are the carriers of the economy and have a significant influence on industry and investors who invest in stocks. The paper is based on stock trading data from the Zagreb Stock Exchange, with a special review and analysis of companies listed on the leading market. The results show the price range and business scope of the observed shares. Limitations of the research include a small sample size for the leading stock market and geographical limitations due to Croatia's small market size. Future research should include an analysis of other companies listed on the stock exchange, as well as a comparison of large companies and stock market operations with countries in Eastern Europe and the European Union. Large companies have a significant impact on global economies, and this study's findings can contribute to a better understanding and increased participation by stakeholders and potential investors in company operations available on the stock exchange.*

Key words*: Competitiveness, Development, Enterprise, Stock, Investment.*

JEL classification: *L26, O16.*

INTRODUCTION

Achieving competitiveness and business excellence is one of the biggest challenges for companies in today's global economy. Due to various external macroeco-

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nomic factors, such as the COVID-19 pandemic, the introduction of the euro as a new currency, and the war in Ukraine, companies in Croatia have had to make important strategic decisions over the past few years to reduce their impact or use these challenges as opportunities for further development. Achieving excellence in such an uncertain environment is a real challenge for companies. Croatia is one of the post-transition economies that recently joined the European Union. Over the past few decades, Croatia has experienced an economic transformation emphasizing free market structures. This transformation was accompanied by privatization and development of the financial system. With rising efficiency of financial intermediaries, the stock market has experienced significant growth, making it an important issue for scholars and practitioners (Novak, 2021).

In order to achieve a unique market position and achieve excellence, it is necessary for companies to have an organized system of successful strategic action, as well as strategic management of the costs and finances of the company globally.

In the overall structure of companies in the Republic of Croatia, small companies dominate numerically, but with regard to the number of employees, average net salaries, as well as business results and scope of operations, large companies dominate, with special reference to companies that are listed and issue their shares on the Zagreb Stock Exchange. This work provides a theoretical overview of the role of large companies and a view of their development from different author's perspectives. The second goal of the work is to present and analyse the state and level of stock market operations on the domestic stock exchange.

LITERATURE REVIEW

The goal of the company's strategy is to improve operations and achieve a competitive advantage in new market conditions. The characteristics of modern business that are becoming more and more pronounced and have an increasing influence on the company are: new trends, globalization, market positioning, market share, turbulent market, etc. The roles of strategy in the company are: accurate and quick judgment of a certain situation, analysing facts in order to identify opportunities and threats in the company's environment, as well as strengths and weaknesses in the company, recommend specific courses of action, and sharpen analytical skills, as well as connect theory and practice and improve communication skills. A company achieves a sustainable competitive advantage when an attractive number of customers prefer its products to those of the competition and when the basis of these preferences is permanent.

For a company, one of the most important indicators that enable development and prosperity in the future are investments. In today's economy, more and more emphasis are placed on intangible values, and this paper analyses the importance of investing in shares, and how the level of investment can affect the growth and development of a company. In the rest of the text, an overview of previous research related to stock market operations, innovations, strategies, and the competitiveness and excellence of companies is given.

According Szabo and Bihary paper research and brings conclusion for long term period that holding stocks is more profitable and better option than holding money on bank account (Szabo & Bihary, 2023.). Nametala et.al. explore that artificial intelligence has an increasing influence and importance in defining and implementing strat-

egies related to stock markets. Artificial intelligence is a growing trend in the world and according to this work it should be considered that the predictors of the classical form of business and modern factors based on the application of artificial intelligence differ. (Nametala, 2023.) According Lepori's paper an account is given of how ilness of employees of stock exchange institutions have an impact on the final business result, success and excellence of operations. Research is conducted on New York professionals. (Lepori, 2023.) Liang, Williams & Chong Xiao in the paper analyses and conducts research on the impact of innovations on the supply chain in stock markets. „Market signals about customers appear more important when information asymmetry is greater, when suppliers face greater competitive threats, and when suppliers are financially unconstrained." (Liang, Williams, & Chong Xiao, 2021.) Yarba & Yassa made next research elements: „this paper investigates investment behaviour across public and privately held firms using a novel firm-level dataset. The results reveal that stock market listing spurs growth significantly in terms of sales, employment and assets for manufacturing firms." (Yarba & Yassa, 2022.) According Xie et. al. "paper provides evidence on the role of foreign analysts in improving the informativeness of stock prices for corporate managers. Cross-sectional analyses indicate that the positive effect of foreign analysts on managerial learning is more pronounced for firms in developed economies, firms with better financial positions, firms in less competitive industries, and firms with less foreign ownership." (Xie, 2022.)

According Ozkan the „role of expected growth is assumed to have a positive relation with expected stock returns." The main goal of this paper is to research influence of expected investment growth on stock returns. (Ozkan, 2021.) Caneo and Kristjanpoller in their paper research that „largest eigenvalue is clearly dominant and that its associated eigen portfolio presents a co-movement with the market while the number of dominant components is contrary to market volatility." (Caneo & Kristjanpoller, 2019.) Huang and Fang in their paper are focused on heterogeneity and investments of corporations. According their paper and research conclusion is that „rationally valued stocks, corporate investment is positively correlated with valuation and has no consistent relationship with market sentiment." Because of that changes in market sentiment can make reduction of the reliance of managers' investment decisions on valuation. (Huang & Fang, 2021.)

According Thakurata the core of research was optimal portfolio choice in developing countries, based on stock market entry costs and on the other side human capital investments. (Thakurata, 2021.) De Franco in paper Stock Picking in the US Market and the Effect of Passive Investments conduct research in order to „provide evidence about the alleged structural changes in the US equity markets that have dramatically reduced the potential for stock picking strategies to work. Greater competition and ease to trade have made investors eager to revisit their choice of manager (overall a positive thing) but also to chase past winners." (De Franco, 2021.)

According Chhimwal, Bapat. & Gaurav retail domestic investors prefers small cap stocks and enterprises which require lack knowledge. „In addition, industry heterogeneity determines investment decisions. Firm-specific and macroeconomic factors that influence investment decisions differ across industries. Finally, government policies and reforms also play a key role in attracting investors." (Chhimwal, Bapat, & Gaurav, 2021.) Achleitner et. al. present empirical evidence about investments of two

of most relevant investment areas of world, Germany and Hong Kong. Findings of this paper are „mainly attributable to industrial policies pursued by Chinese and Gulf investors, which mirror the different political and economic goals in these two regions." (Achleitner, 2021.) According Khan et. al. all development and modernisation decisions of enterprise should be based on level of investments. (Khan, 2021.)

Li, Wang and Yu in their paper research topic of expected growth of investments and their returns on stock market. They analyse investment plans, growth, market return, investments based on neoclassical model. (Li, Wang, & Yu, 2021.) Artikis et. al. in their paper named „Asset Growth and Stock Returns in European Equity Markets: Implications of Investment and Accounting Distortions" investigate effect of company growth on stock market (based on balance sheets). Authors found that investment growth is higher in countries with higher market efficiency. (Artikis, 2022.) Parveen et. al. in their paper research cognitive biases of enterprises (managers and entrepreneurs) that influence the decisions of the investors in the stock market. (Parveen, 2020.)

According Alhassan and Naka stock liquidity is one of most important elements that determines stock investment. (Alhassan & Naka, 2019.) Shahbaz et. al. made research green economy and stock prices, based on parameters of energy and stock market. Clean energy and sustainable development should be in modern days important parameter for each business. (Shahbaz, 2021.) Wang in his paper „investigates the role of stock market valuation and cross-country arbitrage in shaping foreign direct and indirect investments, contingent upon a country's stage of development." (Wang, 2019.)

METHODOLOGY

The research methodology refers to the analysis of trading in company securities on the Zagreb Stock Exchange. The Zagreb Stock Exchange has existed informally since June 15, 1907, when it operated as part of the then Chamber of Commerce under the name 'Section for Securities and Commodity Trading' and achieved excellent results already in the first week of operation. In the area of trade, there are three types of markets offered: leading. Official and regular market. In the area of trading, the stock exchange offers several types of securities, including the following: equity securities (shares and certificates of deposit), ETFs, debt securities (bonds: municipal bonds, corporate bonds; money market instruments), and structured products (index certificates and turbo certificates). With regard to trading models, the stock exchange offers: continuous trading modality, trading modality for low liquid stocks, modality. continuous auctions, auction modality, block transaction, OTC transaction).

In the area of securities trading, for research purposes, all types of securities are analysed in two trading modalities: CT Continuous trading modality and CTLL Trading modality for low-liquid stocks.

RESULTS AND DISCUSSION

This research deals with the fundamental indicators of operations on the Zagreb Stock Exchange. The Zagreb Stock Exchange has a long tradition, but considering the size of the market, there is not a very large number of companies on it, and many of those on the stock exchange are not traded at all. In the continuation of the paper, a table with the basic indicators of the stock market turnover is presented first.

Table 1. Turnover statistics in million Euro

Period	Equity Instruments	Debt Instruments	Structured Products	EFT	Total Turnover	No. of Trades
2023-04	82,80	8,47	0	2,00	93,27	26,696
2022	366,01	16,59	0	10,14	392,74	81 722
2021	300,85	30,21	0	6,02	337,08	91 599
2020	378,44	33,93	0	2,91	415,28	122 103
2019	358,58	38,83	0	0	397,41	108 260
2018	281,58	97,22	0	0	378,80	92 650
2017	426,16	59,56	0	0	485,73	181 205
2016	413,95	92,05	6,89	0	512,89	133 177
2015	364,64	66,74	10,52	0	441,90	177 943
2014	378,45	95,01	11,79	0	485,26	201 607
2013	398,73	76,47	1,19	0	476,39	237 154

Source: Zagreb stock exchange (Zagreb Stock Exchange, 2023.)

Table 1. Shows equity instruments, debt instruments, structured products, EFT (exchange-traded funds), total turnover and number of trades. According to the table, in the observed early period from 2013 to 2023, the number of trades decreases in principle. The highest level of trading was in 2013. The year when the number of recorded trades was 237,154, which compared to 2022 was almost three times the volume of trade. Total turnover was generally at the highest level in the period 2013-2016, and in 2016 it was the highest compared to the observed period. Trading with EFT took place only in the period 2020-2023, and there were no recorded trades in the previous period, structured products were traded only until 2106, after that year there were no trades.

In addition to the amount and statistical indicators on the volume of business, the following table shows the market types and the share of companies by each modality on the Zagreb Stock Exchange. The data refer to the distribution in 2023.

Table 2. Market types and the share of companies in each modality on the Zagreb Stock Exchange

Type of market	Trading modality	Company number	Share in a particular modality (%)
Market leader	CT	6	100%
	CTILL	0	0%
Official market	CT	49	100%
	CTILL	0	0%
Regular market	CT	49	56,32%
	CTILL	38	43,67%

Source: author

Table 2. shows three types of markets on the Zagreb Stock Exchange: market leader, official market and regular market. Market leaders are companies from the stock exchange that have the highest turnover, the largest amounts of business and the best

performance. The official market is the one on which the trading year is regularly conducted, and the regular market is the list of all companies listed on the stock exchange.

In addition to the division of the market, there are also two types of trading, the so-called Trading modality, and it consists of two types: CT (modality of continuous trade) and CTILL (modality for low-liquid shares). CT modality on the leader market is 100%, as well as on the official market. The only difference is on the regular market, where the CT modality makes up 56.32% of companies, while the CTILL modality makes up 43.67% of companies on the stock exchange.

In view of the above, this table confirms the statement that a large part of the companies on the stock exchange is inactive, and that no trade is conducted, which means that on average, only half of the companies on the Zagreb Stock Exchange are continuously traded. In addition to the division and structure of companies that are on the stock exchange, the continuation of the paper also states the division of companies according to the sector classification by industry branches, in the rest of the text follows table 3. Number of companies within the sector according to sector classification.

Table 3. Number of companies within the sector according to sector classification

Sector designation	Sectoral classification	Number of companies within the sector	% of companies in each sector
A	Agriculture, forestry and fishing	1	0,9%
CA	Production of food products, beverages and tobacco products	9	8,1%
CB	Production of textiles, clothing, leather and related products	3	2,7%
CC	Production of wood and paper products, printing	1	0,9%
CE	Production of chemicals and chemical products	1	0,9%
CI	Production of computers and electronic and optical products	1	0,9%
CJ	Production of electrical equipment	1	0,9%
CL	Production of transport equipment	33	30%
F	Construction	3	2,7%
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	5	4,6%
H	Transportation and storage	9	8,1%
I	Activities of providing accommodation and preparing and serving food	19	17,2%
JA	Publishing activities, film and sound recording activities, and program broadcasting activities	1	0,9%
JB	Telecomunications	1	0,9%
K	Financial activities and insurance activities	12	10,9%
L	Real estate business	2	1,8%
MA	Legal, accounting, management, architectural activities and engineering, as well as technical testing and analysis	8	7,2%
R	Art, entertainment and recreation	1	0,9%

Source: author

Table 3. shows 18 different sectors in accordance with the sector classification of activity and the number of listed companies belonging to a certain sector branch. The largest number of companies, 33 of them, belong to the sector CL- Production of transport equipment, followed by sector I- Activities of providing accommodation and preparing and serving food with 19 companies, and the third most represented sector with 12 companies is K- Financial activities and insurance activities. As many as seven sectors count only one belonging company.

In the rest of the text, Tables 4 and 5 are shown, which provide an overview of the stock market indices on the Zagreb Stock Exchange. Table 4 shows the statistics of stock market indices for the period 2021-2023. The stock index of the Zagreb Stock Exchange is Crobex (Crobex, Crobex tr, Crobex prime, Crobex 10, Crobex 10tr).

Table 4. Annual statistics of stock market indices

Period	CROBEX	CROBEX tr	CROBEX prime	CROBEX 10	CROBEX 10tr
2023-04	2.230,85	1.623,72	1.277,05	1.281,93	1.361,42
2022	1.979,88	1.415,96	1.149,64	1.156,15	1.222,39
2021	2.079,35	1.441,05	1.220,29	1.262,31	1.293,33
2020	1.739,29	1.179,89	1.048,11	1.087,81	1.087,33
2019	2.017,43	1.348,37	1.164,17	1.199,89	1.175,42
2018	1.748,81	1.129,13	1.000,00	1.017,07	-
2017	1.842,87	1.161,71	-	1.076,86	-
2016	1.994,84	1.222,89	-	1.158,18	-
2015	1.689,63	1.010,22	-	989,28	-
2014	1.745,44	1.009,78	-	1.007,14	-
2013	1.794,28	-	-	994,85	-
2012	1.740,39	-	-	971,56	-
2011	1.740,21	-	-	976,16	-
2010	2.110,93	-	-	1.154,30	-

Source: Zagreb stock exchange

According to Table 4., only complete data for two indices (Crobex and Crobex 10) are presented on the stock exchange for the period from 2010-2023. The Crobex stock market index had the highest value in 2023.

Table 5 shows the indices and provides an analysis according to sector affiliation of Zagreb stock exchange stocks (Crobex plus, Crobex industry, Crobex construct, Crobex nutris, Crobex transport and Crobex truist). The analysed period is the last ten years, from 2013-2023.

Table 5. Sector indice analysis per year

Period	Crobex plus	Crobex industry	Crobex construct	Crobex nutris	Crobex transport	Crobex turist
2023-04	1.631,48	1.416,78	519,63	771,12	1.578,81	4.036,99
2022	1.360,86	1.048,52	554,21	726,50	1.234,04	3.526,57
2021	1.230,38	1.121,90	478,85	773,75	809,49	3.591,00
2020	1.104,30	950,45	698,94	623,36	-	3.477,97
2019	1.108,73	870.48	432,14	689,01	750,13	3.456,83
2018	947,63	853,81	496,32	498,62	791,07	3.538,52
2017	1.082,17	1.130,91	535,23	470,10	1.280,65	3.623,65
2016	1.181,83	1.192,90	517,70	856,31	1.077,12	3.271,93
2015	969,58	965,06	480,09	782,23	889,38	2.559,02
2014	940,18	910,74	499,03	805,73	1.262,35	2.068,44
2013	987,83	1.106,90	787,26	879,75	1.169,80	1.155,00

Source: Zagreb stock exchange

According to the index of individual sectors from table 5, the most significant and successful stock exchange index is in the tourism sector, ie Crobex turist. The lowest index is the one for the construction sector Crobex construct.

Table 6. below is an overview of market capitalization for the period 2010-2023.

Table 6. Market capitalisation in million Euro

Period	Equity Instruments	Debt Instruments	Total Market Cap	No. of Trades
2023-04	19.622,08	17.890,10	37.520,91	26.696
2022	18.020,30	16.329,87	34.357,65	81.722
2021	18.495,23	17.857,76	36.361,38	91.599
2020	18.230,68	17.722,38	35.956,65	122.103
2019	19.640,78	15.371,70	35.012,48	108.260
2018	17.618,76	13.378,46	30.997,22	92.650
2017	18.349,82	12.983,08	31.332,89	181.205
2016	19.004,43	11.842,48	30.846,92	133.177
2015	16.315,37	10.484,27	27.028,48	177.943
2014	16.084,22	9.995,31	26.161,37	201.607
2013	15.046,03	8.531,20	23.590,77	237.154
2012	16.386,98	8.227,92	24.614,90	273.553
2011	16.756,55	7.186,70	23.943,25	347.220
2010	18.164,86	6.697,40	24.862,27	281.875

Source: Zagreb stock exchange

Table 6. Shows equity and debt instruments, total market capital and number of trades. Market capitalization is constantly increasing over time, while the number of

trades was the highest in 2011.

CONCLUSION

This paper provides an overview and analysis of the main indicators of companies in the Republic of Croatia that are listed on the Zagreb Stock Exchange. Based on the survey, an overview of business on the stock exchange, type and structure of companies according to modality, number and structure of companies according to industrial sector, overview of stock market indices and market capitalization in the period of the last ten years was given. With this research, it can be concluded that a large number of companies are not listed on the Zagreb Stock Exchange, that a large part of the trade is inactive and that there are no transactions. In accordance with the industrial distribution, many branches of industry do not have a representative number of companies, so that it would even be possible to make an analysis of stock market operations according to a particular branch of industry. Therefore, it can be concluded that the main limitations of this work are the small sample of companies and the large share of companies that are listed on the stock exchange but are not active.

In order to be able to obtain more relevant data for more detailed research in the future and future recommendations, it would be good to analyse a larger geographical stock market location, in a way to analyse the stock market operations of several countries in the region or a larger part of Eastern Europe. In order to increase the competitiveness of the entire economy, it is necessary to develop and strengthen both large companies listed on the stock exchange, as well as medium and small ones, through strategic actions, innovation and investment investments.

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PREGLEDNI NAUČNI RAD / OVERVIEW SCIENTIFIC PAPER

DRUŠTVENA ODGOVORNOST U POSLOVANJU: UVIDI U PERCEPCIJE HRVATSKIH POTROŠAČA

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Sažetak: *Europska komisija definira društveno odgovorno poslovanje (DOP) kao odgovornost poduzeća za njihov utjecaj na društvo. Društveno odgovorno poslovanje sve više postaje ključni element suvremenog poslovanja, a naglasak je na integraciji ekonomske, društvene i ekološke odgovornosti u poslovne strategije. U kontekstu razvoja gospodarstva, naglašava se uloga DOP-a u promicanju održivog razvoja iz perspektive korporativne etike i ekološke odgovornosti. U ovom članku se kroz pregled literature, društveno odgovorno poslovanje pojmovno određuje i analiziraju se elementi, područja djelovanja i vrste odgovornosti. Korištenjem kvalitativne paradigme istraživanja (fokus grupe) ovaj znanstveni članak istražuje korelaciju spola, dobi, stupnja obrazovanje i visine primanja na razumijevanje koncepta DOP-a kod hrvatskih potrošača. Ovaj članak također istražuje postoji li preferencija kupnje od određenih trgovačkih lanaca i prodavaonica kozmetičkih proizvoda, a poseban fokus stavljen je na aktivnosti u okolišnoj dimenziji DOP-a i njihovu važnost kod hrvatskih potrošača. Rezultati preliminarnog istraživanja su pokazali da potrošači s višom stručnom spremom i oni mlađi od 45 godina bolje razumije koncept DOP-a a inicijative za okoliš ocjenjuju važnijim nego što to čine oni s nižom stručnom spremom. Hrvatski potrošači, čini se, ne percipiraju društveno odgovorne aktivnosti u području okoliša posebno važnim u odnosu na inicijative u druge dvije dimenzije odgovornosti: društvenoj i ekonomskoj. Rezultati također ukazuju da DOP nije odlučujući čimbenik kada potrošači odabiru prodavaonice.*

Ključne riječi; *društveno odgovorno poslovanje, ponašanje potrošača, trgovina, ekonomska, društvena i ekološka odgovornost.*

JEL klasifikacija*: M14, L81.*

UVOD

Društveno odgovorno poslovanje (DOP) predstavlja koncept u kojem poduzeća dobrovoljno integriraju brigu o društvu i okolišu u svoje operacije (Vrdoljak-Raguž

& Hazdovac, 2014). Neki autori smatraju da DOP treba biti usmjereno k poboljšanju zajednice kroz poslovne prakse i resurse (Kotler & Lee, Korporativna društvena odgovornost, 2007.), dok drugi naglašavaju pažljiv odnos prema dionicima izvan i unutar organizacije, uz očuvanje profitabilnosti (Hopkins, 2006). S obzirom na sve brži razvoj gospodarstva, a kako bi se spriječile negativne posljedice po društvo, DOP postaje ključan u okviru održivog razvoja (Pavić-Rogošič, 2015). Biti društveno odgovoran znači više od ispunjavanja zakonskih obaveza te podrazumijeva stalno ulaganje u okoliš, ljudske resurse, zajednicu i dobavljače. Investiranje u ekološki prihvatljive tehnologije, obrazovanje zaposlenika, unapređenje radnih uvjeta i održavanje dobrih odnosa s dobavljačima može poduzećima donijeti i dodatnu konkurentsku prednost.

Iako dosadašnja istraživanja nude važne uvide o utjecaju DOP-a na potrošače, nije pronađena čvrsta izravna korelacija. Ovo ograničenje proizlazi iz uobičajenih izazova kao što su razumijevanje koncepta DOP-a i održivosti od strane ispitanika te njihova tendencija da odgovaraju na način koji smatraju društveno prihvatljivim. Svrha ovog preliminarnog istraživanja je doprinijeti postojećoj istraživačkoj literaturi o utjecaju DOP-a na percepciju, ponašanje i odluke o kupnji potrošača korištenjem kvalitativne paradigme istraživanja. Konkretni cilj je utvrditi utječu li spol, dob, obrazovanje i primanja na razumijevanje koncepta DOP-a kod hrvatskih potrošača, postoji li preferencija kupnje kod određenih trgovačkih lanaca i prodavaonica kozmetičkih proizvoda te koliko su aktivnosti u okolišnoj dimenziji DOP-a važne hrvatskim potrošačima.

Rad je koncipiran u pet dijelova. Nakon uvoda daje se pregled literature, društveno odgovorno poslovanje pojmovno se određuje, navode se elementi i područja djelovanja te vrste odgovornosti, raspravlja se o DOP u Republici Hrvatskoj te o paradoksu uloge korporativne odgovornosti u ponašanju potrošača. Nakon toga slijedi pregled i analiza rezultata kvalitativnog istraživanja. Na kraju rada nude se zaključci i navode ograničenja istraživanja kao i plan budućih istraživanja.

PREGLED LITERATURE

Društveno odgovorno poslovanje

Društveno odgovorno poslovanje (DOP) poznato i kao korporativna društvena odgovornost (eng. Corporate Social Responsibility - CSR), predstavlja koncept upravljanja kojim se poduzeća aktivno angažiraju u integraciji društvenih i ekoloških pitanja u svoje operacije i komunikaciju s dionicima. Glavni cilj društveno odgovornog poslovanja jest doprinijeti općoj dobrobiti zajednice, podržavati dobrotvorne inicijative te stvarati pozitivnu društvenu vrijednost. S obzirom na organizacijsku razinu, DOP se općenito smatra strateškom inicijativom koja ima značajan utjecaj na reputaciju brenda poduzeća. Za uspjeh DOP-a ključno je dosljedno usklađivanje i integracija društveno odgovornih praksi u poslovni model poduzeća. U nekim slučajevima, implementacija DOP-a može nadmašiti regulatorne zahtjeve te uključivati akcije koje potiču društveno dobro, premašujući interese samog poduzeća i pravne obveze.

Suvremeni modeli društveno odgovornog poslovanja obuhvaćaju širok spektar odgovornih inicijativa i aktivnosti (humanitarne, ekološke, obrazovne i slično), što je jedan od razloga za korištenje različitih termina u javnosti koji se odnose na DOP. Tako smo u literaturi primijetili sljedeće termine: korporativnu odgovornost, održivost, korporativnu društvenu odgovornost, održivi razvoj, građansku i društvenu odgovornost i

slične. Za potrebe ovog rada korištena je interpretacija (korporativnog) DOP-a prema kojoj DOP uključuje modificiranje poslovanja tako da pridonosi zajednici, smanjuje rizik i troškove, a zadržava fokus na poslovanju i jača vrijednosti brenda (Risko, Pentek, & Wiwczaroski, 2015). Ovdje treba naglasiti da kroz utjecaj na percepciju potrošača i njihove odluke o kupovini poduzeće ostvaruje različite koristi.

Društveno odgovorno poslovanje (DOP) podrazumijeva razinu odgovornosti poduzeća prema zajednici i okolišu u kojem posluje, s obzirom na to da zajednica predstavlja krajnje kupce proizvoda. Prema (Vrdoljak-Raguž & Hazdovac, 2014), DOP je "koncept poslovanja u kojem poduzeće nastoji dobrovoljno i bez ikakve zakonske prisile uskladiti svoje poslovanje s potrebama društva u najširem mogućem smislu." Poduzeća će u pravilu prihvatiti politike i prakse DOP-a zbog moralnih uvjerenja njihovog višeg menadžmenta. Popularizacija DOP-a zajedno s porastom svijesti potrošača, zaposlenika i drugih dionika poslovnih sustava o konceptu odgovornosti dovela je do postavljanja očekivanja za odgovornost poduzeća. Intenzivno istraživanje DOP-a rezultiralo je spoznajom o nezadovoljstvu trenutnim stanjem a istraživači i znanstvenici nerijetko kritiziranju postojeće poslovne modele (Tafra-Vlahović, 2009). Prema (Zbuchea, 2013.), prethodna istraživanja suglasna su i preporučuju korporativnu društvenu odgovornost kao moderni i etički pristup menadžmentu koji poduzeća duguju društvu, stoga odgovornost nije opcija već obveza poduzeća.

(Letica, 2010.) naglašava da kod primjene principa DOP-a, poduzeća dobrovoljno odlučuju pridonositi očuvanom okolišu i pravednijem društvu. Uz to, društveno odgovorna poduzeća su prepoznata po iznadprosječno pozitivnom djelovanju u društvu (Kotler & Lee, Korporativna društvena odgovornost, 2007.) jer promoviraju interese različitih dionika i teže pozitivnom i transparentnom upravljanju. Takva su poduzeća, osim odgovornog odnosa prema okolišu, široj i lokalnoj zajednici, prepoznata i po pravednom odnosu prema dobavljačima, zaposlenicima, kupcima, klijentima, potrošačima, investitorima i drugim relevantnim dionicima.

Postoje različita područja i aspekti kroz koje poduzeće može koristiti lokalnoj zajednici te se društveno odgovorno poslovanje može podijeliti u sedam osnovnih područja: temeljna načela, misija i vrijednosti, ljudski potencijali, ljudska prava, tržište, okoliš i društvena zajednica. Temeljna načela povezuju svrhu poduzeća s njegovim stvarnim djelovanjem u svim aspektima tržišta, radne snage, okoliša, zajednice i ljudskih prava. Uspješna poduzeća moraju učinkovito uspostaviti, komunicirati, pratiti i prilagoditi svoju misiju i viziju unutar svog poslovanja. Temeljne vrijednosti organizacija mogu se jasno definirati kroz izjavu o misiji, standarde, kodekse ili smjernice. Ljudska prava u poslovnoj praksi su usko povezana sa Zakonom o radu i međunarodnim standardima. Poduzeća također trebaju smanjiti negativan utjecaj svog poslovanja na okoliš te pozitivno djelovati na lokalne zajednice u kojima posluju. Ulaganje u društvenu zajednicu treba biti promatrano kao ulaganje koje može unaprijediti i osnažiti poduzeće.

Osim toga, poduzeća se mogu baviti DOP-om iz altruističkih, egoističkih ili strateških razloga. Altruistička motivacija ka DOP-u odnosi se na situacije kada je cilj poduzeća postići određenu razinu DOP-a bez uzimanja u obzir povećanje svoje dobiti. Egoistički razlozi prisutni su ako vanjski čimbenici primoraju poduzeće na DOP, a strateški kada poduzeće identificira društvene aktivnosti koje potrošači, zaposlenici ili ulagači cijene i integrira te aktivnosti u svoje ciljeve povećanja dobiti (Husted & Sala-

zar, 2006). Ovi autori zaključuju da su potencijalne koristi za poduzeće i društvo veće uz stratešku motivaciju, odnosno kada su društveno odgovorne aktivnosti poduzeća usklađene s vlastitim interesima poduzeća. (Siegel & Vitaliano, 2007) su zaključili da se društveno odgovorne aktivnosti visokog profila najčešće poduzimaju kada se te aktivnosti lako mogu ugraditi u strategiju diferencijacije poduzeća te tako zapravo pridonose povećanju dobiti. Teorijske i empirijske analize pokazuju da strateški, DOP može pridonijeti financijskom uspjehu poduzeća, posebice ako brendovi transparentno izvješćuju o pozitivnim i negativnim posljedicama svojih društveno odgovornih aktivnosti. Takvi korporativni napori često rezultiraju poboljšanjem odnosa s javnošću i dionicima te postavljanjem visokih etičkih standarda radi smanjenja poslovnih i pravnih rizika povezanih s korporativnim djelovanjem. (Kotler & Lee, Korporativna društvena odgovornost, 2007.) ističu kako je upravo zbog tih razloga DOP postao neizostavna tema korporativnih komunikacija što opravdava potrebu za novim ulaganjima u inicijative DOP-a.

Iako ne smatraju svi potrošači društveno odgovorno poslovanje nužnim, ono je postalo važno za kompetitivnost na tržištu jer su konkurenti u gotovo svakoj industriji prepoznali strateški potencijal primjene DOP-a. Društveno odgovorno poslovanje poduzećima uz jačanje konkurentnosti donosi i niz pozitivnih učinaka na poslovanje i ugled poduzeća kao što su: bolji imidž koji rezultira povećanjem prodaje, više povjerenja i bolju reputaciju kod potrošača, zadržavanje kvalitetnijih zaposlenika, kao i veću privlačnost za investitore i bolje odnose sa zajednicom (Carroll & Shabana, 2010) (Matešić, Pavlović, & Bartoluci, 2015). Također, društveno odgovorna poduzeća privlače kvalificirane zaposlenike i imaju prednost nad konkurencijom u odabiru dobavljača i suradnika (Sun & Yu, 2015). Iako je teško kvantificirati takve učinke, ovi su faktori temelj za izgradnju održive konkurentske prednosti na tržištu. Recentna istraživanja sugeriraju da zaposlenici u društveno odgovornim poduzećima često pokazuju veće zadovoljstvo i/ili motivaciju, što može pozitivno utjecati na njihove performanse i produktivnost poduzeća. Osim toga, (Sun & Yu, 2015) su uočili da su zaposlenici ponekad bili spremni prihvatiti niže plaće u poduzećima koja su poznata po društvenoj odgovornosti.

Pokazalo se da su poduzeća s visokim stupnjem društvene odgovornosti obično veća poduzeća i nerijetko pripadaju industrijama koje u velikoj mjeri opterećuju okoliš. S obzirom na industriju u kojoj posluju, moguće je pretpostaviti da je ulaganje u DOP za takva poduzeća nužno, a da im velika ulaganja u odgovorno poslovanje ne bi trebala predstavljati financijski problem. Međutim, to ne mora biti slučaj kod svih poduzeća. Na primjer, novoosnovana i relativno mlada poduzeća koja su usmjerena na opstanak na konkurentnom tržištu možda nisu u poziciji ulagati veća financijska sredstva u društveno odgovorne inicijative. (Čutura & Jerković, 2021) su utvrdili da je u praksi, osobito u slučaju mikro i malih poduzeća, umjesto strategijske implementacije, prisutno ulaganje uglavnom samo u neka područja društvene odgovornosti. Stoga bi bilo opravdano, prilikom ocjenjivanja ulaganja u društveno odgovorne inicijative, uzeti u obzir fazu životnog ciklusa i veličinu poduzeća.

Društveno odgovorno poslovanje, postalo je iznimno važno od početka 2000-ih godina te se smatra integralnom komponentom novog poslovnog modela. Odgovornost se odnosi na prihvaćanje obveze pronalaska ravnoteže između prihoda ili profita, društvene dobrobiti i zadovoljstva potrošača ili kupaca tvrtke (Saleh, Ebeid, &

Abdelhameed, 2015). Sve što poduzeće čini odražava se na ekonomskoj, društvenoj i okolišnoj razini, što rezultira trodimenzionalnim modelom odgovornosti (Rahman, 2011). Trodimenzionalni utjecaj poslovanja poduzeća na društvo ogleda se na društvenoj razini kroz uključenost u društvena pitanja poput obrazovanja, socijalne uključenosti, volontiranja i slično; ekonomski utjecaj se vidi u zapošljavanju, standardima u području poslovne etike i vrijednosti proizvoda; a okolišni utjecaj se očituje u mjeri u kojoj poduzeća uzima u obzir implikacije štetnih emisija, kontrolira stvaranje otpada, količinu utrošene energije, životni ciklus proizvoda i održivi razvoj (Rexhepi, Kurtishi, & Bexheti, 2013).

Tvrtka može, ali nije obavezna, jednako raspodijeliti ulaganja prema navedenim razinama odgovornosti. Drugim riječima, društvena odgovornost tvrtke može biti izraženija u okolišnoj, a manje u ekonomskoj i društvenoj dimenziji. Način raspodjele uloženog truda u svaku dimenziju održivosti ovisi o primarnim proizvodima i/ili uslugama koje tvrtka plasira na tržište. Primjerice, tvrtka koja se uglavnom bavi proizvodnjom kemijskih proizvoda usmjerit će svoje društveno odgovorne inicijative na smanjenje štete za okoliš, a zatim na odgovorno ponašanje prema lokalnoj zajednici, dok će joj ekonomska dimenzija biti manje važna, no prema autorima (Wolzak, Van Sas, & Beugels, 2010) (Rahman, 2011) poduzeće će postići najveći uspjeh kada postigne ravnotežu i uspješno implementira aktivnosti na sve tri razine odgovornosti.

Postoje različiti pristupi odgovornosti u pogledu održivosti. Primjerice, Carrollova piramida korporativne društvene odgovornosti (Carroll A. B., 1991) uključuje ekonomsku, zakonsku, etičku i dobrotvornu razinu. Ekonomska dimenzija obuhvaća primarnu odgovornost prema ostvarivanju rasta i profitabilnosti. Zakonska odgovornost poduzeća uključuje pridržavanje raznih propisa i zakona koji reguliraju poslovanje. Svi aspekti poslovanja, uključujući društvene inicijative, moraju se provoditi u skladu s primjenjivim zakonima i javnim politikama, koje postavljaju standarde i prioritete. Zakoni obuhvaćaju ključna područja kao što su zaštita potrošača, okoliša, sprječavanje diskriminacije u zapošljavanju, i tržišno natjecanje. U Hrvatskoj, primjerice, postoje zakoni poput Zakona o zaštiti potrošača, Zakona o zaštiti tržišnog natjecanja, i Zakona o javnom priopćavanju, koji postavljaju minimalne zahtjeve za društveno i ekološki osviještenu praksu poduzeća. No, osim zakonski obvezujućih načela, poduzeća bi trebala poštovati i etičke principe, što znači vođenje poslovanja s moralnim integritetom i poštovanjem prema prirodi. Dobrotvorna odgovornost, kao posljednja u nizu definiranih odgovornosti, uključuje aktivnosti poput dobrotvornih donacija i financiranja kulturnih institucija, koje su vođene isključivo željom za doprinosom dobrobiti društva.

Iako su poznate brojne prednosti društvene odgovornosti u poslovanju, profit je i dalje primarni cilj poduzeća. U prethodnim je istraživanjima identificirana negativna korelacija između DOP-a i internih mjera profitabilnosti poduzeća (EVA), dok je pozitivna korelacija utvrđena s eksternim mjerama profitabilnosti (MVA) (Hernández-Murillo & Martinek, 2009). Uočen je nedostatak empirijskih dokaza o korelaciji između korporativne društvene odgovornosti i poslovne uspješnosti. Razlog tome vjerojatno leži u činjenici da je DOP teško izravno povezati s kratkoročnim profitom budući da se koristi DOP-a u pravilu manifestiraju tek dugoročno. Stoga nije rijetkost da se poduzeća odlučuju na povećanje prodaje, čak i kada to znači kršenje principa poslovne etike i društvene odgovornosti.

Društveno odgovorno poslovanje u Hrvatskoj

Društvena odgovornost poduzeća u Hrvatskoj dobiva na značenju 2001. godine, istovremeno s potpisivanjem Sporazuma o stabilizaciji i pridruživanju Europskoj uniji. Glavni katalizator u tom procesu bila je konferencija Agenda 2005. Tri godine nakon prve nacionalne konferencije o DOP-u, uočen je značajan napredak, što je potvrdio Izvještaj o DOP-u u Hrvatskoj iz 2007. godine. Nacionalna mreža za društveno odgovorno poslovanje (NMDOP) osnovana je u rujnu 2010. s ciljem intenziviranja dijaloga i partnerstva među organizacijama koje provode DOP te postizanja kvalitetnih rezultata. Glavni ciljevi Mreže uključuju povećanje broja domaćih poduzeća koja provode DOP, integraciju DOP-a u javne politike te podizanje svijesti građana o važnosti DOP-a. U Hrvatskoj je dodjela nagrada Indeks DOP postala uobičajena praksa. To je inicijativa koja ističe i promovira hrvatska poduzeća koja uspješno primjenjuju DOP. Indeks DOP-a omogućuje cjelovit uvid u društveno odgovorne prakse poduzeća i usporedbu s drugim poduzećima. Projektu "Društveno odgovorno poslovanje za sve", glavni je cilj bio unaprijediti razumijevanje DOP-a i poboljšati suradnju među dionicima u društvu te postaviti temelje za lakše izvještavanje o održivosti. Unatoč naporima i iako se primjećuje rastući interes javnosti za ovu temu, još uvijek ne postoji dovoljno zanimanja, a malo je empirijskih istraživanja o DOP-u u Hrvatskoj.

Ponašanje potrošača i paradoks uloge korporativne društvene odgovornosti

(Kotler, Wong, Saunders, & Armstrong, 2006) analiziraju ponašanje potrošača u kontekstu krajnjih potrošača, pojedinaca i kućanstava koji kupuju proizvode ili usluge za osobnu uporabu. Prema (Knežević & Bilić, 2015), ponašanje potrošača obuhvaća psihološke i fizičke aktivnosti pojedinca ili kućanstva tijekom procesa odabira, kupovine i korištenja proizvoda ili usluga radi zadovoljenja njihovih potreba. U svakoj od tih aktivnosti, potrošač preuzima aktivnu ulogu kao kupac i korisnik.

U prethodnim je istraživanjima uočena pozitivna korelacija između percepcije potrošača i društveno odgovornih aktivnosti poduzeća. Na primjer, samo 6% ispitanika nije primijetilo obvezu poduzeća da djeluje odgovorno prema zajednici, a 22% ispitanika je izrazilo zadovoljstvo dosadašnjim naporima privatnog sektora u rješavanju društvenih i okolišnih izazova (Zbuchea, 2013.). Ti podaci ukazuju na razvijenu svijest i stav potrošača da očekuju odgovornost od poduzeća. Rezultati istraživanja (Saleh, Ebeid, & Abdelhameed, 2015) sugeriraju da DOP, posebno u društvenoj i ekonomskoj dimenziji, ima značajan utjecaj na marketing od usta do usta (word-of-mouth) a pritom DOP i marketing od usta do usta značajno utječu na zapamćivanje, osobito kada je takav marketing posrednik u odnosu.

Važno je naglasiti da i u procjeni utjecaja DOP-a na potrošače postoje izazovi. Empirijski je dokazan (Öberseder, Schlegelmilch, & Gruber, 2011) (Risko, Pentek, & Wiwczaroski, 2015). paradoks uloge korporativne društvene odgovornosti u ponašanju potrošača koji se odnosi na situacije gdje potrošači iskazuju spremnost na kupnju proizvoda ili usluga od društveno odgovornih poduzeća, ali u praksi to rijetko čine. Takva paradoksalna pojava može biti posljedica želje potrošača da se prikažu u pozitivnom svjetlu tijekom istraživanja. Istraživanje autora (Risko, Pentek, & Wiwczaroski, 2015) pokazalo je da samo 5% potrošača uvijek djeluje etički (kupnjom proizvoda/usluga od odgovornih poduzeća), dok to povremeno čini 18%, što su usporedili s 83%

potrošača koji su izrazili spremnost na redovitu kupnju od društveno odgovornih poduzeća. (Zbuchea, 2013.) zaključuje da društveno odgovorno poslovanje ne rezultira stvarnim povećanjem prodaje jer je 75% potrošača izjavilo da uzimaju u obzir odgovornost kompanije prema društvu i okolišu, a samo 3% njih je to primijenilo u praksi. Proizvodi koji proizlaze iz održive proizvodnje ili dolaze od društveno odgovornih tvrtki često su skuplja alternativa jer poduzeća s uspostavljenom strategijom DOP-a uključuju troškove implementacije DOP aktivnosti u cijenu proizvoda kako njihovo društveno odgovorno djelovanje ne bi financijski opteretilo poslovanje. Objašnjenje za pozitivne stavove i poželjne odgovore o spremnosti za kupnju proizvoda/usluga od društveno odgovornih poduzeća tijekom ispitivanja moguće je opravdati na način da je moguće da se ispitanici osjećaju nelagodno kad trebaju objasniti svoju sklonost prema. kupovini jeftinijih proizvoda, jer bi ih u tom slučaju ispitivač mogao smatrati manje vrijednima (Zbuchea, 2013.).

I druga su istraživanja pokazala da se društvena odgovornost ne smatra ključnim kriterijem pri donošenju odluke o kupnji, već su važniji kriteriji poput kvalitete, brenda, cijene i porijekla proizvoda ili usluge, vrijednosti za novac i vijeka trajanja (Risko, Pentek, & Wiwczaroski, 2015). Također postoje primjeri gdje je utvrđeno da društvena odgovornost nije ključni faktor pri donošenju odluke o kupnji (Kožená & Mlázovský, 2021), posebice kada su u pitanju dimenzije društvene odgovornosti, odnosno održivosti.

Unatoč razlici između izjava namjere o kupnji i stvarnih podataka o potrošačkoj kupovini, istraživanja su pokazala povezanost između percepcije potrošača o društvenoj odgovornosti i njihove kupovne odluke (Green & Peloza, 2011) (Bianchi, Bruno, & Sanchez-Sarabia, 2019). Autori ističu da potrošači percipiraju veću korist i vrijednost kod proizvoda/usluga društveno odgovornih poduzeća te su stoga spremni platiti do 10% više. Važno je napomenuti da ovaj podatak može izgubiti na važnosti u slučaju potrošača lojalnih brendu, što dodatno komplicira dokazivanje direktnog utjecaja društvene odgovornosti na odluke o kupovini.

No, nisu sva istraživanja potvrdila povezanost između društvene odgovornosti i percepcije te ponašanja potrošača prilikom kupovine proizvoda od društveno odgovornih poduzeća. Postoje situacije u kojima nije uočen utjecaj društvene odgovornosti na lojalnost potrošača prema poduzeću/brendu proizvoda (Vrdoljak-Raguž & Hazdovac, 2014). Ove spoznaje treba promatrati u kontekstu ekonomskog razvoja zemlje i demografskih karakteristika potrošača. S druge strane, dokazana je veza između društveno odgovornih praksi poduzeća i namjere ponovne kupovine (Jose, Khare, & Buchanan, 2015), ali je i ovdje primijećeno da to ne rezultira uvijek stvarnom kupnjom (Saleh, Ebeid, & Abdelhameed, 2015). i (Kumar, 2017) ističe da ponašanje potrošača nije konstantno te se mijenja s vremenom zbog različitih čimbenika, kao što su demografske, geografske i psihološke karakteristike. Pritom je važno razumjeti kako informacije, učenje i promjene stavova utječu na ponašanje potrošača. On je također utvrdio da demografski čimbenici, poput spola, dobi i obrazovanja, imaju statistički značajan utjecaj na proces donošenja odluka o kupnji. U hrvatskom kontekstu Vrdoljak Raguž i Hazdovac (2014.) također ističu kontradiktorne zaključke o utjecaju društveno odgovornog poslovanja na odluke potrošača o kupnji, što ukazuje na složenost procesa odlučivanja potrošača.

Istraživanje percepcije i stavova potrošača o društveno odgovornom poslovanju te njihove odluke o kupnji prehrambenih proizvoda u Republici Hrvatskoj (Zla-

tar-Vulić, 2020) pružilo je uvid da ne postoji statistički značajna povezanost spola i dobi ispitanika s poznavanjem koncepta DOP-a ali da postoji statistički značajna povezanost između stručne spreme ispitanika i poznavanja tog koncepta. Zanimljivo je da su u tom istraživanju muškarci pokazali veći interes za DOP od žena.

METODOLOGIJA

Ciljevi istraživanja bili su istražiti stupanj poznavanja i razumijevanja koncepta DOP-a, utvrditi postojanje korelacije između spola, dobi, visine mjesečnih primanja i stupanja obrazovanja s razinom poznavanja i razumijevanja DOP-a kod potrošača, postoji li preferencija kupnje kod određenih trgovačkih lanaca i prodavaonica kozmetičkih proizvoda te provjeriti jesu li društveno odgovorne inicijative u području okoliša važne hrvatskim potrošačima.

Za istraživanje je odabrana kvalitativna metoda fokus grupe koja se često koristi u politološkim i marketinškim istraživanjima, a nije često primijenjena u istraživanju društveno odgovornog poslovanja. Ova metoda grupnog intervjuiranja odabrana je zato što je cilj bio shvatiti značenje koje društveno odgovorno poslovanje ima za skupinu potrošača te otkriti spektar stavova i potaknuti dubinsku diskusiju o temi društveno odgovornog poslovanja među potrošačima. Taj su cilj autori odlučili ostvariti kroz pažljivo dizajnirana pitanja i sinergiju grupne interakcije. Autori su procijenili da takvu razinu uvida neće moći dobiti jednosmjernim metodama prikupljanja podataka, na primjer anketom. Dobivene spoznaje autori planiraju iskoristiti za pripremu sljedećeg istraživanja, to jest za definiranje sadržaja upitnika te poboljšanje njegove kvalitete i validnosti uz postavljanje hipoteza koje će testirati kvantitativnim metodama.

Sudionici fokus grupa odabrani su iz populacije potrošača po principu slučajnosti i vjerojatnosti, dobrovoljnosti i snježne grude (*snowballing*) a pritom se vodilo računa da budu zastupljene osobe različitih profila/karakteristika (reprezentativnost koncepta). Bile su organizirane 3 fokus grupe, od po 6 odnosno 7 sudionika jer je procijenjeno da ta veličina omogućava svakom sudioniku priliku izraziti vlastiti stav a u isto je vrijeme dovoljna za grupnu dinamiku. Pri formiranju grupa vodilo se računa o homogenosti. Kako bi sudionici bili što sličniji te otvorenije i slobodnije govorili bili su raspoređeni prema razini njihove stručne spreme. Prije početka razgovora u fokus grupama istraživači su se dogovorili oko željenog scenarija za diskusiju i osnovnih pitanja koja će biti postavljena. Ciljano vođeni razgovori u fokus grupama su trajali između 60 i 90 minuta jer je procijenjeno da je to dovoljno vremena da svi sudionici iskažu svoje mišljenje. Tijekom razgovora istraživači su vodili bilješke a razgovori su snimani. Zahvaljujući naporima uloženim u kvalitetno moderiranje, tijekom istraživanja nije bilo problema s grupnom dinamikom (na primjer, nije bilo situacija kada je jedan sudionik fokus grupe dominirao raspravom), a interpretacija rezultata osigurana je sudjelovanjem dva istraživača.

Nakon prikupljenih iskaza analizirani su transkripti metodom kodiranja i verificiranja, a podatci su reducirani metodom usporedbe. Odgovori na pojedina pitanja i komentari sudionika su sistematizirani te je na taj način identificiran tematski okvir i utvrđen stupanj slaganja i razlika oko pojedinih pitanja. Formiranjem deskriptivnih izjava dobivene su kategorije koje će biti analizirane u nastavku. Nakon takve analize bilo je moguće napraviti određene zaključke.

Analiza uzorka

U istraživanju je sudjelovalo 20 osoba iz Osijeka, Republika Hrvatska, oba spola, različitih dobnih skupina, stupnja obrazovanja i mjesečnih primanja. Na početku istraživanja sudionici su se izjasnili o pitanjima navedenim u Tablici 1. kako bi istraživači dobili uvid u osnovne karakteristike uzorka te dobili referentne varijable za usporedbu i izvođenje opažanja. Nakon toga su sudionici bili podijeljeni su tri fokus grupe prema stupnju obrazovanja. Istraživanje je provedeno u rujnu 2023. godine. U fokus grupama je ukupno sudjelovalo 10 osoba ženskog i isto toliko osoba muškog spola čime je ciljano postignuta ravnoteža sudionika u pogledu spola.

Tablica 1. Opći podaci o sudionicima

Spol	M/Ž
Dobna skupina	16-25 / 26 - 35 / 36-45 / 45-55 / 56-65 / 65+
Stupanj obrazovanja	OŠ / SSS / VŠS / VSS / dr. ili mag. sc.
Radni status	student / nezaposlen / zaposlen / umirovljenik
Mjesečna osobna primanja (u €)	do 200
	200 - 260
	260 - 530
	530 - 740
	740 - 1.000
	1.000 - 1.200
	više od 1.200

Izvor: autori

Sudionici su bili uglavnom između 16 i 35 godina starosti (15 od ukupno 20 sudionika), niti jedna osoba nije bila starija od 65 godina, šest osoba (30%) je u tom trenutku imalo srednju stručnu spremu (SSS), a po sedam (35%) višu (VŠS) odnosno visoku stručnu spremu (VSS). S obzirom na radni status, 14 sudionika odnosno 70% je bilo zaposleno, 5 je bilo studenata i 1 umirovljenik. Najveći postotak sudionika, točnije 40% imalo je mjesečna primanja između 740 i 1.000 €, samo jedna sudionica imala je primanja manja od 200 €, a samo jedan sudionik zarađivao je više od 1.200 €.

REZULTATI ISTRAŽIVANJA I RASPRAVA

Autori su na početku razgovora u fokus grupama istražili poznaju li i razumiju li sudionici koncept DOP-a. Kada su razgovarali što njima znači DOP, sudionici su najčešće isticali brigu za okoliš, zaštitu okoliša, kada poduzeća u svom poslovanju vode brigu o društvenim pitanjima, poštuju prava radnika i zadaju si društvene i ekološke ciljeve, iako oni nisu otvoreno izražavali svoj stav o tome. U nastavku razgovora, autori su sudionicima ponudili 8 pojmova (redovito isplaćivanje plaća, poslovna strategija, beneficije zaposlenika, cjenovno pristupačni proizvodi/usluge, racionalno korištenje resursa, briga za okoliš, promidžba i dobrotvorni rad i humanitarne inicijative) i pitali ih da odaberu pojmove koji po njima najbolje opisuju DOP. Namjerno su ponuđene 4 aktivnosti poduzeća koje se odnose na standardni zakonski minimum koji poduzeća moraju poštovati te se ne može reći da predstavljaju društvenu odgovornost u poslova-

nju. Autori su zaključili da sudionici koji ovo ne budu primijetili, ne razumiju dovoljno DOP. U Tablici 3, stupac 5 prikazano je u postotcima koliko su sudionici bili uspješni u identificiranju ovakvih aktivnosti.

Autori su na još jedan način provjerili koliko sudionici razumiju DOP. Za svaku od tri dimenzije DOP-a (ekonomsku, društvenu i okolišnu) u razgovoru su bile ponuđene dvije situacije od kojih je samo jedna bila točna, a druga se odnosila na neku drugu dimenziju (Tablica 2). Bilo je potrebno točno povezati dvije od tri dimenzije kako bi autori zaključili da sudionik uspješno razlikuje dimenzije DOP-a, a ako je sudionik fokus grupe točno komentirao sva tri primjera dimenzija, pokazao je da u potpunosti razumije kako poduzeće svojim poslovanjem utječe na okolinu na ekonomskoj, društvenoj i okolišnoj razini. Stupac 6 u Tablici 3 pokazuje uspješnost sudionika u ovom zadatku u postotcima.

Tablica 2: Situacije za dodatnu provjeru razumijevanja koncepta DOP-a

Poduzeće je odgovorno ako:		
Ekonomska dimenzija	**Društvena dimenzija**	**Okolišna dimenzija**
a) pri zapošljavanju uzima u obzir kandidate iz okoline u kojoj se poduzeće nalazi i primarno izvršava proizvodne/uslužne aktivnosti	a) među zaposlenicima promiče pridržavanje standarda poslovne etike tijekom radnog vremena	a) mjeri i izvještava o količini energije koju troši za proizvodnu/uslužne djelatnosti
b) uzima u obzir štetne emisije i kontrolira otpad koji nastaje kao produkt primarne djelatnosti poduzeća	b) među zaposlenicima aktivno potiče volontiranje u obližnjem selu	b) stipendira studente i učinke iz lokalne zajednice

Izvor: autori

Kao što je vidljivo iz Tablice 3 (stupci 5 i 6) za 16 od 20 sudionika (80% uzorka) je utvrđeno da su ostvarili više od 50% rezultata. Na osnovi toga autori su zaključili da sudionici ispitivanja (iako niti jedan ispitanik nije ostvario 100% rezultata) relativno dobro razumiju koncept DOP-a. Samo su 4 osobe, odnosno 20% sudionika, pokazale 25% poznavanja (1 od 4 točna odgovora) odnosno 33% razumijevanja (jedan od tri točna odgovora) te time prikazali slabo razumijevanje DOP-a. Sudionici koji nisu pokazali poznavanje, nisu pokazali niti razumijevanje DOP-a (usporediti stupac 5 i 6, Tablica 3). To su bile dvije osobe ženskog spola i 2 muškarca, a tri od ta četiri sudionika su osobe starije od 45 godina. Od 16 sudionika koji su pokazali poznavanje DOP-a, osam je pokazalo razumijevanje DOP-a u potpunosti. Preostalih osam je pokazalo relevantno dobru razinu razumijevanja (66,7%).

Kako su među sudionicima koji su razumjeli DOP kao i među onima koji to nisu, podjednako zastupljene žene i muškarci pokazalo se, kao i u prethodnim istraživanjima (Zlatar-Vulić, 2020), da spol nema utjecaj na shvaćanje DOP-a.

Tablica 3: Rezultati istraživanja

1	2	3	4	5	6	7	8	9
Fokus grupa 1: SSS								
Karakteristike uzorka				Razumijevanje i poznavanje DOP-a		Odabir prodavaonice		Percipirana važnost okolišnih inicijativa
Dob	Spol	Radni status	Primanja (€)	Poznavanje (u %)	Razumijevanje (u %)	Kozmetički proizvodi	Roba široke potrošnje	Broj odabranih inicijativa
16-25	Ž	studentica	Do 150	50,0%	66,7%	BIPA	Plodine	0
16-25	M	student	260-530	75,0%	66,7%	DM	Lidl	1
16-25	M	Student	260-530	50,0%	66,7%	BIPA	Kaufland	0
45-55	M	zaposlen	740-1.000	25,0%	33,3%	Müller	Konzum	0
45-55	Ž	zaposlena	740-1.000	25,0%	33,3%	Müller	Lidl	2
56-65	M	umirovljenik	260-530	25,0%	33,3%	Müller	Interspar	0
Fokus grupa 2: VŠS								
Dob	Spol	Radni status	Primanja (€)	Poznavanje (u %)	Razumijevanje (u %)	Kozmetički proizvodi	Roba široke potrošnje	Broj odabranih inicijativa
16-25	Ž	studentica	260-530	75,0%	100,0%	BIPA	Konzum	0
16-25	M	student	260-530	50,0%	100,0%	BIPA	Lidl	1
26-35	Ž	zaposlena	740-1.000	75,0%	100,0%	Müller	Lidl	0
26-35	Ž	zaposlena	740-1.000	50,0%	66,7%	DM	Kaufland	1
26-35	M	zaposlen	740-1.000	75,0%	66,7%	DM	Lidl	1
26-35	M	zaposlen	530-740	75,0%	66,7%	BIPA	Konzum	2
Fokus grupa 3: VSS								
Dob	Spol	Radni status	Primanja (€)	Poznavanje (u %)	Razumijevanje (u %)	Kozmetički proizvodi	Roba široke potrošnje	Broj odabranih inicijativa
26-35	Ž	zaposlena	1.000-1.200	50,0%	100,0%	BIPA	Lidl	0
26-35	Ž	zaposlena	740-1.000	75,0%	100,0%	BIPA	Kaufland	1
26-35	Ž	zaposlena	740-1.000	75,0%	100,0%	DM	Lidl	2
26-35	M	zaposlen	Više od 1,200	75,0%	100,0%	DM	Kaufland	2
36-45	M	zaposlen	1.000-1.200	75,0%	66,7%	Müller	Kaufland	1
36-45	M	zaposlen	1.000-1.200	50,0%	100,0%	DM	Lidl	3

Izvor: podaci prikupljeni primarnim istraživanjem autora

Od sudionika koji su pokazali poznavanje i razumijevanje DOP-a, sedam je VSS (35%) , šest VŠS (30%) dok su tri ispitanika SSS (15%). Pokazalo se dakle, da sobe s višim stupnjem obrazovanja u odnosu na one s nižim stupnjem obrazovanja bolje poznaju i razumiju DOP. Od osam ispitanika sa 100% rezultata u razlikovanju dimenzija društvene odgovornosti (stupac 6 Tablice 3), četiri imaju VSS obrazovanje, a četiri imaju VŠS obrazovanje. Prema tome, 100% uzorka koji su pokazali da u potpunosti razumiju DOP ima VŠS odnosno VSS. Od osam ispitanika koji su prepoznali dvije od tri dimenzije, dvoje ih ima VSS, četvoro ima VŠS te dvoje SSS. Samo su tri od

6 ispitanika sa SSS pokazali poznavanje i razumijevanje DOP-a, u usporedbi sa 100% ispitanika sa VSS te 83.3% ispitanika s VŠS. Zbog toga se čini da stupanj obrazovanja utječe na bolje razumijevanje trodimenzionalnog modela odgovornosti jer možemo vidjeti da je 50% osoba sa SSS usporedivo s 85% osoba s VŠS/VSS pokazalo dva ili više točnih odgovora (izraženo u Tablici 3 u postotcima). Zanimljivo je da su svi studenti pokazali dobro ili izvrsno razumijevanje DOP-a.

Tijekom razgovora se također pokazalo da sudionici stariji od 45 godina (iako ih je bilo samo troje) lošije poznaju koncept društvene odgovornosti od mlađih sudionika jer niti jedan on njih nije dao više od jednog točnog odgovora (stupci 5 i 6 u Tablici 3). Zbog toga bi se moglo pretpostaviti da dob ima utjecaj na razumijevanje DOP.

Što se tiče utjecaja visine mjesečnih primanja na osviještenost i razumijevanje DOP-a, fokus grupe su pokazale da od 6 sudionika koji imaju primanja manja od 530€ samo 1 ne poznaje i ne razumije DOP, dok su svi sudionici fokus grupa s mjesečnim primanjima iznad 1.000€ pokazali da jako dobro razumiju DOP. Nakon analize razgovora čini se da razina primanja nema veći utjecaj na razumijevanje koncepta društvene odgovornosti zato što 83% sudionika u kategoriji mjesečnih primanja do 530€ u usporedbi s 78% u kategoriji iznad 530€ razumije DOP.

Sljedeća zanimljiva tema koja se pojavila u diskusijama u fokus grupama bila je koju prodavaonicu kozmetičkih proizvoda odnosno trgovački lanac robe široke potrošnje sudionici najčešće odabiru. Primijećeno je da su sudionici ravnomjerno raspoređeni u odabiru omiljene prodavaonice kozmetičkih proizvoda, i to šestoro sudionika za Müller , po sedam za DM i BIPA. Pritom su sudionici s nižim mjesečnim primanjima uglavnom birali BIPA (pet od sedam), dok je najčešći odabir onih s većim primanjima bio DM (6 puta) i Müller (5 puta). Svi sudionici stariji od 45 godina preferirali su Müller, dok su ga mlađi puno rjeđe birali. Zanimljivo, stariji sudionici su uglavnom bili ti koji su pokazali lošije razumijevanje DOP-a. Mlađi sudionici su bili podijeljenog mišljenja (7 za BIPA i po 7 za DM), a kod objašnjavanja svog izbora često su uz kvalitetu navodili i napore ove dvije tvrtke u zaštiti okoliša, pravednim radnim uvjetima, angažmanu u zajednici i etičkoj nabavi. Naglašavali su da oba lanca prodavaonica kozmetičkih proizvoda imaju programe recikliranja, sudjeluju u humanitarnim akcijama te se zalažu za poštivanje ljudskih prava i prava zaposlenika na pravedne plaće i uvjete rada. Činjenica je da je samo DM nagrađivan (u razdoblju 2013-2018. četiri puta) po Indeksu društveno odgovornog poslovanja u Hrvatskoj (Hrvatski poslovni savjet za održivi razvoj) u nekoliko kategorija: kategoriji velikih poduzeća, društveno odgovornih odnosa sa zajednicom, odgovorne politike i prakse u radnoj okolini te za najveći napredak. Važno je napomenuti da ocjena društvene odgovornosti tvrtke može varirati ovisno o različitim perspektivama i kontekstu te ovdje nećemo ulaziti u raspravu koja je od prodavaonicu kozmetičkih proizvoda društveno odgovornija u svom poslovanju.

U kategoriji trgovina robe široke potrošnje, najčešći odabir sudionika bio je Lidl/Kaufland[1] (biralo ih je 15 od ukupno 20 sudionika) dok su Plodine i Interspar odabrane samo jednom, a Konzum 3 puta. Lidl/Kaufland su bili omiljeni izbor svih sudionika s VSS, od 14 sudionika s većim primanjima njih 11 je odabralo baš te trgovačke lance. Zanimljivo je da su to bili sudionici uglavnom mlađi od 45 godina. Sudionici su u razgovoru navodili inicijative tih dviju poduzeća o kojima su saznali

[1] Ova dva trgovačka lanca promatramo zajedno jer oba pripadaju istoj grupaciji, Schwarz group.

iz medija a koje cijene i podržavaju, kao što su zaštita okoliša, pravedne radne prakse, angažman u zajednici i etička nabava. Spominjali su se ulaganje u energetsku učinkovitost, smanjenje otpada, primjeri održive nabave i korištenje obnovljive energije u trgovinama te da su u obje tvrtke primijetili linije proizvoda organskog podrijetla i poštene trgovine (fair trade). Sudionici su pohvalili i podršku lokalnim dobrotvornim organizacijama, promicanju zdravih načina života i sponzoriranje kulturnih događaja. Sudionici su komentirali kako su im u odabiru prodavaonicu kozmetičkih proizvoda i trgovačkih lanaca važniji kvaliteta, cijena i preporuka te da se prilikom odabira trgovačkih lanaca i prodavaonica kozmetičkih proizvoda ne informiraju o tome koliko je to poduzeće društveno odgovorno, što je u skladu s rezultatima (Zlatar-Vulić, 2020).

Od ukupnog broja sudionika 16 se osoba može smatrati osviještenima i upoznatim s principima DOP- a i zanimljivo, 14 od njih 16 odabiralo je Lidl/Kaufland, a svi oni koji su pokazali najvišu osviještenost su odabrali upravo te trgovačke lance. Niti jedan sudionik koji ranije nije pokazao razumijevanje DOP nije birao DM, a kako su svo troje odabrali Lidl/Kaufland kao preferiranu trgovinu robe široke potrošnje moglo bi se primijetiti da osviještenost o DOP-u i razumijevanje tog koncepta nema značajni utjecaj na odabir trgovačkih lanaca. Kako se radi o malom uzorku nezahvalno je poopćavati ali to ne umanjuje zanimljivost ovih pokazatelja.

Kako nije primijećeno veće slaganje oko odabira prodavaonica kozmetičkih proizvoda i trgovačkih lanaca među sudionicima koji su pokazali dobro ili izvrsno poznavanje koncepta DOP-a, slično kao kod (Zbuchea, 2013.), (Risko, Pentek, & Wiwczaroski, 2015) i (Kožená & Mlázovský, 2021), autori su zaključili da DOP nije odlučujući čimbenik kod odabira prodavaonica kozmetičkih proizvoda i trgovačkih lanaca robe široke potrošnje.

Razgovor u fokus grupama je nadalje ponudio autorima i uvid u to koliko su društveno odgovorne inicijative u području okoliša važne hrvatskim potrošačima. Cilj je bio potaknuti sudionike na razgovor o društveno odgovornim inicijativama vezanim za okoliš u odnosu na inicijative koje poduzeća poduzimaju u području socijalnih pitanja i na ekonomskoj razini, potaknuti ih da usporede važnost tih dimenzija i odaberu najvažniju te utvrditi hoće li sudionici češće odabirati i više cijeniti društveno odgovorne inicijative u okolišnoj dimenziji DOP. Autori su od sudionika ukupno tri puta tijekom razgovora zatražili da od tri inicijative (svaka iz jedne od dimenzija DOP-a) odaberu onu koja je po njihovom mišljenju najznačajnija za društvo i njih osobno. Tablica 4 prikazuje rezultate. Samo je jedna sudionik fokus grupa ocijenio sve tri okolišne inicijative vrjednijima od ekonomskih i društvenih, a najveći broj sudionika (njih 8) je odabrao samo jednu takvu inicijativu kao vrjedniju. Autori su ocijenili da dio uzorka koji je 2 ili 3 puta izabrao inicijativu u području okoliša kao najvažniju, predstavlja dio uzorka koji percipira društveno odgovorne inicijative poduzeća vezana uz okolišna pitanja relevantnijima u odnosu na inicijative u području socijalnih pitanja i ekonomskih pitanja. Takvih je bilo ukupno 6 sudionika (tri muškarca i tri ženske osobe) te se čini da spol nije povezan s vrijednošću koju potrošači pridaju okolišnoj dimenziji društvene odgovornosti, a kako je samo jedna sudionica sa SSS, i ovdje se pokazalo da je stupanj stručne spreme čimbenik koji čini razliku jer je čini se povezan s određivanjem važnosti okoliše dimenzija DOP-a. Iako se radi o malom uzorku, ovi su rezultati zanimljivi i pokazuju smjer za buduća istraživanja.

Tablica 4. Percipirana važnost inicijativa poduzeća u području okoliša kod hrvatskih potrošača

Muškarci	Broj spominjanih inicijativa u području okoliša (od 3)	Žene	Broj spominjanih inicijativa u području okoliša (od 3)
VŠS	1	VŠS	0
VSS	**2**	**VSS**	**2**
SSS	0	VŠS	0
VŠS	1	VSS	0
VSS	1	VSS	1
VŠS	**2**	VŠS	1
VSS	**3**	**VSS**	**2**
SSS	1	SSS	0
SSS	0	SSS	**2**
SSS	0	VŠS	0

Izvor: podaci prikupljeni primarnim istraživanjem autora

Zanimljivo je da je starija ženska osoba koja nije pokazala visoku razinu razumijevanja DOP tijekom ovog dijela razgovora istaknula 2 od 3 inicijative u području okoliša kao važne. Kako su sudionici okolišne inicijative prilično rijetko isticali, autori su skloni pretpostaviti da društveno odgovorne inicijative u području okoliša (unutar DOP-a) kod hrvatskih potrošača nisu percipirane važnijima u odnosu na inicijative na ekonomskoj i društvenoj razini. I u drugom se istraživanju pokazalo da ekološki aspekt društveno odgovornog poslovanja nije bio značajan za potrošače u tranzicijskim zemljama (Macarulla & Talalweh, 2012), što odražava racionalan stav da će potrošači u manje razvijenim ekonomijama prvenstveno cijeniti ekonomičnost prilikom kupovine, dok će briga za okoliš biti manje važna.

ZAKLJUČAK

Ciljevi istraživanja bili su istražiti stupanj poznavanja i razumijevanja koncepta DOP-a te provjeriti utječu li čimbenici kao što su dob, spol, stupanj obrazovanja i visina mjesečnih primanja na poznavanje i razumijevanje DOP-a kod potrošača. Također se želio ispitati utjecaj razumijevanja koncepta DOP-a na preferencije kupnje od određenih trgovačkih lanaca i prodavaonica kozmetičkih proizvoda te provjeriti jesu li društveno odgovorne inicijative u području okoliša važne hrvatskim potrošačima.

Iako se do rezultata došlo primjenom kvalitativne metode i iako se radi o malom uzorku, moguće je doći do određenih pretpostavki. Na osnovi analize ovih fokus grupa stječe se dojam da potrošači uglavnom dobro razumiju društveno odgovorno poslovanje. Pritom, spol i visina mjesečnih primanja, čini se, ne utječu na poznavanje i razumijevanje DOP-a, a razlike u dobi i stupnju obrazovanja imaju značajniji utjecaj. U ovom se istraživanju nije pokazao utjecaj DOP-a na odabir trgovačkih lanaca i prodavaonica kozmetičkih proizvoda. Analizom zapisa s fokus grupa nije utvrđeno da visina mjesečnih primanja, dob sudionika niti stupanj razumijevanja DOP-a utječu na odabir prodavaonica kozmetičkih proizvoda i robe široke potrošnje. Također se pokazalo da sudionici ovih fokus grupa uglavnom ne vrednuju društveno odgovorne inicijative u

području okoliša važnijima od inicijativa na ekonomskoj i društvenoj razini. Slijedom toga, za pretpostaviti je da društveno odgovorno poslovanje nije odlučujući čimbenik u donošenju odluka potrošača. Kako na osnovi kvalitativnog istraživanja nije moguće donijeti nikakva poopćenja, ove će uvide biti potrebno dodatno istražiti, provjeriti i nadopuniti nekom od kvantitativnih metoda.

Ovo istraživanje ima određena ograničenja. Prije svega to je činjenica da zbog odabira metode prikupljanja podataka ispitanici nisu reprezentativni za ciljanu populaciju te se rezultati istraživanja ne mogu poopćiti.

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CORPORATE SOCIAL RESPONSIBILITY: INSIGHTS INTO THE PERCEPTIONS OF CROATIAN CONSUMERS

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Summary: *The European Commission defines corporate social responsibility (CSR) as the responsibility of companies for their impact on society and the environment. Corporate social responsibility is increasingly becoming a key element of the modern business world, with a focus on integrating economic, social and environmental responsibility into corporate strategies. In the context of economic development, the role of CSR in promoting sustainable development is emphasized from the perspective of business ethics and environmental responsibility. Based on a literature review, corporate social responsibility is conceptually defined and elements, areas of activity and types of responsibility are analyzed. This academic article examines the extent to which gender, age, level of education and income level are related to the understanding of the concept of corporate social responsibility among Croatian consumers. This article also examines whether there is a preference for buying from certain retail chains and cosmetics stores, and it places a special emphasis on the activities in the environmental dimension of CSR and their importance among Croatian consumers.*
Although the results were obtained using a qualitative method (focus groups) and it is a small sample, it is possible to draw certain conclusions. Gender and the amount of monthly income have no significant influence on the understanding of CSR, while the influence of age and level of education is more present. Those younger than 45 and those with a higher level of education have a better understanding of the concept of CSR. The analysis of the records from the focus groups did not reveal that the amount of monthly income, the age of the participants or the level of understanding of CSR significantly influenced the choice of cosmetics and consumer goods stores. Quality, price and recommendation were found to play a much greater role in customers' purchasing decisions. Participants with lower monthly income mostly chose BIPA, while those with higher income most frequently chose DM and Müller . Interestingly, all participants older than 45 years preferred Müller . Participants emphasized that both cosmetics chains have recycling programs, participate in humanitarian actions and are committed to respecting human rights and the right of employees to fair wages and working conditions. Participants who were familiar with the principles of CSR mostly chose Lidl/Kaufland, and all of those who showed the highest understanding of the concept of CSR chose these two retail chains. It was also found that participants in these focus groups did not generally rate socially responsible initiatives in the environmental dimension as more important than initiatives at an economic and social level. This research is subject to certain limitations. As it is not possible to make generalizations based on qualitative research, the findings need to be further explored, verified and complemented by some quantitative methods.

Keywords: *Corporate social responsibility; consumer behavior; commerce; economic, social and environmental responsibility.*

JEL classification: *M14, L81*

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PREGLEDNI NAUČNI RAD / OVERVIEW SCIENTIFIC PAPER

THE IMPACT OF DIGITAL TECHNOLOGIES AND TOOLS ON BUSINESS COMMUNICATION IN CONTEMPORARY BUSINESS ENVIRONMENT

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Abstract: *This paper examines the impact of digital technologies and tools on business communication in the contemporary business environment through the prism of new communication channels. Every technological breakthrough throughout history has altered the way people communicate, beginning with the discovery of the printing press, telegraph, radio, and television. In the fifth industrial revolution and contemporary environment, business communication becomes increasingly focused on current digital technologies and tools. Traditional communication, which was inherently slow, is being phased out in favor of interactive and quick communication. Communication through modern digital technologies and tools has many benefits, but it also has some drawbacks, including the possibility of misunderstandings and conflict. This paper discusses the digital age's key communication channels, including smart mobile phones, short messages (sms), multimedia messages (mms), voice mail, Viber, WhatsApp, iMessage, Skype, Google Hangouts, Slack, teleconferences, video conferences, e-mail, intranet, organizational social and professional networks, and various business communication applications. Besides from their essential characteristics and advantages, this paper highlights key limitations that should be considered in order to eliminate or lessen misunderstandings and conflict situations.*

Keywords*: digital technologies, business communication, contemporary business, digital age, organizational behaviour.*

JEL classification: *O15, O33.*

INTRODUCTION

Modern technology has altered the way people communicate with one another (Wuersch et al., 2022). Globalization, employee diversity, and digital technology penetration are major variables influencing business communication in the digital age (Dw-

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yer, 2020). People are more connected than ever before thanks to advances in modern information and communication technologies (Hazlehurst et al., 2023). Due to the globalization, commodities, services, and information produced in one national economy can be easily transferred with other national economies around the world (Omorede, 2022). Successful global communication in contemporary business environment is founded on an understanding of differences in values, attitudes, and expectations, and it demonstrates that cooperation in diverse cultural contexts can be challenging and complex (Afridi et al., 2023). Interlocutors must learn about the culture, habits, and business norms of others and put in extra effort during the communication process (Meyer et al., 2023). In the digital age, effective companies have employees who vary by gender, age, religion, ethnic origin, culture, family status, parenthood, and mother tongue. As a result, companies must address workforce diversity challenges in order to maximize the benefits of existing differences. This creates several obstacles in the communication process, as a message that is poorly organized owing to cultural differences might result in misunderstanding and conflict. On the other hand, communication via social media and current platforms results in more effective marketing campaigns, online customer support, and more interaction. Potential clients can ask a question via the Facebook page or Twitter profile and receive a quick response. There are also various discussion forums, video clips, video conferences, webinars. In addition to contact and networking with clients, digital technologies provide significant opportunities for communication with employees who work from home or are on business trips. Contemporary business requires constant interactivity, receiving and responding to messages in real time, active participation regardless of time and location, and rapid and constant changes (Kovaitė et al., 2020). New communication channels in digital age have new characteristics regarding interactivity (the forms of interaction that are supported), timing (synchonous or asynchronous), social cues (available range of cues such as facial expression), storage (how to keep data), replicability (possibility to save and forward message), reach (scope of audience), and mobility (possibility for portability) (Hartley et al., 2023).

The aim of this paper is to emphasize the important tools and techniques for business communication in contemporary business environment shaped by digital technologies, as well as to highlight their key advantages and potential shortcomings. The paper is structured as follows. First, the key channels of communication in contemporary environment were presented, with their key characteristics. Then, symbolic communication and emojis were introduced as a unique form of symbolic communication shaped by digital technologies and tools. Finally, the potential negative shortcomings of digital communication channels were discussed, along with crucial advice for overcoming those shortcomings and making the best possible use of these channels.

COMMUNICATION CHANNELS IN CONTEMPORARY BUSINESS ENVIRONMENT

Communication is any behavior that results in the exchange of messages. It is the transfer and understanding of the meaning of a message (Robbins & Coulter, 2008) sent from one person to another person (in groups, teams, organizational parts, organizations). The importance of business communication is also evidenced by the attitude that it represents the blood flow of every organization, regardless of its activity, financial strength, market, age and size (Bisen & Priya, 2009). Successful team-

work, building and nurturing interpersonal relationships depend on communication skills. Therefore, the communication system holds the whole organization together. The effects of good organizational communication are multiple (Table 1). First of all, good communication causes fewer conflicts, mistakes and misunderstandings between employees. Open communication ensures that all employees understand the organizational vision and mission, but also that they are aware of how their activities contribute to the realization of organizational goals. All this results in greater cooperation, better motivation, productivity, sales and higher profits.

Table 1. Effects of good organizational communication

Reduced	Improved	Increased
Stress	The decision-making process	Degree of cooperation
Conflicts	Troubleshooting	Motivation
Gossip/rumors	Flow of work tasks	Productivity
Errors	Interpersonal relations	Sale
Misunderstanding	Professional reputation	Profit

Source: Adapted from Taylor & Lester, 2009

In the digital economy, thanks to the Internet and the development of information and communication technologies, new forms and channels of communication have appeared (Kraus et al., 2021). Their key advantages are that they enable fast and efficient communication, regardless of geographical location and time zone (Yujie et al., 2022). These new forms of communication are achieved through smart mobile phones, short messages (sms), multimedia messages (mms), voicemail, Viber, WhatsApp, iMessage, Skype, Google Hangouts, Slack, teleconferencing, video-conferencing, e-mail, intranet, organizational social and professional networks, as well as various applications for business cooperation (Jaganjac & Lukić Nikolić, 2023).

Communication channels based on smart mobile phones

The development and mass application of smart mobile phones for business purposes have led to numerous advantages in the communication process. First of all, participants can exchange information in real time, regardless of their location and time zone. This connection is especially important in crisis situations, when employees are on a business trip, geographically dislocated, and when it is necessary to react quickly, convey messages and make decisions (Lazarević & Lukić Nikolić, 2024). Smart mobile phones represent an important mean of communication among yonger generations, especially Generation Z (Kollárová et al., 2023). On the other hand, communication via mobile phones can lead to information overload for employees and difficulties in separating time for private life and time for work. Smart mobile phones are accompanied by limited possibilities for creating and sending content, due to the size of the keyboard and the quality of the Internet network. In addition, it has been observed that mobile phone users tend to multitask (reading and sending messages on the go, while shopping, traveling), which can lead to incomplete information and errors in their messages. There are also numerous dangers regarding the safety and security of data sent via smart mobile phones. For

example, if an employee loses a mobile phone on which access to various organizational documents is set, it can jeopardize the safety and security of data.

Mobile phones provide opportunities for following types of communication:

- **Short Message Service - SMS** refers to the option of sending and receiving text messages via mobile phones. The key advantage is that the message can be sent at any time at affordable prices, while the disadvantages are the potential delay of messages due to problems with the operator's network and limitations on the length of the message (number of characters).
- **Multimedia Message Service - MMS** is an option for sending and receiving messages via mobile phones, which in addition to text can contain photos, audio and video recordings.
- **Voicemail on mobile phones**. If the person is unable to answer the call, voicemail can allow the caller to leave the message. In order for this type of communication to be effective, it is necessary to regularly update the greeting message in accordance with the planned schedule, to leave an e-mail address or postal address if that information can be useful for the callers, to emphasize when the person will be available for conversation and to regularly check left voice messages.

Furthermore, there are numerous applications which may be istalled on mobile phones such as Viber, WhatsUp, iMessage, Skype, Google Hangouts, Slack etc. which enable fast and easy communication and exchange of various messages (text, photos, audio, video) and calls.

Teleconferencing involves communication between two or more people who are in different locations. The advantages are the ease of entry into the communication process and the availability of participants regardless of geographic location. On the other hand, the very fact that the interlocutors are not present face to face can lead to numerous misunderstandings and conflicts. In this type of communication, there may be barriers related to the quality of the established connection and noise in the environment of the interlocutor or in the communication channels.

E-mail as communication channel

For several decades, e-mail has been an important channel, especially for business communication. It is basically verbal communication in writing form. The popularity of e-mail communication is increasing because most business people own a computer and access to the Internet. E-mail is usually used for various invitations to meetings, lectures, events, cocktails, promotions, etc. Its purpose is short and quick communication - the e-mail is sent in just a few seconds and reaches the recipient immediately. The key advantages of e-mail communication are:

- Enables a quick and easy flow of information between participants who may be in different time zones and different locations. An e-mail can be sent at any time (real time or scheduled) and from any location where there is internet and a computer/tablet/smartphone.
- It reduces costs that are characteristic of other types of communication such as sending postal items and telephone conversations.
- It reduces the use of paper, which contributes to reducing costs and preserving the environment.

- Allows sending of various documents, images, audio and video.
- Identical messages can be sent to e-mail addresses of several people at the same time.

E-mail communication is accompanied by certain disadvantages. First of all, long e-mails can be exhausting to read and difficult to understand. Then, this form of communication should not be used when people are sitting in the same office or can simply pass on information orally. There are companies that, in order to stimulate face-to-face communication, prohibit sending e-mails between employees on certain days, but insist that employees meet and exchange information face-to-face (Lukić Nikolić, 2021). Also, it should be noted that some people do not check their e-mail regularly (they do not have synchronization with their mobile phones, they do not use the computer every day, etc.), while some have unreliable systems that are prone to losing messages and/or their arrival in junk mail that many users do not check.

For successful e-mail communication, it is desirable that the following conditions are met (Smith et al., 2017):

- Regular response to incoming e-mails,
- Conceptualizing a clear and complete message (without ambiguous words, jargon, abbreviations),
- Avoiding sending too many attachments (it is recommended to zip the files before sending),
- Write full name and surname in the signature along with contact information (mobile phone),
- Always check the message before sending and correct spelling and grammatical errors.

The e-mail newsletter for employees is one of the ways to inform employees about events in the organization - about what happened in the previous period, but also about announcements of some future events. It is an information bulletin in electronic form. Adding photos, graphs and videos affects the appearance of the newsletter and the degree of its attractiveness for employees. However, in practice, certain shortcomings of the newsletter came to the fore. First of all, it is sent via e-mails, which is why employees often do not have enough time to read and review it or simply do not even see the e-mail due to a full inbox. Also, the newsletter is sent to all employees - it is largely standardized and does not provide the possibility to adapt the text to certain groups of employees (their position, location, language they speak).

Website, Intranet and podcasts as communication channels

Regardless of whether it is a small organization with a simple structure or a large organization, a website is one of the most important means of communication. In the digital age, a good website allows all interested parties to find the information they need in a simple and quick way, with a few clicks. It can be a means of informing employees, but it is primarily oriented as a means of informing the public, primarily potential clients, business partners and candidates from the labor market.

An intranet is a form of internal communication among employees. It is also known as a system with predefined users and participants because it is used by everyone who is employed in an organization. Through the intranet, information and various documents related to work, tasks and events are sent in written form. Many organi-

zations have switched from e-mails to intranets because it is a much faster and more efficient form of communication between employees, teams, different organizational parts, and at the level of the entire organization. The key advantages of an intranet as an internal communication channel are:

- Employees are familiar with all the happenings in the organization on a daily basis, as well as with the necessary organizational changes.
- The flow of communication is two-way - "from top to bottom" and "from bottom to top" because all employees actively participate in the communication process - not only those at higher hierarchical levels, but also employees at lower levels;
- Encourages introverted employees to give their comments, feedback, proposals, and suggestions because communication is in written form;
- Enables the connection of all employees, regardless of their location and time zone. The intranet can also be set up on smart mobile phones, which enables employees to be constantly informed and connected with colleagues and managers.

Internal podcasts are increasingly used as a form of internal communication with employees. A podcast is an audio or audio-video recording intended for listening or viewing. It is especially useful for providing important information about the organizational culture to the younger generations of employees, then providing information about the achieved results, successes, awards won, and future plans. Organizations use podcasts as a replacement or supplement for conference calls and newsletters. Employees can listen/watch the podcast and gain a better understanding of the message sent to them based on voice and non-verbal communication. However, the podcast also has certain disadvantages, among which are one-way communication and the time it takes to listen/watch to it.

Applications and professional social media as communication channels

In the contemporary business environment, employees are required to share information quickly and to be informed about all important aspects of their work. For this reason, numerous applications for business communication and collaboration have been developed that enable the exchange of messages and various files in real time. Many employees use WhatsApp and/or Viber for business purposes, until modern applications appeared and provided them with much more possibilities and functionalities. Frequently used applications are: Slack, Microsoft Teams, Google Chat, Rocket Chat and Chanty. The usage of applications for business communication and collaboration experienced a significant expansion in the time of the Covid-19 pandemic and working from home, as organizations became aware that e-mails are not a suitable tool for fast and effective communication. In practice, it has been noticed that proper use of these applications may improve employee satisfaction and productivity since they feel like they are a part of the organization, learn from one another, solve problems more effectively, and make better decisions.

Videoconferencing involves video transmission of communication between two or more people who are in different locations. This type of communication allows participants to hear and see each other in real time and has many similarities

to face-to-face communication. Videoconference takes place through various applications (Zoom, Google Hangouts, Microsoft Teams, GoToWebinar) that require internet access, a camera and a microphone. The key advantages of video conferencing are:

- Participants can see each other and can see non-verbal signals;
- Communication takes place in real time;
- Immediate feedback is received;
- Cost savings (participants do not have to come to the meeting place).

During the Covid-19 pandemic, when a huge percentage of employees worked from home, companies shifted to video conferencing for most meetings. This tendency is likely to continue in the future, given the growing number of employees who work from home, in various geographic regions, and time zones.

In the digital age, organizations have various applications at their disposal to collect suggestions, proposals and feedback from employees. These applications allow online collection of employee proposals, commenting on proposals, prioritization, voting for the best proposals and selection of proposals to be implemented. These types of internal communication are important for organizations because they provide the opportunity to hear the voice of employees and lead to an increase in their satisfaction, commitment and engagement (Lukić Nikolić, 2021).

In recent years, organizational social (Twitter, Facebook, Yammer) and professional (LinkedIn) networks have become an important tool for internal organizational communication between employees at different levels and between the organization itself and employees. On these networks, employees can share their successes, joys and good moments at the workplace. They provide the opportunity for all employees, regardless of geographical location and time zone, to communicate and share information with each other through posts, comments, messages, videos. By sharing interesting stories about the organization, its working conditions, team building activities, products and services, employees impact on employer branding.

SYMBOLIC COMMUNICATION IN THE DIGITAL AGE

Communication is based on a large number of symbols that connect into complex symbolic systems and enable the creation of numerous concepts and communications about various things and phenomena (Rot, 2004). The key feature of symbolic communication is that it is realized through signs that are accepted in a certain community as carriers of some meaning, means of communicating messages, and are connected in systems that, according to certain rules of combination, enable the creation of many signs that have new meanings. Symbolic communication is developed by people who, adopting the language of their community, adopt a handful of symbols, but also create new symbols. The application of symbolic systems, and especially developed language, is a factor of great importance for the development and progress of humanity. It is believed that, thanks to the application of symbols, primarily human speech and various languages, man has become a different and more developed being than all other species.

Symbolic communication has not remained immune to technological progress in the digital age. Namely, during face-to-face communication, a non-verbal message is always sent as an integral part (body language, eye contact, volume, pitch and tone of voice), which increases the chances that the interlocutor will understand the message in the right way. In communication that takes place through digital technologies and

tools, questions and doubts may arise as to whether the interlocutor will understand the message in the right way. For this reason, numerous emoticons have been developed in the form of text character symbols, as well as numerous icons that symbolize emotions - these icons are called emojis (Jaganjac & Lukić Nikolić, 2024).

The word emoticon comes from the English words emotional icon. It is a combination of punctuation marks, letters and numbers in written communication. With the advancement of technology, emoticons have started to be used more and more. The development of modern smartphones gave rise to emojis - coded emoticons. Today, emojis are available in all applications, devices and platforms. It is interesting that back in 2016, a British agency announced a job vacancy for the position of "Emoji Translator", whose main tasks are decoding emojis and looking at generational, cultural and international differences in their use (Roksandić Kablar, 2021).

The development of emoticons and emojis has led to contradictory attitudes regarding the issue of their justification in business communication. Although most are aware of their role and importance, there are also those who consider emoticons and emojis inappropriate, except in communication between close colleagues. Also, some professionals believe that emoticons and emojis can be misinterpreted and can often allude to certain forms of sexual harassment, inappropriate courtship, and the like. In order to ensure adequate use of emoticons and emojis, it is necessary to consider the following (Bovee & Thill, 2020):

- The sender should know the receivers of the message well and estimate how they will understand and experience the provided emoticon and/or emoji.
- Use emoticons and emojis carefully to retain professionalism.
- If the superior is not using emoticons or emojis, this should be followed.
- Take in mind that emoticons and emojis convey a message. If someone has just reached the position of manager, emoticons and emojis can be an indicator that this person wishes to promote a welcoming environment.
- Avoid using emoticons and emojis in communication with clients and third parties unless you have a deep, long-term relationship with them.
- Avoid using emoticons and emojis in professional communication, such as business plans, proposals, and contracts.
- When sending emoticons and emojis, select those that are commonly used and understood. New and uncommon emoticons and emojis may not be readily understood.

POTENTIAL SHORTCOMINGS OF COMMUNICATION IN CONTEMPORARY BUSINESS ENVIRONMENT

E-mails, text messages, instant messages, social and professional networks, as well as other channels of communication in contemporary business environment have certain shortcomings. These include (McShane & Von Glinow, 2017):

Insufficient representation of emotions. People rely heavily on facial expressions and other nonverbal signals when interpreting the emotions of interlocutors. The increasing intensity of written communication, which takes place through modern digital communication channels, leaves interlocutors deprived of non-verbal communication. In the digital age, interlocutors apply certain types of communication in which they try to express their emotions, such as the use of emoticons and emojis.

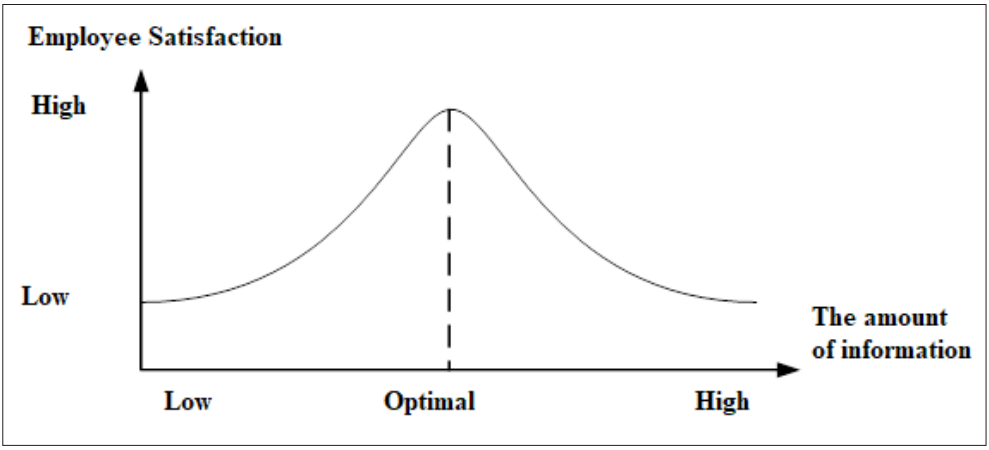
Less politeness and respect. Due to the fact that in written communication the interlocutors cannot see each other, messages sent through digital channels are often characterized as cold and/or without empathy.

Digital communication is **inadequate for messages related to complex and unexpected situations**. Digital communication channels are extremely effective for well-defined situations such as confirming the time and place of a meeting or providing information about some routine activities. However, in the digital age when there are many new, unexpected and complex situations, this type of communication is not ideal because it is necessary for the interlocutors to quickly exchange messages and give each other feedback. In those situations, it is always better to communicate verbally.

Digital communication **can lead to an excessive amount of information (information overload)**. Information overload is a situation when the amount of information exceeds an individual's ability to process and analyze it. Over a long period of time, information overload can lead to anxiety, frustration and dissatisfaction of communication participants.

In practice, it happens that communication in the organization is at extreme values - from its complete absence to an excessive amount of information. Both communication situations lead to reduced employee satisfaction, as shown in Figure 1.

Figure 1. The relationship between the amount of information and employee satisfaction



Source: adapted from Opitz & Hinner, 2003

In Figure 1, it can be seen that employees are dissatisfied when they do not have enough information that is important to them in order to effectively perform their part of the job, but also when they receive too much information that has no value and importance for them. The best situation is when employees have the optimal amount of information and when the intensity and volume of communication leave them enough time to perform their work well.

Research conducted among employees who work from home found the following (O'Connell, 2021):

- 81% of employees have experienced conflict at the workplace;
- 46% of employees used applications to send written messages with their

arguments. These are: Slack, Google Hangouts, Trello;
- 65% of employees had a conflict with colleagues at the same hierarchical level, 19% with superiors, 11% with external partners and 5% with clients;
- the most common causes of conflicts were: stress due to workload, poor teamwork, rude behavior, lack of transparency, honesty, conflict of interest, false information (accusations);
- more than 2/3 of the employees thought that the messages they received from their superiors were cold and aggressive;
- 39% of employees wanted to leave their jobs because of the conflict.

The key causes of conflicts in the digital age are (Jaganjac & Lukić Nikolić, 2024):

Inappropriate communication channels. Managers are frequently confronted with the question of whether employees will take seriously the information delivered to them via Slack or another less formal communication channel. And, in practice, employees often do not take seriously the information they receive through less formal channels of communication.

There are **no rules for desired communication time**, which means communication outside of working hours. It is frequently asked whether it is appropriate to send messages to coworkers via any communication channel outside of working hours, and whether it is reasonable to expect a response to a sent message late in the evening, on weekends, holidays, or days off. Violation of private time can lead to employee dissatisfaction, frustration, and even conflicts. Unfortunately, most organizations lack explicit communication time guidelines. This presents employees with a significant amount of e-mails or messages that they receive 24/7, 365 days a year, disrupting the balance between work and private life.

In addition to the aforementioned, conflicts in the digital age can arise as a result of a **lack of transparency** in communication and informing employees, cold and often aggressive e-mails and communication styles, and increased stress and pressure that employees feel because they believe they are constantly being watched and controlled by modern digital technologies.

New technological solutions bring numerous advantages for business communication, but the following facts should be kept in mind (Bovee & Thill, 2020):

- Technology is just a tool to send messages. Participants in communication must be careful when using modern technologies.
- Technology should be set up to prevent information overload. It often happens that the participants in the communication receive more messages than they can process, which leads to frustration, anxiety, stress and mistakes. Periodically, information channels should be adjusted in order to separate messages that are important from those that are undesirable.
- Technology and new tools should be used in an optimal way. In practice, it has been observed that employees spend too much time on social networks (Facebook, Twitter) and that they often distract them from regular business activities and tasks.
- Technology and new tools should be used effectively. Communication participants need to know the key features, functionalities and options of new technological tools in order to be able to apply them effectively.

At the end, it is important to highglight that technology should not replace face-

to-face communication. Although technology provides opportunities for real-time communication, established interpersonal relationships need to be nurtured. A few minutes of face-to-face communication can lead to increased satisfaction, trust and stronger connection among employees.

CONCLUSION

Successful business communication is an important factor that determines the quality of business relationships and affects business results, as well as interpersonal relationships. With the development of new technological solutions in contemporary business environment, business communication has taken on new properties and features. The most pronounced change in the field of business communication is the emergence of new communication channels. Consequently, the key characteristics of the structuring and shaping of the message are also changing.

The use of modern technologies in communication causes considerable changes. People can always be connected and in touch, actively participate in decision-making, provide and receive feedback, attend all events, and be familiar with all circumstances. However, in business communication, it is critical to avoid conflicting circumstances. The major reasons of conflict in the digital age include increased fluidity and flexibility, the lack of face-to-face contact, and the lack of nonverbal communication. Employees can become more aware of the issues they confront during digital communication by implementing appropriate organizational policies, norms, and practices, as well as trainings. In this way, they can eliminate or at least reduce the causes of conflict situations.

The paper contributes significantly to the topic of business communication and management in contemporary business environment shaped by digital technologies and tools. It gathered current knowledge in a single place and provided a clear understanding of modern communication channels developed through the invention and implementation of modern digital technologies and tools. However, the paper can also be valuable for managers and leaders because it clearly identifies the possible weaknesses and threats that different types of communication in the digital age bring with them.

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PREGLEDNI NAUČNI RAD / OVERVIEW SCIENTIFIC PAPER

ETIČNO KOMUNICIRANJE NA DRUŠTVENIM MREŽAMA

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Sažetak: *Komunikacija predstavlja ključni segment u društvenom i poslovnom životu. Putem novih komunikacijskih kanala, koji se zadnjih godina predstavljaju kao glavni, društveni mediji omogućuju ostvarivanje znatno brže i jednostavnije komuniciranje. Prateći najnovije trendove i upotrebom društvenih medija za komunikaciju, tvrtke nastoje prikupiti nove klijente, zadržati postojeće klijente, opstati na tržištu i konkurirati. Korištenje društvenih mreža za stvaranje i održavanje privatnih i poslovnih odnosa zahtjeva i određenu, prihvatljivu vrstu ponašanja. Na ono na što bi se trebala obratiti pažnja jesu određene granice odnosno ograničenja i odgovornosti u primjeni takve vrste javne komunikacije. U tom slučaju govori se o etici koja predstavlja opća prihvaćena pravila koja bi se trebala primjenjivati u odnosima. Kako u klasičnom poslovnom svijetu tako i u internetskom poslovnom svijetu, postoje određena pravila kojih bi se korisnici trebali pridržavati ako žele postići i održati zdrave poslovne odnose. Za korisnike društvenih mreža važan je razvoj svijesti o odgovornosti rečenoga i napisanoga na društvenim mrežama. Stoga primjena osnovnih etičkih i komunikacijskih standarda, koji ujedno predstavljaju i univerzalne standarde, predstavljaju ključnu komponentu u odnosima među ljudima. Cilj rada je istražiti koliko često zaposlenici koriste društvene mreže tijekom slobodnog vremena i tijekom radnog vremena, kakvo je njihovo ponašanje na društvenim mrežama te smatraju li je li njihovo ponašanje etično ili neetično. Prilikom istraživanja, ispitane su osobe koje su u radnom odnosu u Republici Hrvatskoj. Hipoteza rada je: Zaposlenici često koriste društvene mreže, najčešće u privatne svrhe, tijekom radnog vremena. Metodologija u ovom radu koristi deskriptivnu statistiku koja će pružiti informacije o varijablama u određenom skupu podataka i istaknuti odnose između varijabli u uzorku.*
Rezultati istraživanja će biti pokazani uz pomoć Likertove skale.

Ključne riječi: *komunikacija, društvene mreže, pravila ponašanja, etika.*

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UVOD

Etika i moral predstavljaju širok pojam. Etika predstavlja strategiju kojom se definiraju ponašanja primjenjiva u svakodnevnom životu te istražuje što je dobro, a što loše ponašanje. Etika se primjenjuje svugdje. Iako etiku najčešće povezujemo s poslovnim životom, ona se često koristi i u društvenom životu.

S pojavom društvenih mreža mijenja se i komunikacija među ljudima omogućavajući lakše stupanje u kontakt s ljudima, zbog čega se društvene mreže i počinju sve češće koristiti. Društvene mreže danas predstavljaju dio čovjekove svakodnevice. Sve više tvrtki je počelo prepoznavati njihovu korist i u vlastitom poslovanju, kako za međusobnu komunikaciji unutar većih tvrtki, komunikaciju i povezivanje s potencijalnim klijentima, tako i za privlačenje novih radnika. No, upotreba društvenih mreža tijekom radnog vremena sa sobom može nositi i negativne posljedice.

Cilj ovog rada se temelji na prikazivanju etičkog ili neetičkog načina ponašanja i komuniciranja na društvenim mrežama te istodobno korištenje društvenih mreža u poslovnom svijetu.

Zadatci i svrha istraživanja određeni su u najužoj vezi sa znanstvenim problemom i predmetom znanstvenog istraživanja te postavljenom hipotezom.

Svrha istraživanja je, koristeći znanstveno-istraživačke metode, dokazati prednosti i nedostatke korištenja društvenih mreža od strane zaposlenika tijekom slobodnog vremena, ali i onog provedenog na radnom mjestu.

Na osnovu postavljenog cilja i determiniranog problema, a u skladu s postojećom literaturom i istraživanjem, postavljena je sljedeća hipoteza:

Hipoteza 1 glasi: Zaposlenici često koriste društvene mreže, najčešće u privatne svrhe, tijekom radnog vremena.

Rad je koncipiran na slijedeći način. U prvom dijelu rada, Pregled literature, naveden je pregled dosadašnjih istraživanja. U drugom dijelu, Metodologija istraživanja, prikazana je metodologija prikupljanja podataka, kao i empirijski podaci. U trećem dijelu rada nalaze se Rezultati istraživanja te rasprava. U zaključku rada prikazana je hipoteza, analizirani su rezultati istraživanja, te važnost dobivenih podataka uz osvrt na određena ograničenja u samom istraživanju, kao i preporuke za iduća slična istraživanja.

PREGLED LITERATURE

Kada se govori o etici, kao rasprostranjenom pojmu u svijetu, njena definicija se može gledati kroz različita područja. Glavna i najpoznatija definicija bi bila ona koja se odnosi na pravila u razlikovanju ispravnog i neispravnog. Etika predstavlja filozofsku, znanstvenu disciplinu koja određuje načine odnosno pravila i principe dobrog ili lošeg ponašanja, a čija je primjena uglavnom zastupljena u javnim okruženjima.

Većina ljudi etičke norme uče od kuće, u školi ili nekim drugim društvenim okruženjima. Iako većina ljudi stječe svoje osjećaje ispravnog i pogrešnog tijekom djetinjstva, moralni razvoj se također događa i tijekom života dok ljudi prolaze kroz različite stadije rasta. Većina društava ima zakonska pravila koja reguliraju ponašanje, ali etičke norme imaju tendenciju da budu šire i neformalnije od zakona. Etika i zakon nisu isto iako etička i pravna pravila koriste slične pojmove. Radnja može biti zakonita, ali neetička.

Mnoge različite discipline, institucije i profesije imaju norme za ponašanje koje odgovaraju njihovim posebnim ciljevima. Posjedovanje normi pomažu pojedincima da koordiniraju svoje akcije ili aktivnosti te da uspostave povjerenje. Etičke norme mogu, na primjer, određivati ponašanje u medicini, pravu, inženjerstvu i različitim poslovima.

Naučeno je da se etika veže uz pojam morala odnosno da se etika bavi moralom. „Etika je filozofija morala.“ (Jalšenjak & Krkač, 2016) „Etika (prema grčkom *ἠθικός:* moralan, ćudoredan), skup načela moralnoga (ćudorednog) ponašanja nekoga društva ili društvene skupine koja se zasnivaju na temeljnim društvenim vrijednostima kao što su: dobrota, poštenje, dužnost, istina ljudskost itd.; znanost o moralu kao društvenom fenomenu koji se izražava u konkretnim ljudskim postupcima u okviru pravila, maksima i civilizacijskih zasada jednoga društva; filozofska disciplina koja ispituje zasnovanost i izvor morala, temeljne kriterije za vrjednovanje te ciljeve i smisao moralnih htijenja i djelovanja.“ (Hrvatska enciklopedija) „Moral (prema lat. moralis: ćudoredan, moralan), sustav nepisanih društvenih normi što određuju način ponašanja u određenoj društvenoj skupini, zajednici, a zasnivaju se na običajima i na općenito prihvaćenim mjerilima vrjednovanja postupaka sa stajališta načela »dobra« ili »zla«. Moral je povijesno određen, oblikuje se u izravnoj vezi s uvjetima života zajednice, kulturnom tradicijom i religijskim predodžbama. No unatoč stanovitoj relativnosti, koja se ogleda i u različitosti moralnih načela unutar klasa i slojeva istoga društva, moral općenito označuje važan čimbenik društvene kohezije, pa i cjelovit sustav stajalištâ i djelovanjâ koji regulira odnose među ljudima (obitelj, prijatelji i sl.). Moralno se djelovanje karakterizira svojevrsnim unutrašnjim stajalištem, u kojem, uz svjestan izbor vrijednosno određenih postupaka, djeluju i emotivni, voljni čimbenici, te odgojne zasade.“ (Hrvatska enciklopedija)

Pojam etike ne koristi se samo u životu svakog pojedinca već se primjenjuje i u radu. „Poslovna etika može se odrediti kao sustav temeljnih vrijednosti i pravila individualnog, organizacijskog i društvenog ponašanja vezanoga za poslovanje i za ostvarivanje njegovih ciljeva te za prosudbu posljedica poslovnog ponašanja i odlučivanja za druge sudionike u poslovnoj okolini.“ (Bahtijarević-Šiber i saradnici, 2008) „Poslovna etika je dakle način koncipiranja, sklapanja, komuniciranja i izvođenja poslova u istovremenom skladu s duhovnim, sociološkim, biološkim i prirodnim zakonitostima čovjeka i okruženja ili, jednostavnije, poslovnu etiku možemo objasniti kao prirodno vođenje poslova odnosno poslovanje u skladu s prirodom.“ (Bebek & Kolumbić, 2000) Svrha etike u poslovnom svijetu predstavlja iznošenje stajališta od strane organizacije o primjeni etičkog kodeksa odnosno pravila ponašanja između radnika te procjena njihovih utjecaja na samo poslovanje. Primjenjujući nametnuta pravila ponašanja od strane poslodavaca, zaposlenici predstavljaju ogledalo sebe, poslodavca i organizacije u cjelini. Problem organizacije u terminima primjene etičkih načela javlja se prilikom nepridržavanja nametnutih pravila kod pojedinaca zbog drugačije percepcije o njihovoj koristi za poslovni interes.

Poslovna etika podrazumijeva dvostruko ostvarivanje i zadovoljavanje ciljeva i potreba što za sobom veže samu svrhu poslovne etike koja se ne odnosi samo na uspješno obavljanje zadataka koje radimo za drugu osobu, već obavljanje zadataka tako da druga strana kompenzira potrebe radnika. Da bi poslovni subjekt odnosno osoba za koju se izvršavaju određeni zadaci bio etičan, treba uzeti u obzir realizaciju cilje-

va i potreba druge strane te jednako tako biti pošten i etičan u tome, isto kao što mora biti pošten i etičan prema samome sebi. Djelovanje etičnog poslovnog subjekta ne predstavlja poklon već dogovorenu razmjenu novaca, dobara, usluga, poklona i slično. „Do moralne nijemosti dolazi kada se ljudi ponašaju u skladu s moralnim načelima, ali kada se raspravlja o nekim odlukama onda se moralnost ne spominje.“ (Business Ethics, Moral Muteness of Managers)

Od početka pojave Interneta pojavljivali su se i društveni mediji koji predstavljaju fenomen evolucije internetskih trendova. „Medij je tehnička i organizacijska infrastruktura za komunikaciju“. (Lumkomenn, 2001) Društveni mediji definiraju se kao skup različitih internetskih platformi, aplikacija i medija čiji je osnovni cilj spajanje ljudi, omogućavanje suradnje među ljudima te stvaranje i razmjena sadržaja između korisnika. Svaka osoba koja je danas prisutna na Internetu ili društvenim mrežama posjeduje svoj profil koji mu služi za iznošenje vlastitih misli, osjećaja, mišljenja i slično. Društvene mreže predstavljaju važan segment kako u privatnom životu tako i u poslovnom. Utjecaj društvenih mreža na ljude se neprestano razvija i raste. No, zanemareno je ono bitnije o čemu se baš i ne raspravlja, a to je etika koja se u mnogim situacijama ignorira pa isto tako i u poslovanju kroz društvene mreže, a i u privatne svrhe. Kako nadolaze nove tehnologije stvaraju se i nove generacije korisnika koja sve manje mare za tuđa mišljenja, prava i norme kojih bi se trebali pridržavati. Društvene mreže postale su dio Interneta pod kojim se rijetko razmatra njihova etička strana. Kako u stvarnome svijetu, tako etička pravila vrijede i na Internetu, no čini se da korisnici toga nisu svjesni te se o tome ni ne raspravlja. Kako su nove tehnologije u neprestanom razvoju, postavljaju se novi etički izazovi, ali se istodobno i širi prostor poštivanja i kršenja istih.

Društvene mreže kao suvremeni komunikacijski alat

„Suvremeno poslovanje prate brze i neočekivane promjene, neizvjesnost, rizik, dinamičnost poslovanja te jaka konkurencija cijene i kvalitete. Proces koji se najčešće u suvremenom poslovanju pojavljuje je, dakako, globalizacija, koja na svakojake načine prodire u države i svijest njenih građana. Načina na koje se globalizacija probija je mnogo, ali nama interesantno u ovom slučaju je definitivno Internet, odnosno društvene mreže.“ (Kupres-Đorđević, 2016)

Društvene mreže od velikog su značaja za interakciju njihovih korisnika što uključuje znatno jednostavniju, bržu i lakšu komunikaciju. Isto tako omogućuju razmjenjivanje različitih sadržaja bez značajnijih troškova jer su društveni mediji takvi mediji koji su neplaćeni i dostupni za sve pojedince i organizacije. Različite su vrste društvenih medija, a navodi se osnovna podjela:

- Društvene mreže na Internetu - predstavljaju internetske zajednice čija je osnovna svrha povezivanje ljudi širom svijeta. Isto tako, predstavlja besplatan Internet servis. Na takvim stranicama korisnici sami odlučuju hoće li i koje će informacije dijeliti o sebi drugima. Društvene mreže razlikuju se po tome što neke od njih mogu biti općeg tipa, ali i karakteristične za različita zanimanja i potrebe korisnika. Jednu od najpopularnijih društvenih mreža danas predstavlja Facebook koja je uglavnom društvenog tipa, dok najpopularniju društvenu mrežu poslovnog tipa predstavlja LinkedIn;
- Blogovi - predstavljaju internetsku stranicu koja omogućava jednom ili više

autora da objavljuju različite sadržaje od tekstualnih, slikovnih, zvučnih i drugih, a koji su dostupni i ostalim korisnicima. Sadržaji na blogovima su prikazani kronološkim redoslijedom. Svrha mu je razmjena mišljenja i vođenje razgovora o određenoj temi;

- Mikroblogovi - predstavljaju medije koje su slični blogovima, međutim razlika je u količini sadržaja koje korisnici mogu podijeliti na takvim stranicama. Oni omogućuju razmjenu malih sadržaja u obliku SMS poruka, hiperlinkova ili pojedinačnih slika;
- Servisi za označavanje sadržaja - omogućavaju korisnicima da po svojim željama označe one stranice koje bi htjeli pregledavati kasnije te se tako stvaraju liste spremljenih sadržaja;
- Forumi - predstavljaju najstariji oblik društvenih mreža i društvene stranice na kojima ljudi mogu voditi razgovore o određenim temama, tražiti savjete, razmjenjivati informacije i slično. Svaka tema koja se vodi može imati svoje podteme. Svaki forum ima glavnu osobu koja je zadužena za vođenje istoga i uređivanje u slučaju objavljivanja neprikladnog sadržaja od druge strane, a naziva se administrator;
- Servisi za recenzije - predstavljaju internetske stranice na kojima korisnici razmjenjuju svoja iskustva odnosno dojmove. Najčešće se razmjenjuju recenzije o korištenju određenih proizvoda i usluga, ali u pitanju može biti i bilo koja druga tema, predmet i slično.

S obzirom na ubrzani tehnološki napredak prethodnih godina, društvene mreže su se počele usvajati i kao važan alat u poslovanju. Za tvrtke je uvijek važno pratiti najnovije trendove i promjene u okolini kojima će se adekvatno prilagoditi, stoga bi svaka tvrtka danas trebala biti prisutna barem na jednoj društvenoj mreži, ali onoj poslovnog karaktera. Postoje razne društvene mreže odnosno aplikacije koje firme koriste u poslovne svrhe. Društveni mediji predstavljaju važan komunikacijski alat za tvrtke čija je uloga pronalaženje poslovnih partnera, potencijalnih klijenata, održavanje veza s ključnim korisnicima, ali isto tako pomaže ostvarivanju pozitivnih poslovnih rezultata, promoviranju vlastitih proizvoda te čak traženju radnika. Način poslovanja putem društvenih mreža tvrtkama nudi nove mogućnosti koje imaju na raspolaganju, a isto tako predstavlja i novi oblik tržišta gdje njihovi korisnici postaju važni dionici u poslovnom okruženju. „…interakcija putem društvenih medija važan je čimbenik u praksi praćenja društvenih medija.“ (Strauβ & Jonkman, 2017)

U suvremenom poslovanju, tvrtke osnivaju društvene platforme odnosno društvene softvere za internu upotrebu i suradnju koje za glavni cilj imaju povezivanje zaposlenika i informacija kao i digitalne imovine u cijelog organizaciji. Takve društvene platforme imaju sljedeće funkcije:

- “pretraživanje koje omogućuje pronalazak određenog sadržaja i korisnika;
- linkovi koji povezuju slične sadržaje i korisnike;
- uređivanje blogova i članaka;
- omogućuju korisnicima da označuju sadržaje linkovima (engleski: *tag*);
- prikazuju preporuke ostalih korisnika za određene tražene sadržaje;
- nude mogućnosti preplaćivanja na određene korisnike ili određeni materijal i/ili zanimljivi sadržaj.” (Kupres-Đorđević, 2016)

Glavna razlika između društvenih platformi koje firme same osnivaju i standardnih društvenih mreža jest taj što je fokus društvenih platformi na internom korištenju, unutar tvrtke i na njima rade samo zaposlenici te na svemu onome što je usko povezano za tvrtku. Društvene platforme razlikuju se također prema razinama na kojima se koriste, a navode se sljedeće:

- "postupna, lokalna unapređenja u tekućem procesu, na primjer upravljanje odnosima s kupcima;
- postupna sistemska unapređenja procesa od samog potrošača u određenom lancu vrijednosti, na primjer izgradnja društvenih mreža između zaposlenika koji su u neposrednom kontaktu s kupcima i unutarnjih zaposlenika;
- sistemska transformacija kroz cjelokupni organizacijski sustav, na primjer pronalaženje načina kako promijeniti razmišljanje zaposlenika o onome što i kako surađuju s kolegama." (Kupres-Đorđević, 2016)

Društvene mreže predstavljaju, s jedne strane suvremeni način komuniciranja, a kada se gleda u socijalnom smislu predstavlja novu formu društvenosti. Korištenjem društvenih mreža nameću se novi obrasci ponašanja i načini društvenog povezivanja. Internet je jednim dijelom postao način života svakoga pojedinca s obzirom na to da je većina ljudske populacije danas prisutna što općenito na Internetu što na društvenim mrežama i toga su ljudi svjesni.

Prednosti i nedostaci društvenih mreža

S obzirom na sve prednosti koje nam Internet i društvene mreže pružaju, postoje i nedostaci kojih možda neki i nisu svjesni, a ti nedostaci su prisutni u kulturi i odnosima na društvenim mrežama, načinu komuniciranja, govoru, ponašanju i zaštiti privatnosti. Navedeno se može svrstati u primjenu pravila ponašanja na društvenim mrežama odnosno primjeni etičkih načela i pravila u komuniciranju i radu na društvenim mrežama. Društvene mreže predstavljaju najpopularnije platforme u vidu komunikacije između njezinih korisnika . Sastavljene su od pojedinaca koji ih koriste, a koji su međusobno povezani na temelju poznanstava i prijateljstava, putem misli i ideja te zajedničkih interesa, hobija i mnoštvo drugoga.

Kao prednosti društvenih mreža navodi se sljedeće:

- Komunikacija - za pojedinca društvene mreže imaju važnu ulogu u području komunikacije koja vodi od upoznavanja, ulaženja u određeni odnos s drugom stranom, održavanje tog odnosa, no isto tako i prekida odnosa;
- Obnavljanje odnosa - vezano uz komunikaciju, jednu od prednosti koje pružaju društvene mreže su obnavljanje odnosa. Radi se o situaciji koja se sigurno svima dogodila, a to je da se nakon određenog vremena prekinula komunikacija, bilo da se radi o prijateljima, rodbini i slično. Pronalazeći osobu na društvenim mrežama stvara nam se mogućnost da ponovno stupimo u kontakt i razvijemo odnos s osobama s kojima smo nekada bili dobri;
- Veza na daljinu - da nema Interneta, vjerojatno se s nekim osobama ne bi nikako čuli. Naravno postoji opcija kontaktiranja putem telefona, ali ono što društvene mreže pružaju jest kontaktiranje bez dodatnih naknada koje bi na primjer morali plaćati ako zovemo osobu putem telefona. Stoga nam društvene mreže omogućuju kontaktiranje drugih osoba bez ograničenja i

besplatno;

- Dijeljenje informacija - ono što društvene mreže pružaju su brzina dijeljenja informacija, podataka u velikim količinama, iskustava i slično, a uz niske troškove;
- Pristup informacijama - s obzirom na to da je većina ljudi, tvrtki, javnih ustanova i slično prisutna na Internetu, može se lako doći do informacija bilo da se radi pronalaženju radnoga vremena određenih ustanova, traženja mjesta i vremena održavanja određenih događaja i ostalo;
- Objavljivanje oglasa - putem različitih oglasnika koje možemo pronaći na Internetu, a isto tako i na društvenim mrežama, na jednostavan i brz način možemo kreirati i objaviti oglas o prodaji ili traženju određenih proizvoda ili usluga. Na društvenim mrežama, posebno Facebook-u, može se naći veliki broj oglasnika koji su podijeljeni prema različitim kategorijama: oglasnici za cijelu državu, oglasnici u kojima se predaju oglasi za određene županije, oglasnici na lokalnim odnosno gradskim razinama, oglasnici u kojima se nude ili traže poslovi, oglasnici u kojima se nude ili traže stanovi/apartmani i tako dalje.

Za nedostatke društvenih mreža navodi se sljedeće:

- Sigurnost i privatnost – predstavlja glavni nedostatak i najveći problem društvenih mreža danas. Prilikom kreiranja profila na društvenim mrežama potrebno je unijeti određene osobne podatke o sebi što znači da svatko može lako pristupiti osobnim podacima ako ih se ne zaštiti. Isto tako, prilikom potvrđivanja pristanka za ulaz na određene aplikacije i stranice u obliku skočnog prozora, omogućava se drugima pristup osobnim podacima koji su ostavljeni na profilima. Vezano uz to, objavljivanjem što više informacija o sebi, riskira se krađa identiteta, stoga uvijek treba biti na oprezu kod davanja takvih informacija. Ono što je neizbježno kada se govori o sigurnosti na društvenim mrežama jest njihova upotreba. Mlađe osobe na društvene mreže gledaju kao na zabavu ili igru, a nisu svjesni da iza društvenih mreža može postojati ozbiljna opasnost koja se odnosi na internetsko zlostavljanje. Kako bi se ovo preveniralo, mlade osobe je potrebno savjetovati o pravilnoj uporabi društvenih mreža;
- Ovisnost i kontrola - kako su društvene mreže postale dio svakodnevice i na njima se provodi veći dio slobodnog vremena, one sve više počinju kontrolirati život pojedinaca što dovodi do određene ovisnosti. Prekomjernim bivanjem na društvenim mrežama zanemaruju se događanja i obaveze u stvarnome svijetu. Ovakva situacija slična je kao kod osoba koje su ovisne o igricama. Isto tako, u slučaju kvarova na uređajima s kojima su povezani na društvene mreže, osobe lako postaju nervozne i ljute što je jedna od karakteristika kako prepoznati ovisnu osobu. Kako bi se spriječila ovisnost o društvenim mrežama potrebno je odrediti određeno vrijeme koje se smije provoditi na njima ili pak zamijeniti korištenje društvenih mreža s odlaskom u prirodu, šetnjom, druženju s prijateljima i slično;
- Koncentracija - prekomjernim korištenjem društvenih mreža dolazi do zanemarivanja obaveza u stvarnome svijetu. Shodno tome uzrokuju pad koncen-

tracije što dovodi do slabe produktivnosti u obavljanju obaveza. Isto tako i u drugim situacijama kao što su vožnja automobilom ne bi se smjelo dopustiti da društvene mreže okupiraju pozornost korisnika.

Ako se društvene mreže koriste na pravilan i primjeren način, osobe mogu imati značajnu korist od njih, no ipak s druge strane mogu nanijeti veliku štetu u slučaju neispravnog korištenja. Negativne posljedice od korištenja društvenih mreža imat će samo one osobe koje nisu svjesne opasnosti i nisu upoznate s načinom na koje društvene mreže funkcioniraju (Martinović & Jurković-Majić, 2009).

Etično poslovanje na društvenim mrežama

„Poslovanje je rad poduzeća koje se svodi na postizanje određenih ciljeva. Sadržava takozvani popis odgovornosti, ograničenja i dužnosti kojih se zaposlenik mora pridržavati prilikom obavljanja nekog posla. Posao je djelatnost koja iziskuje izvršenje radnih obaveza. Potrebno je da zaposlenik posjeduje odgovarajuće vještine za obavljanje određenih poslova te da kvalitetno i na vrijeme izvršava svoje obveze. U samom poslovanju ulažu se u sredstva, napori, razne aktivnosti koje su korisne za ostvarivanje pozitivnih rezultate te se samim time jača položaj na tržištu. Poslodavac je onaj koji upravlja, odnosno, kao dio uprave vodi poslove u poduzeću te zapošljava zaposlenike koji odgovaraju načelima njihovog poduzeća. Prilikom poslovanja moguće je djelovati etično ili neetično, ovisno o djelovanju samog poslovnog okruženja.“ (Kurbanjev & Kemeter, 2017)

„Kada se govori o etici u poslovanju, misli se na sve vidove etičkoga poslovnog ponašanja, od strateških odluka do ponašanja prema kupcima i dobavljačima, tj. na moralne principe i vrijednosti koji određuju ponašanje pojedinaca i grupa unutar organizacije. Svakodnevno djelovanje tvrtke izloženo je različitim dvojbama i iskušenjima vezanim za etičko promišljanje (od otkaza ugovora o radu, promocije i oglašavanja, politike cijela, motivacije, zadovoljstva, povećanja produktivnosti, odnosa s dobavljačima, odnosa s potrošačima/klijentima, sustava nabave, sustava nagrađivanja i kazni, podmirenja financijskih i drugih obveza, rokova dospijeća, zaštite okoliša, podmićivanja, iskrenosti, povjerljivosti itd.), veza uz tradicionalne etičke probleme.“ (Martinović & Jurković-Majić, 2009) Problemi koji se pojavljuju u stvarno poslovnom svijetu prisutni su i na Internetu, a mogu se svrstati u etičke ili neetičke što svaki pojedinac može percipirati na svoj način ovisno o svojoj osobnosti i imati vlastito mišljenje o tome koji bi bili etički, a koji neetički problemi.

„Etičnost poslovanja potrebno je primjenjivati u svakodnevnom radu, međutim neki zaposlenici ustraju samo na zaradi koju žele steći, bez obzira na koji način. Pritom je potrebno napomenuti, ukoliko se žele postići pozitivni rezultati, za dobrobit poslovanja treba se pridržavati etičnosti i ljudi koji posjeduju poštene i pozitivne stavove.“ (Kurbanjev & Kemeter, 2017) Neetično poslovanje se uglavnom odnosi na ostvarivanje zarade na način u kojemu se moralnost ne poštuje i koje se provodi bez obzira na posljedica koje ono nosi sa sobom. Takva nemoralna odnosno neetična ponašanja koja se karakteriziraju kao kriminalna kažnjavaju se zakonom. Neki od primjera neetičnog ponašanja u poslovnom svijetu su: “razni oblici prijevara i obmana u poslovanju; prikriveni ili otvoreni oblici zastrašivanja; …; razni oblici podmićivanja; porezne prijave; …; povreda prava pisaca, umjetnika, izumitelja kao i eventualno iskorištavanje

njihovih položaja; …; krađa poslovnih tajni konkurentskih poduzeća; podmićivanje djelatnika drugih tvrtki; …; ponižavajuće postupanje s djelatnicima; ometanje slobode udruživanja radnika, ali i zlouporaba štrajka; zanemarivanje mjera sigurnosti na radu; ugrožavanja zdravlja i života radnika; razni oblici uništavanja okoliša." (Dujanić, 2003)

Poslovanje u marketingu i oglašavanje na društvenim mrežama može se svrstati i u etično i u neetično poslovanje. Postoje organizacije koje daju više neistinitih informacija o sebi, ali i one koje to rade na ispravan način. Iste se neće morati opravdavati pred klijentima i kupcima u slučaju razotkrivanja neistinitosti.

Kada se govori o etičnom ponašanju na društvenim mrežama, ono se uglavnom svodi na način komuniciranja, što u privatnom s prijateljima što u poslovnom svijetu s klijentima. Način na koji se ljudi ponašaju odnosno komuniciraju može bitno utjecati na ugled pojedinca pa tako i tvrtke. Poslovanje na društvenim mrežama također ima svoju neetičnu stranu. Kako za mnoge korisnike, tako i za tvrtke, društvene mreže postavile su nove izazove na području etičkih normi što potiče vlasnike tvrtki da razmisle o smjernicama odnosno procedurama za korištenje društvenih mreža, a isto tako ponašanje svojih zaposlenika u poslovanju na društvenim mrežama. Menadžment tvrtke još nema dovoljno znanja i razumijevanja o samoj važnosti, raširenosti i mogućnostima koje društvene mreže nude u poslovanju. Problem tehnološkog doba predstavlja (ne) odvojenost privatnih korisničkih profila na Internetu od poslovnih. Korisnici, odnosno zaposlenici se dovode u opasnost od iznošenja negativnih komentara na račun tvrtke što rezultira nanošenjem potencijalne štete za tvrtku. „Svaka osoba ima pravo na slobodu izražavanja i govora, ali isto tako, ima i odgovornost od nanošenja štete drugima što obuhvaća i narušavanje ugleda i časti. Takvi načini neetičkog poslovanja ruše etičku stranu korištenja društvenih mreža. Korisnici društvenih mreža moraju pokazati veću tolerantnost za aktivnosti koje se smatraju neetičnima i pridržavati se načela koja su kao zaposlenici dužni poštovati. Općenito, smatra se da ono što korisnici, kao zaposlenici, objavljuju u privatne svrhe u privatno vrijeme, poslodavci ne bi trebali provjeravati. Društvene mreže, smatrajući se mjestom u kojem Internet daje pravo na različite aktivnosti dovodi u pitanje što je etički dopustivo." (Stanković)

Društvene mreže su se u početku koristile u slobodno vrijeme, no realnost je postala drugačija. Naime, uporaba društvenih mreža u privatne svrhe počela se koristiti i na uređajima na radnim mjestima odnosno uređajima poslodavaca tijekom radnog vremena. Dovodi se u pitanje zanemaruju li zaposlenici svoje radne obveze korištenjem društvenih mreža na radnome mjestu te kako poslodavci gledaju na to. Ovisno o poslodavcu, postoje oni kod kojih je korištenje društvenih mreža dopušteno. U svrhu promoviranja tvrtke, neki poslodavci i potiču njihovo korištenje. Postoje poslodavci kod kojih je izričito zabranjena uporaba društvenih mreža za vrijeme obavljanja radnih zadataka. U tom slučaju, korištenje društvenih mreža, dozvoljeno ili ne dozvoljeno, trebalo bi biti uvedeno u pravilnik tvrtke o ponašanju zaposlenika, čega bi se oni trebali i pridržavati. „Upotrebljivost i korisnost društvenih mreža tijekom radnoga vremena može imati negativne posljedice. Zaposlenici trebaju imati na umu da su ogledalo tvrtke u kojoj su zaposleni i neprestano su na pozornici, a tako se trebaju i ponašati. Oni su ambasadori tvrtke i brenda. Kako su društvene mreže postale važan segment privatnoga i poslovnoga života mnogih, a njihov utjecaj i važnost još će više rasti, za tvrtke je nužno razvijanje smjernica za zaposlenike." (Žada & Vidak, 2018)

Za primjer neetičkog poslovanja kompanija na društvenim mrežama može se navesti davanje lažnih, netočnih ili nepotpunih informacija o proizvodima ili uslugama koje tvrtka nudi, a za sobom može vezati prodaju proizvoda i obavljanje cjelokupnog procesa prodaje s drugom stranom, ali bez da se plaćeni proizvod isporuči nego se samo primi novac. Kada se govori o pružanju informacija, jedan od čestih primjera neetičnog ponašanja u poslovanju jest sadržaj informacija koje zaposlenici, ili bivši zaposlenici, mogu pružati na internetskim stranicama o organizaciji u kojoj rade ili su radili. Tako na Internetu postoje određene stranice koje su namijenjene davanju recenzija o firmama odnosno koliko su zaposlenici, klijenti, poslovni partneri i slično, zadovoljni s poslovanjem određene tvrtke. Tu se javlja situacija u kojoj, najčešće bivši zaposlenici, daju dosta negativne komentare o tvrtki u kojoj su radili što ne znači da je istinito, a što rezultira narušavanjem ugleda poduzeća.

Snimanje i razvoj poslovanja konkurencije smatra se normalnom poslovnom praksom isto kao što se prati razvoj tvrtkine ciljne skupine kupaca, novih trendova koji se pojavljuju na tržištu i slično. Uz praćenje konkurencije može se javiti potreba za kopiranjem bilo da se radi o proizvodima, uslugama, načinu oglašavanja, promociji, kanalima distribucije, a rezultira uništavanjem vlastitog branda i identiteta što kod kupaca može izazvati nerazumijevanje prema onome tko ste kao tvrtka i što radite. Isto tako, kopiranje neće proći neopaženo od strane kupaca. Kao stručan termin koji se odnosi na praćenje konkurencije, uspoređivanje poslovnih procesa i mjerenje uspješnosti s uspješnim konkurentima navodi se „*benchmarking*“, a dobro je poznat marketingu i menadžmentu poduzeća.

„Etika u oglašavanju odnosi se na ponašanje organizacija u njihovom nastupu na tržištu, posebno provedbi spleta komuniciranja kojeg definiramo kao oglašavanje.“ (Antolović & Haramija, 2015) „Zbog utjecaja koje oglašavanje ima na svakog pojedinca i ukupnu zajednicu brojne su mogućnosti zloupotrebe; od pretjerivanja o svojstvima proizvoda ili njihova prikrivanja preko zavaravanja sve do otvorenih obmana i laži.“ (Antolović & Haramija, 2015)

Poslovna komunikacija na društvenim mrežama

Suvremeno poslovanje temelji se na dobrom i djelotvornom komuniciranju s drugim ljudima jer „bez komunikacije ne mogu postojati organizacije“. Komunikacija se definira kao „uspostavljane informacijske veze između sustava koji imaju sposobnost primiti, memorirati, obrađivati i slati signale, a to su raznovrsni mediji i sredstva, koji omogućuju različite oblike prijenosa informacija.“ (Gnječ, 2016) Poslovna komunikacija suštinski je važna za svaku suvremenu organizaciju jer čini dio njezinog poslovanja, organizacije i menadžmenta. Pri tome je važno da svaka organizacija ima svoj stil komunikacije i način na koji posluje, a koji bi trebao biti strukturiran tako da pristaje okruženju unutar kojeg djeluje. „Poslovna se komunikacija može realizirati unutar tvrtke, ali i izvan nje. Kada je riječ o komunikaciji unutar tvrtke većinom se radi o procesima u kojima je potrebno realizirati određeni plan što znači da je nužno sudjelovanje svih struktura. Primaju se upute, šalju povratne informacije i na kraju te iste informacije stoje na raspolaganju zaposlenicima koji ju međusobno moraju dijeliti kako bi svi bili upoznati s trenutnim stanjem stvari. Kada je komunikacija unutar tvrtke uspješna tek se onda može krenuti na onu izvan nje gdje većinom nastupa pojedinac koji predstavlja proizvod ili uslugu.“ (Stanković)

Društvene mreže danas predstavljaju ključnu komunikacijsku platformu u privatnom svijetu. No, uz nevjerojatan porast u kratkom vremenskom periodu počele su se koristiti i u poslovne svrhe. Bez njih poslovna komunikacija danas nije moguća. Popularnost Interneta raste iz dana u dan, a njegova važnost postaje sve veća u komuniciranju i poslovanju. Poslovnim korisnicima društvene mreže omogućuju brzu i jednostavnu komunikaciju s postojećim klijentima, budućim klijentima, kupcima i potrošačima, što predstavlja najveću prednost online komunikacije. Neophodno je za spomenuti da većina tvrtki svoje poslovanje unapređuje putem društvenih mreža. Umreženost poduzeća, osoba, informacija, ideja i proizvoda predstavljaju ključne smjerove za napredovanje u poslovnom svijetu. „Koristeći Internet kao glavno sredstvo komunikacije i obrade informacija, tvrtka prisvaja mrežu kao svoj organizacijski oblik. Dolazi do promjena u cijelome sustavu, odnosno one utječu na proces stvaranja, razmjene i distribucije vrijednosti. Kapital i radna snaga kao ključne komponente svih poslovnih procesa mijenjaju svoje karakteristike i način djelovanja.“ (Kuleš, 2015)

Svi korisnici društvenih mreža mogu predstavljati potencijalne kupce za tvtku. Tvrtke svoje potencijalne kupce mogu privući kako kvalitetnom ponudom tako i objavljivanjem zanimljivih sadržaja informativnog karaktera koji imaju dodatnu vrijednosti s naglaskom da te informacije budu pravopisno točne i pravodobne. Shodno tome pružaju se prednosti u pogledu dobivanja feedback-a odnosno mišljenja i kritika druge strane koje tvrtke nastoje uvažavati. Prisustvom na društvenim mrežama, tvrtke za cilj imaju izgraditi zajednicu odnosno privući potencijalne korisnike s kojima će ostvariti komunikaciju preko društvenih mreža te nakon čega će oni širiti pozitivne kritike o tvrtkinim proizvodima i uslugama. Isto tako, bitno je zadržati već postojeće kupce jer privlačenje novih zahtjeva ulaganje dodatnog vremena i novca. Svoje reakcije, mišljenja i stavove korisnici ostavljaju na društvenim mrežama nakon čega one trajno tamo ostanu zabilježene. Ovisno o tome jesu li reakcije, mišljenja i stavovi pojedinaca pozitivni ili negativni iz toga proizlaze dva načina reagiranja na njih. Prvi predstavlja uvažavanje pozitivnih i negativnih kritika na smiren način s pozitivnom povratnom informacijom od strane tvrtke dok drugi predstavlja osobno shvaćanje kritika kao takvih da se počinje gubiti kontrola što završava negativnim, a ponekad i vulgarnim odgovaranjem. Kod poslovnog komuniciranja, kako standardnim putem tako i putem društvenih mreža važno je slušanje druge strane i to slušanje poruke do kraja bez obzira u kakvom raspoloženju bili mi ili klijenti.

Etika i zaštita privatnosti na Internetu

Problem privatnosti i odgovornosti za informacije posljedica je neetičnosti pojedinaca i pojedinih organizacija. „Zakonom o zaštiti osobnih podataka uređuje se zaštita osobnih podataka o fizičkim osobama te nadzor nad prikupljanjem, obradom i korištenjem osobnih podataka u Republici Hrvatskoj. Svrha zaštite osobnih podatak je zaštita privatnog života i ostalih ljudskih prava i temeljnih sloboda u prikupljanju, obradi i korištenju osobnih podataka.“ (Zakon.hr) Dijelu populacije moralnost i moralne vrijednosti ne predstavljaju važnost, stoga ni nemaju problema za njihovo kršenje. Tu dolazi do situacija da se etika suočava s pitanjima koja se odnose na to što je moralno na Internetu, a što nije.

„Iako su često moralna prava pretvorena u zakonska pravila u internetskom poslovanju još uvijek nedostaje zakonskih pravila. S obzirom na to da nema dovoljno za-

konskih pravila koja bi regulirala internetsko poslovanje potrebne su moralne granice koje će regulirati ponašanje na Internetu. Svi će se složiti s činjenicom kako je sloboda jedna blagodat, no isto tako će se složiti s činjenicom kako sloboda može dovesti do loših i nepredvidivih situacija. Sloboda omogućuje pojedincima da čine nepoželjne stvari kao što je vrijeđanje preko Internet mreža, krađa osobnih podataka u elektroničkom poslovanju i slično. Ponašanje i djelovanje na Internetu i u elektroničkom poslovanju zapravo ovisi o osobnih vrijednostima čovjeka te moralnim stavovima. Koliko je čovjek odgovoran prema sebi i ostalim sudionicima ove globalne mreže uvelike ovisi o tome koliko poznaje etiku i koliko prihvaća moralno ponašanje i djelovanje." (Ivanušić, 2017)

S obzirom da je etika postala dio čovjekovog života, njegovog privatnog pa i poslovnog života, njezino primjenjivanje je slabije u odnosu na onakvo kakvo bi trebalo biti. Etika na Internetu nam omogućuje da svoje ponašanje prilagođavamo prema vrijednostima. Poštujući privatnost osobnih podataka i podataka drugih osoba u isto vrijeme se poštuju i ustavna to jest ljudska prava. Zaštita privatnosti odnosi se na cijelo društvo koje je prisutno na Internetu.

S Internetom je povezano mnogo zločina iako je njihov postotak teško procijeniti s obzirom da se većina zločina ne prijavljuje. Svojom prisutnošću na društvenim mrežama odnosno Internetu trebali bi uskladiti svoje ponašanje unutar pravnih okvira koji često nisu dovoljno precizno definirani s obzirom da je razvoj tehnologija dosta ubrzan stoga bi i ažuriranje pravila trebalo biti dosta ubrzanije.

Za poduzeća i zaštitu privatnosti važno je da, ako želi ostvariti što veću sigurnost na Internetu i što sigurnije poslovanje, mora razviti svoju strategiju. Utvrđujući trenutnu razinu sigurnosti i postavljajući željenu razinu sigurnosti, potrebno je odabrati alate uz čiju pomoć će se razviti i provesti strategija postavljanja odnosno pojačavanja sigurnosti.

U nastavku su navedeni neki od problema zaštite privatnosti.

1. Cyber-špijunaža predstavlja organizirani sustav koji za cilj ima prikupljanje podataka o drugim korisnicima društvenih mreža ili općenito Interneta. Svojim pristupanjem i korištenjem Interneta, svi podaci i aktivnosti pojedinaca pohranjuju se u bazama podataka. Objavljivanje i dijeljene privatnih informacija javnosti bez znanja korisnika predstavljaju rezultat kriminalnih radnji. Velika je količina podataka koje pojedinci mogu dijeliti o sebi, iako postoji mogućnost odabira hoće li takvi podaci biti javni ili privatni. Dijeljenje određenih podataka javnosti predstavlja opasnost onda kada se oni, zajedno sa aktivnostima korisnika, pohranjuju u bazama te prenose trećim stranama ili tvrtkama bez privole korisnika. Takav način prikupljanja podataka i aktivnosti nisu direktno vidljive korisnicima, no on može snažno utjecati na poslovni život pojedinaca prilikom zapošljavanja ili razvitka karijere. Jedan od načina prikupljanja podataka o drugim osobama, a danas je najzastupljeniji u svijetu Interneta, jest provala koja uključuje pristupanje na tuđa računala, provale na profile društvenih mreža, provale na bankovne račune i drugo.
2. Cyber-kriminal - Kako u stvarnome svijetu i u svim društvima, rizik od kriminala postoji i na Internetu, a s razvojem informacijsko-komunikacijske tehnologije dovode se i novi oblici kriminala. „Pojam *cyber*-kriminala podrazumijeva novi tip kriminala koji uključuje uporabu računala, računalne

tehnologije, novih medija i mreže te visokog osobnog ili grupnog znanja. Zbog njegove naravi ne može ga se kontrolirati unutar granica države. Predstavlja prijetnju i za pojedinca i za nacionalnu sigurnost te se razvija svakodnevno. Za ovakvu vrstu kriminala posebno su pogodne društvene mreže čijom pojavom je *cyber*-kriminal napredovao. One zapravo postaju sredstvo preko kojeg *cyber*-kriminali puno lakše dolaze do svojih žrtava. Društvena mreža koja je posebno poznata po konstantnoj prisutnosti *cyber*-kriminala je Facebook. Neki od oblika *cyber*-kriminala su krađa identiteta, siva trgovina te dječja pornografija. *Phishing* se odnosi na uporabu Interneta, a posebno društvenih mreža putem kojih *cyber*-kriminalci šalju drugima poruke putem kojih žele prikupiti određene podatke koji su tajni kao što su brojevi bankovnih računa te korisnička imena i lozinke.“ (Kuleš, 2015)

3. Anonimnost - No ipak, unatoč slobodnom razotkrivanju privatnih podataka, s druge strane moguće je ostati anoniman. U virtualnom svijetu sloboda u komunikaciji je puno veća. Tim načinom osoba se može osloboditi i pokazati osobnost i komunikacijske vještine koje inače u stvarnosti ne pokazuje. „Anonimnost zapravo predstavlja kreiranje i konstantni rad na razvitku virtualnog identiteta. Virtualni identitet može predstavljati zamišljanje i izgradnju idealnog identiteta, a bijeg od stvarnog koji osoba često ne prihvaća. Na ovakav način osoba dolazi do jedne granice kada se razdvajaju njezin stvarna i virtualna osobnost što upućuje na dualizam odnosno postojanje fizičkog i virtualnog identiteta.“ (Kuleš, 2015) Ono što predstavlja nedostatak u prikazivanju na Internetu kroz anonimnost jest razočarenje koje se može desiti u trenutku kada se dvije osobe sastanu u stvarnosti te komunikacijom licem u lice dožive osobu drukčijom nego što je očekivano. Time se dolazi do spoznaje da je virtualni svijet potpuno drugačiji od stvarnosti. Veliki broj ljudi na Internetu se može predstaviti kao jedno, a u stvarnosti biti drugo.

METODOLOGIJA ISTRAŽIVANJA

U ovom znanstvenom istraživanju koristit će se znanstveno-istraživačke metode radi osiguranja što kvalitetnijih zaključaka o navedenoj temi. Kako bi se analiziralo pojedine elemente i njihov međusobni utjecaj, upotrijebit će se logičke i tehničke metode, kao što su: metoda deskripcije, induktivno-deduktivna metoda, analitičko-sintetička, metoda anketiranja, kao i statističke i matematičke metode. Njihova upotreba ovisit će o unaprijed postavljenim Koristit će se metoda anketiranja.

Empirijski podaci

Uzorak čine osobe koje su bile ili koje jesu u radnome odnosu. Veličina uzorka uključuje 221 ispitanika. Anketi je pristupilo 55,6 % muškaraca (123) i 44,3 % žena (98). Najviše ispitanika koji su pristupili ovom istraživanju čine osobe između 25 i 34 godine (38,0 %), zatim osobe starije od 35 godina (35,7 %), potom osobe između 18 i 24 godine (26,2 %).

Kako bi se utvrdilo koliko često ispitanici koriste društvene mreže na poslu i kakva je etičnost na društvenim mrežama, provedeno je anonimno anketiranje. Upitnik je poslan e-poštom putem obrasca Google Forms ili izravnim slanjem obrasca, a popunjeni obrasci prikupljani su na isti način na koji su i predani. Upitnik je sadržavao 14

pitanja. U dijelu upitnika ispitanici su iskazali stupanj svake tvrdnje na Likertovoj skali od 2 do 5 stupnjeva ovisno o vrsti pitanja. Pitanja koja sadrži anketa su zatvorenoga tipa što znači da svako pitanje ima ponuđeni odgovor, a od ispitanika se traži da izabere jedan od ponuđenih odgovora. Istraživanje je provedeno u razdoblju od 15.6.2020. do 19.6.2020. godine.

Metode obrade podataka uključivale su izračunavanje parametara deskriptivne statistike. Podaci su obrađeni računalnim programom Statistics ver.13.0.

REZULTATI ISTRAŽIVANJA

Istraživanje se provodi s ciljem iznalaženja rješenja vezanog uz problem koliko su zaposlenici svjesni korištenja društvenih mreža u poslovne svrhe te koliko je etično ponašanje zastupljeno među osobama. U nastavku slijede rezultati provedenog istraživanja.

Prvi set pitanja je formiran na način da su ispitanici odgovarali sa „ne“ (vrijednost 1) i „da“ (vrijednost 2).

Tablica 1. Opisni pokazatelji za procjenu korištenja društvenih mreža (1. dio)

	N	M	Me	Mo	Min	Max	SD
Da li vaša tvrtka koristi društvene mreže u poslovanju?	221	1,70	2,00	2,00	1,00	2,00	0,46
Pazite li što objavljujete na društvenim mrežama, imajući na umu da vaš poslodavac može vidjeti vaše objave?	221	1,72	2,00	2,00	1,00	2,00	0,45
Biste li pristali raditi za poslodavca koji bi vam na radnome mjestu u potpunosti zabranio pristup društvenim mrežama?	221	1,84	2,00	2,00	1,00	2,00	0,37
Posjeduje li organizacija u kojoj radite Etički kodeks?	221	1,68	2,00	2,00	1,00	2,00	0,47

Legenda: M – aritmetička sredina; Med – medijan; Mo – mod; SD – standardna devijacija; Min – minimum; Max – maksimum

Izvor: izradile autorice

Iz Tablice 1. se vidi da gotovo sve tvrtke koriste društvene mreže u svom poslovanju. Pored toga ispitanici su u velikoj mjeri odgovorili da paze što objavljuju na društvenim mrežama vodeći računa o tome da poslodavac ima uvid u to. Gotovo svi ispitanici bi pristali raditi za poslodavca koji bi na radnom mjestu zabranio pristup društvenim mrežama. Također, veliki broj organizacija u kojoj ispitanici rade posjeduje Etički kodeks.

Drugi set pitanja formiran je na način da su ispitanici imali mogućnost odabrati jedan od tri ponuđena odgovora (vrijednosti su postavljene od 1 do 3 prema Likertovoj skali).

Tablica 2. Opisni pokazatelji za procjenu korištenja društvenih mreža (2. dio)

	N	M	Me	Mo	Min	Max	SD
Pristupate li društvenim mrežama u privatne svrhe tijekom radnoga vremena?	221	2,29	2,00	2,00	1,00	3,00	0,66
Dijelite li informacije vezane uz posao na društvenim mrežama?	221	1,35	1,00	1,00	1,00	3,00	0,66
Smatrate li da je opravdana poslodavčeva opomena ukoliko vas zatekne na društvenim mrežama tijekom radnoga vremena?	221	2,14	2,00	2,00	1,00	3,00	0,74
Smatrate li da poslodavci imaju pravo provjeravati vaše ponašanje na društvenim mrežama?	221	1,39	1,00	1,00	1,00	3,00	0,64
Mislite li da bi se trebalo definirati ponašanje zaposlenika na društvenim mrežama u ugovoru o radu ili pravilniku tvrtke?	221	1,87	2,00	2,00	1,00	3,00	0,78
Postupa li Vaš nadređeni u skladu s etičkim normama?	221	2,64	3,00	3,00	1,00	3,00	0,59

Legenda: M – aritmetička sredina; Med – medijan; Mo – mod; SD – standardna devijacija; Min – minimum; Max – maksimum

Izvor: izradile autorice

Iz Tablice 2. se vidi da ispitanici pristupaju društvenim mrežama u privatne svrhe tijekom radnog vremena, ali najčešće u vrijeme pauze. Naveli su da ne dijele informacije vezane uz posao na društvenim mrežama. Isti smatraju da je opravdana poslodavčeva opomena ako ih zatekne na društvenim mrežama tijekom radnog vremena ako se time krši politika tvrtke vezano uz korištenje interneta na radnom mjestu. Smatraju da poslodavci nemaju pravo provjeravati njihovo ponašanje na društvenim mrežama ako to rade izvan radnog mjesta. Većinom smatraju da bi se trebalo definirati ponašanje zaposlenika na društvenim mrežama u ugovoru o radu ili pravilnikom tvrtke. Pored toga, smatraju da njihovi nadređeni postupaju u skladu s etičkim normama.

Treći set pitanja formiran je na način da su ispitanici imali mogućnost odabrati jedan od četiri ponuđena odgovora (vrijednosti postavljene od 1 do 4 prema Likertovoj skali).

Tablica 3. Opisni pokazatelji za procjenu korištenja društvenih mreža (3. dio)

	N	M	Me	Mo	Min	Max	SD
Koliko dnevno vremenski provodite na društvenim mrežama?	221	2,57	3,00	3,00	1,00	4,00	0,95
Je li ikada došlo do konfliktne situacije s poslodavcem zbog toga što se provodili vrijeme na društvenim mrežama tijekom radnoga vremena?	221	1,20	1,00	1,00	1,00	4,00	0,56
Kakva je politika vašeg poduzeća vezana uz pristup društvenim mrežama?	221	2,24	2,00	1,00	1,00	4,00	1,14
Smatrate li da je Vaše ponašanje na Internetu u skladu s etičkim normama?	221	3,59	4,00	4,00	1,00	4,00	0,58

Legenda: M – aritmetička sredina; Med – medijan; Mo – mod; SD – standardna devijacija; Min – minimum; Max – maksimum

Izvor: izradile autorice

Iz Tablice 3. se vidi da ispitanici provode od 2 do 3 sata dnevno na društvenim mrežama. Većina ispitanika nije doživjela konfliktnu situaciju s poslodavcem zbog korištenja društvenih mreža tijekom radnog vremena. U većini tvrtki korištenje društvenih mreža je dopušteno samo onim odjelima u poduzeću koji koriste društvene mreže u sklopu svog radnog mjesta. Gotovo svi ispitanici smatraju da je njihovo ponašanje na Internetu u skladu s etičkim normama.

Rasprava

Temeljem provedenog istraživanja zaključuje se da, iako ispitanici ne provode previše vremena na Internetu (više od 2 do 3 sata dnevno), ipak jedan dio vremena provode na Internetu tijekom radnog dana, u vrijeme pauze ili za vrijeme radnoga vremena. „Vrijeme utrošeno na konzumaciju online medija kontinuirano raste, dok vrijeme posvećeno konzumaciji tradicionalnih medija kontinuirano opada." (Perčić & Perić, 2022) Iako većina tvrtki koristi društvene mreže za poslovanje, ispitanici nisu toliko aktivni što se tiče dijeljena informacija vezanih za tvrtku ili posao na društvene mreže. Rezultat toga može biti da poduzeće nudi pristup društvenim mrežama samo onim odjelima koji koriste društvene mreže u sklopu svog radnog mjesta. Ispitanici koji koriste društvene mreže tijekom radnog vremena uglavnom ne dolaze do konfliktnih situacija od strane poslodavca, ali dolazi do manjih prigovora. Većina ispitanika smatra da poslodavci nemaju pravo provjeravati njihove aktivnosti i ponašanja na društvenim mrežama iako bi to bilo opravdano ako bi se ono odražavalo na poduzeće. „Provođenje fleksibilnog radnog vremena se ne može dobro odraziti na uspješnost u poslovanju ukoliko su zaposlenici nekvalitetno pripremljeni ili neinformirani, ukoliko se ne postave jasni ciljevi, ali i ukoliko se ne uspostave odnosi odgovornosti i povjerenja." (Kulaš Mirosavljević i saradnici, 2023) Uz praćenje javlja se pitanje poznavanja pravila o zaštiti privatnosti s kojima je većina ispitanika upoznata iako vjerovanje u postupke zaštite privatnosti na Internetu nije potpuno. Unatoč ustupanju određenih osobnih podataka prilikom korištenja društvenih mreža, ispitanici nisu toliko zabrinuti zbog nadzora i praćenja od strane drugih na društvenim mrežama. Korisnici društvenih mreža odnosno Interneta uglavnom se ponašaju u skladu s etičkim normama, a većina poslodavaca također u svom radu primjenjuju etičke norme.

ZAKLJUČAK

S tehnološkim napretkom mijenja se svijet u kojem živi današnji čovjek. Društvene mreže postale su neizostavan dio svakodnevice u privatnom i poslovnom životu pojedinca. One omogućuju lak način za povezivanje i komunikaciju. Poduzeća društvene mreže najčešće koriste za promicanje ili oglašavanje svojih proizvoda i usluga. Važnost društvenih mreža raste iz dana u dan. S rastom popularnosti društvenih mreža pojavljuje se niz etički pitanja koje se odnose na poslovno okruženje, a etička strana društvenih mreža se rijetko razmatra. Etička pravila koja se primjenjuju u stvarnome svijetu vrijede i na društvenim mrežama.

Korištenje društvenih mreža sa sobom nosi određeni strah kod korisnika zbog velikog broja prijevara. Kada bi se cijelo društvo ponašalo etički, toga ne bi bilo. Zaštita privatnosti, kada se govori o elektroničkom poslovanju, je moralno pravo svakog pojedinca, no kod nekih pojedinaca moralne vrijednosti nisu važne.

Istraživanjem se zaključilo da, iako su društvene mreže u velikoj mjeri zastupljene u životima ljudi, u poslovnom svijetu je njegovo korištenje ipak svedeno na minimalnu razinu. Zaposlenici se pridržavaju naputaka i pravila o korištenju društvenih mreža za vrijeme radnog vremena. Postupanjem u skladu s pravilima tvrtke predstavlja ponašanje u skladu s etičkim normama. Samim time ne dolazi do upuštanja u konfliktne situacije s poslodavcem niti stavljanja zaposlenika u neugodnu situaciju koja može rezultirati otkazom.

Za kraj se može reći da na pojedincima ostaje kako će koristiti mogućnosti koje im nude društvene mreže. Uz pravilnu kontrolu ponašanja na društvenim mrežama, poštivanje privatnosti i pravila ponašanja poticat će se dodatan rast i razvoj društvenih mreža.

Dobiveni rezultati istraživanja umjereno potvrđuju teorijske postavke.

Stoga se prihvaća hipoteza postavljena na početku ovog istraživanja, a to je da zaposlenici često koriste društvene mreže, najčešće u privatne svrhe, tijekom radnog vremena.

Ograničenje ove studije bilo je raspoloživo vrijeme za ispunjavanje upitnika. Budući da se radilo o online upitniku, pristup mu je bio vremenski ograničen. Rezultat je bio da ga neki od sudionika nisu mogli dovršiti u navedenom roku. Naposljetku, veličina i reprezentativnost uzorka problem su kojim se treba pozabaviti.

Uz ograničenja studije, mora se istaknuti važnost provođenja daljnjih istraživanja kako bi se dobili valjaniji rezultati i koristiti veći uzorak.

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ETHICAL COMMUNICATION ON SOCIAL NETWORKS

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Summary: *Communication is a key segment in social and business life. Through new communication channels, which have emerged as the main ones in recent years, social media enable much faster and simpler communication. By following the latest trends and using social media for communication, companies strive to acquire new customers, retain existing customers, survive in the market and compete.*

Using social networks to create and maintain private and business relationships also requires a certain, acceptable type of behavior. What should be paid attention to are certain limits, ie limitations and responsibilities in the application of this type of public communication. In this case, we are talking about ethics, which represent generally accepted rules that should be applied in relationships. Both in the traditional business world and in the online business world, there are certain rules that users should follow if they want to achieve and maintain healthy business relationships. For users of social networks, it is important to develop an awareness of the responsibility of what is said and written on social networks. Therefore, the application of basic ethical and commu-

nication standards, which at the same time represent universal standards, represent a key component in relationships between people.
The aim of the paper is to investigate how much employees use social networks during their free time and during working hours, what their behavior is on social networks and whether they think their behavior is ethical or unethical. During the research, people who are employed in the Republic of Croatia were examined.
The hypothesis is: Employees often use social networks, most often for private purposes, during working hours.
The methodology in this paper uses descriptive statistics that will provide information about the variables in a particular data set and highlight the relationships between the variables in the sample.
The results of the research will be shown with the help of a Likert scale.
The research concluded that, although social networks are widely represented in people's lives, their use in the business world has been reduced to a minimal level. Employees follow the instructions and rules regarding the use of social networks during working hours. Acting in accordance with company rules represents behavior in accordance with ethical norms. In the end, it can be said that it is up to individuals how they will use the opportunities offered by social networks. With proper control of behavior on social networks, respect for privacy and rules of conduct will encourage additional growth and development of social networks.

Keywords: *communication, social networks, behavioral rules, ethics*

JEL classification: *A13*

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PREGLEDNI NAUČNI RAD / OVERVIEW SCIENTIFIC PAPER

TRANSFORMATIONAL AI (TRAI): REVOLUTIONIZING THE MODERN BUSINESS WORLD

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Abstract: *Transformational Artificial Intelligence (TRAI), a subset of Transformative AI (TAI), empowers individuals to design and implement sophisticated data transformation workflows. TRAI systems enable new ways of working and learning by progressively manipulating data through a series of operations. This article explores TRAI's potential to revolutionise workflows, information consumption, and decision-making, offering practical guidance on leveraging existing tools to implement TRAI today. It also discusses the democratisation of workflows, the power of AI triggers, and the skills needed to excel in the TRAI landscape, emphasising that TRAI is not just for tech experts but anyone willing to learn and experiment. This article provides practical guidance on leveraging existing tools to implement TRAI today. It discusses the democratisation of workflows, the power of AI triggers, and the essential skills needed to excel in the TRAI landscape. Ultimately, TRAI is not just for tech experts but for anyone willing to learn and experiment, paving the way for more inclusive and effective AI solutions.*

Keywords**:** *artificial intelligence, transformational AI, workflows, automation, data transformation.*

JEL Classification: *O33, M15.*

INTRODUCTION

Artificial Intelligence (AI) has often been seen as the domain of experts, requiring specialised knowledge and complex coding. However, a new paradigm is emerging transformational artificial intelligence (TRAI). TRAI, a subset of Transformative AI (TAI), democratises the power of AI by enabling practically anyone with an open mind and some testing to design and implement sophisticated data transformation workflows, even without a technical background. In this article, we'll introduce you

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to the concept of TRAI, demonstrate its potential to revolutionise how we work and learn and provide practical guidance on how to get started with readily available tools.

DISTINGUISHING TAI AND TRAI

Transformational AI (TAI) is a broader concept encompassing any AI technology that has the potential to initiate significant, potentially irreversible change within society. This could manifest in several ways, from reshaping industries to altering societal norms. While terms like "human-level AI" and "artificial general intelligence" capture the potential for significant societal change from advanced AI, they lack clear definitions (Gruetzemacher & Whittlestone, 2022). In their place, Gruetzemacher and Whittlestone propose the concept of Transformative AI (TAI), emphasising the potential for AI to radically impact society, even without achieving human-level intelligence.

On the other hand, here we introduce the concept of Transformational Artificial Intelligence (TRAI) as a crucial technical underpinning for achieving TAI. TRAI focuses on the multi-step transformation of data structures. This model serves as the foundation for fundamentally changing workflows across diverse fields. By progressively manipulating data through a series of operations, TRAI systems enable entirely new ways of working, ultimately driving the broad societal changes envisioned by TAI.

Table 1. Comparison of TAI and TRAI

Term	Focus	Scope
TAI (Transformative AI)	Broad societal change	Potential to reshape industries, norms, etc.
TRAI (Transformational AI)	Technical processes	Multi-step data transformation workflows

Source: The authors' elaboration

APPLICATIONS OF TRAI

Learning from lengthy online resources can be time-consuming.

Imagine a world where you could quickly grasp the essence of a 2-hour video tutorial without fully watching it. TRAI promises to make this possible, transforming how we digest and learn from information.

Consider a common scenario: you find a potentially valuable 2-hour video tutorial on a topic you want to explore. Traditionally, you'd dedicate two hours, take notes, and hope the content is worth the time investment.

With TRAI, the approach is completely different:

- *Step 1:* Audio Extraction: The TRAI process starts with audio extraction for a seamless workflow.
- *Step 2:* Speech Transcription: An AI service accurately transcribes the audio into a text file. This step exemplifies the power of AI within TRAI. Without advanced AI for speech recognition, processing the audio into usable text would be a significant hurdle.
- *Step 3:* AI Summarization: A TRAI tool generates a concise summary and a list of key learning points based on your query (e.g., "Outline the core concepts and takeaways"). Here, AI shines again. Natural Language Processing allows the TRAI system to analyse the transcribed text, identify key points, and present them in a summarised format.

- *Step 4* (Optional): Mind Map Generation: Upon further prompting ("Create a mind map connecting the key concepts"), the TRAI tool visually represents the knowledge structure outlined in the video. This step leverages AI's ability to process information and generate a visual representation based on the identified key points.

This multi-step TRAI process transforms the raw video content into highly usable formats within minutes. You can quickly assess the video's relevance, obtain core takeaways, and visualise the information based on your preferred learning style, all without investing two hours into watching the entire video.

Table 2. Progressive transformation is a core of Transformational AI

Source: (TED, Gamification to improve our world | Yu-kai Chou at TEDx Lausanne, 2014)

This example illustrates the core of TRAI: progressively transforming data (video) through interconnected steps, utilising a range of TRAI tools. For the context of TRAI, a 'tool' refers to any resource, software, or service that facilitates the preparation and transformation of data from one form to another. These tools can be based on AI or conventional methods and may be locally available or accessed remotely through an online service (SaaS).

The presented example is only a glimpse of TRAI's potential to revolutionise our interactions with information. However, the implications extend far beyond individual tasks. By reshaping how we approach workflows, TRAI is democratising the ability to automate and optimise processes, previously the domain of technical specialists. This democratisation has the potential to rapidly transform entire industries, promising significant time and cost savings. For instance, the impact of AI on firm performance has been extensively studied, revealing that AI-based transformation projects across various industrial sectors can optimize existing processes, enhance automation, and improve decision-making. These improvements lead to significant performance enhancements at both organizational and process levels. Organizations can achieve better performance through AI capabilities by effectively reconfiguring their processes to leverage AI technologies (Wamba-Taguimdje, S.-L., Wamba, S. F., Kamdjoug, J. K., & Wanko, C., 2020).

The banking sector provides a striking example of this potential: analysts predict that AI technology alone could generate more than $1 trillion worth of additional benefits for the banking industry by 2030 (Koyluoglu & Acar, 2023).This massive eco-

nomic impact illustrates how TRAI can swiftly and dramatically alter the landscape of an entire industry. As organizations across various sectors adopt these technologies, we can expect similar transformative effects, with TRAI enabling faster, more efficient, and more innovative approaches to a wide range of business processes.

BUSINESS AND TRAI WORKFLOWS: A SHARED FOUNDATION, BUT A TRANSFORMATIVE LEAP

Business workflow methodology, a time-tested discipline, provides a structured approach to analysing, designing, and optimising organisational processes. Its value is undeniable, but its reliance on technical expertise often creates barriers to implementation (Reiner, B., Siegel, E., & Carrino, J., 2002). Now is the time to enter Transformational Artificial Intelligence (TRAI), a new-time concept that builds upon the familiar foundation of business workflows while offering distinct advantages powered by AI.

Shared Principles: A Bridge to Understanding

TRAI shares fundamental similarities with traditional business workflows, making it easier for business professionals to grasp its potential:

- Modular Design: Both rely on interconnected steps with a specific function. This might involve data entry, approvals, and reporting in business workflows. TRAI mirrors this structure with audio extraction, transcription, and summarisation steps.
- Sequential Progression: Both emphasise a logical sequence, where each step builds upon the previous one to achieve the desired outcome.

1. Transformation as the Goal: The core purpose of both is transformation. Business workflows transform raw data and inputs into desired outputs, like turning customer inquiries into resolved issues (Guru, Q., 2011). TRAI takes this further, using AI to transform data into more valuable forms, such as concise summaries or insightful visualisations.

- Triggers: Events, data changes, or user input initiates actions in both systems. In a business workflow, an incoming order triggers fulfilment. In TRAI, events like a customer's query or a change in market conditions can trigger a sophisticated AI-powered process.

The AI Advantage: Where TRAI Takes Flight

While the foundational principles are shared, TRAI distinguishes itself through its integration of AI, unlocking capabilities that traditional workflows can't match:

- Data Transformation Powered by AI: TRAI leverages AI to analyse vast amounts of data, extract meaningful insights, and make intelligent decisions. This goes far beyond simple rule-based transformations. For example, in supply chain management, AI can analyse real-time data to predict disruptions and optimise inventory levels, something traditional methods need help to achieve. If a key material is in low supply from one partner, AI can help companies identify other suppliers on short notice (Melton, J., & Evans, K, 2024).
- "Intelligent Triggers: TRAI's triggers are not reactive but proactive and intelligent. AI models can analyse data patterns and predict potential issues

before they arise. In fraud detection, AI can analyse customer behaviour and flag suspicious transactions, saving time and resources (Vyas, 2023), (Halvaiee, N., & Akbari, M., 2014)."

From Siloed Tools to a Unified Platform: TRAI consolidates data and tasks from various disconnected tools into a single platform. This eliminates the need to juggle multiple applications, streamlines communication, and creates a single source of truth for informed decision-making.

Emphasis on transformation

TRAI workflows aren't just about adding AI to existing processes; they are designed from the ground up to leverage AI's transformative power. This term underscores the fundamental shift in how data is processed, decisions are made, and outcomes are achieved.

The shared foundation between TRAI and traditional workflows provides a crucial advantage. Business professionals can quickly understand and embrace TRAI's capabilities by leveraging their knowledge. This familiarity empowers them to become champions for change, advocating for AI adoption and leading the charge in transforming their organisations (Russell & Norvig, 2021).

THE DEMOCRATISATION OF WORKFLOWS

Despite sharing core similarities with traditional business workflows, TRAI introduces a revolutionary distinction: unparalleled accessibility. While classic workflows often demand coding or programming expertise, TRAI shatters those barriers.

TRAI is more than just a new tool; it signifies a fundamental shift in approaching problem-solving and process automation. It's about recognising that AI isn't just for tech specialists; it's a resource that anyone with a curious and open mindset can harness.

TRAI opens its doors to everyone within an organisation by leveraging human-like conversation and intuitive interfaces. This means that existing skills still need to be updated. Instead, TRAI demands new skills, primarily process thinking and a willingness to learn and adapt (Goodfellow, Ian ; Bengio,Yoshua, 2016).

Anyone Can Learn: Developing the Necessary Skills

To fully embrace TRAI, individuals must be willing to:

- Cultivate Process Thinking: Understanding how to break down complex tasks into smaller, manageable steps is crucial for designing effective TRAI workflows.
- Learn New Tools: While TRAI eliminates the need for coding, familiarity with various TRAI tools and platforms is essential.
- Embrace Experimentation: TRAI is a rapidly evolving field. Be bold, try new approaches, test different tools, and continuously iterate on your workflows.

The Key Takeaway: TRAI's In-House Potential

With TRAI, the power to design and implement workflows shifts from IT departments to the broader workforce. This democratisation empowers organisations to:

- Utilise All Available Resources: TRAI enables everyone to contribute their unique expertise and perspectives to workflow design, fostering collaboration and innovation.
- Embrace Agility: Traditional workflow changes can be cumbersome. TRAI allows for rapid adaptation, enabling organisations to respond quickly to evolving needs and seize new opportunities.

In essence, TRAI isn't about making everyone an instant expert. It's about fostering a mindset of continuous learning and recognising that AI is a tool everyone can learn to leverage for greater efficiency and innovation. By embracing this new paradigm, organisations can unlock the full potential of their human capital and drive transformative change.

THE POWER OF AI TRIGGERS: DYNAMIC WORKFLOWS AND ENHANCED DECISION-MAKING

In traditional business workflows, triggers act as the starting point or catalyst for a series of actions. These triggers are often based on predetermined rules or conditions. For instance, an incoming customer order might trigger a fulfilment process, or a low inventory level could trigger a reordering process. These rule-based triggers provide a basic level of automation, ensuring that specific actions are taken when certain conditions are met.

One of TRAI's standout features is its ability to incorporate AI triggers, significantly enhancing workflow adaptability and intelligence. Unlike traditional triggers based on fixed rules or simple conditions, AI triggers leverage machine learning models to make more nuanced and context-aware decisions. This enables workflows to respond dynamically to complex situations and diverse data inputs, leading to more effective and efficient processes.

Defining AI Triggers

An AI trigger is a decision point within a TRAI workflow that activates based on the output of an AI mode, such as sentiment analysis in text or image recognition in visual content. When the AI model detects a predefined pattern or threshold, it triggers a specific action or path within the workflow.

Example: Intelligent Technical Support Routing

Let's consider your example of a technical support workflow. In this scenario, an AI trigger can route incoming emails dynamically based on customer sentiment.

- Email Analysis: An AI model with sentiment analysis capabilities scans incoming support emails.
- AI Trigger Activation: If the model detects a strong negative sentiment (e.g., anger, frustration, or threats), it activates a trigger.
- Workflow Branching: The triggered workflow branches off, escalating the issue to a technical support leader or manager.
- Standard Processing: Emails with neutral or positive sentiments follow the standard support process.

This example highlights the value of AI triggers. Without this capability, all support tickets would be processed uniformly, potentially delaying responses to urgent or

sensitive issues. AI triggers enable a more responsive and tailored approach, ensuring that the most critical concerns receive prompt attention from the appropriate personnel.

AI triggers represent a significant leap forward in TRAI's capabilities. By incorporating machine learning into decision points, workflows can dynamically adapt to complex situations, streamline processes, and improve outcomes across various domains.

BREAKING LANGUAGE BARRIERS: AI-POWERED INTERFACES

With AI agents' ability to communicate in multiple languages, changing the language of interaction within TRAI processes becomes effortless. This opens many possibilities, particularly in today's increasingly multicultural world.

Consider multilingual surveys designed with open-ended questions to gather insights from diverse respondents.

Traditionally, this would involve translating the survey into every anticipated language, a costly and time-consuming process. With TRAI, language selection becomes as simple as choosing from a dropdown menu. AI seamlessly translates survey questions in real time, adapting them linguistically and culturally. This ensures that questions are not just translated word-for-word but resonate with the specific nuances and sensitivities of the target group.

The result is a rich database of responses in various languages, which would have been incredibly challenging to analyse. With TRAI, you can build workflows to perform complex tasks like topic or sentiment analysis across this multilingual dataset. The AI can filter out irrelevant or low-quality responses and normalise the data to facilitate meaningful comparisons.

Ultimately, TRAI eliminates the need for manual translation and extensive adaptation of surveys, freeing up resources to focus on extracting valuable insights and driving more informed decision-making from diverse linguistic data.A question for you - does a video transformation from the beginning of this article pose any challenge in TRAI methodology if this video is, for example, in language you don't understand?

PACKAGING TRAI FLOWS: BUILDING BLOCKS FOR INTELLIGENT AUTOMATION

A key advantage of TRAI methodology is the ability to encapsulate individual workflows into reusable packages, much like LEGO bricks. Each package represents a self-contained unit of functionality, such as "transform video takeaways into mind map". These packages can then be easily combined and interconnected to create larger, more complex TRAI flows.

The Benefits of Packaged TRAI Flows

- Modularity: Packaged TRAI flows promote a modular approach to automation. This allows for greater flexibility and customisation, as users can select and assemble the specific components they need for a given task.
- Reusability: By packaging flows, users can reuse pre-built components across different workflows, saving time and effort in development.
- Collaboration: Packaged flows can be shared and reused within teams or organisations, fostering collaboration and knowledge exchange.
- Scalability: Packaged flows can be scaled up or down as needed, allowing users to adapt their automation to changing requirements.

According to Cull and Eldabi (Cull, R., & Eldabi, T, 2010), a hybrid approach to workflow modelling supports this modularity, enhancing adaptability and efficiency in complex systems.

Interconnected Information Systems and AI Flows

"TRAI leverages interconnected information systems and AI flows to deliver its transformative power. Data can seamlessly flow between tools and services, regardless of location. For example, a TRAI flow might start on your local computer, utilise cloud-based AI services for processing, and then return the results to your machine (Josifoski, M., Klein, L., Peyrard, M., Li, Y., Geng, S., Schnitzler, J., Yao, Y., Wei, J., Paul, D., & West, R, 2023).

This distributed architecture allows TRAI to leverage the best available tools and resources for each process step. It also enables seamless integration with existing systems, enhancing the value of your current infrastructure.

Building a Learning Organization with TRAI

The LEGO-like nature of TRAI opens up exciting possibilities for learning organizations. Imagine a scenario where employees create AI-powered workflows tailored to their specific needs. These flows can then be shared and reused by others within the organization, creating a more complex workflow. This bottom-up approach to automation empowers users to take ownership of their workflows and continuously improve them. By leveraging the organization's collective intelligence, TRAI can drive innovation, streamline processes, and free up valuable time for more strategic tasks (Amershi, S., Begel, A., Bird, C., Deline, R., Gall, H., Kamar, E., Nagappan, N., Nushi, B., & Zimmermann, T., 2019).

LEARNING THE POWER OF TRAI: 5 SURPRISING SKILLS YOU NEED

Have you ever seen a Rube Goldberg machine[1]? It's a delightfully complex contraption that uses chain reactions and everyday objects to achieve a simple task. This humourous approach to problem-solving, popularised by the American cartoonist Rube Goldberg, shares a surprising connection with the world of Transformational AI (TRAI). Just like those intricate machines, TRAI involves orchestrating a sequence of steps to transform data ingeniously. According to Acharya and Sirinterlikci (Acharya, S., & Sirinterlikci, A. , 2010), introducing engineering design through intelligent Rube Goldberg implementations can provide a unique educational experience that fosters creativity and problem-solving skills.

If you're intrigued by the idea of building your own "digital Rube Goldberg machines," here are five fascinating skills you'll need to master to become a TRAI expert:

1. The Data Detective: As Rube Goldberg meticulously planned each step of his contraptions, TRAI developers must have a keen eye for data. You'll

[1] Reuben Lucius Goldberg (1883-1970), was an American cartoonist renowned for his humorous depictions of complex contraptions designed to perform simple tasks convolutedly. These "Rube Goldberg machines," often involving chain reactions, reflected a fascination with interconnectedness and playful ingenuity—qualities that resonate with the design of TRAI workflows. (See examples here: https://bit.ly/RUBE-TRAI)

need to uncover hidden patterns, inconsistencies, and opportunities for transformation within datasets. It's like being Sherlock Holmes, piecing together clues to unravel the mysteries hidden within data, its structures, representations, and different standards.

2. The Workflow Architect: Rube Goldberg's machines were a symphony of interconnected parts, each triggering the next in a delightful chain reaction. Similarly, designing effective TRAI flows requires a vision of how different AI models and tools can work together seamlessly. You'll be the architect, crafting intricate workflows that transform raw data into valuable insights.
3. The Language Whisperer: Many TRAI applications involve working with natural language, whether analysing text, understanding voice commands, or generating summaries. Your secret weapon will be a deep understanding of language nuances and the ability to communicate effectively with AI models.
4. The Tech-Savvy Tinkerer: While you don't need to be a coding wizard, you'll need to get comfortable with a diverse toolkit of TRAI technologies. Think of yourself as a modern-day Rube Goldberg, experimenting with various software and AI services to create innovative solutions.
5. The Ethical Navigator: TRAI's impact can be profound, so it's crucial to consider the ethical implications of your work. Are your algorithms fair and unbiased? Could they be misused? Just as Rube Goldberg's creations were meant to inspire and amuse, TRAI should be developed responsibly, focusing on positive societal impact. Ethical considerations in AI also involve transparency, accountability, and societal impact, emphasizing the responsible development and deployment of these technologies (Jaiswal, R., Sharma, S., & Kaushik, R. , 2023).

Bonus Skill: The Lifelong Learner: The world of TRAI is constantly evolving, so the most successful practitioners embrace a growth mindset. Never stop learning, experimenting, and pushing the boundaries of what's possible with this transformative technology.

Building real-life TRAI applications is an exhilarating journey that blends creativity, technical skill, and ethical responsibility. By drawing inspiration from the playful genius of Rube Goldberg and embracing these essential skills, you'll be well on your way to becoming a TRAI trailblazer.

KEY TAKEAWAYS: PUTTING TRAI INTO PRACTICE TODAY

Transformational AI (TRAI) isn't just a futuristic concept; it's a practical tool you can use today to reshape how you work, learn, and interact with information. Here are some key takeaways from this article that you can apply right now:

1. Embrace the Lego-like Approach: Think of TRAI as a set of building blocks. Take your time with the idea of complex workflows. Experiment with individual tools and services to understand how they can be combined to achieve specific goals.
2. Explore Existing Tools: You don't need to be a developer to leverage TRAI. A wealth of user-friendly tools is readily available. Experiment with audio extraction, speech-to-text transcription, AI summarisation, and even mind map generation. Many of these tools offer free trials or basic versions to get

you started.

3. Think in Workflows: Break down tasks into smaller steps and identify how AI tools can automate or enhance each step. This could be as simple as using a text summariser to quickly grasp the key points of a long article or automating repetitive data entry tasks.
4. Ask for Help: Be bold and leverage the power of AI. Ask chatbots or AI assistants to help you brainstorm ideas, generate summaries, or even create simple workflows. The technology is rapidly advancing, and you might be surprised by what it can do.
5. Keep Learning: TRAI is a dynamic field with new tools and techniques emerging constantly. Stay curious and explore online resources, tutorials, and communities to expand your knowledge and stay ahead of the curve.

CONCLUSION

The beauty of TRAI is that it's wider than tech experts. Anyone willing to learn and experiment can harness its power to transform their daily tasks and streamline their workflows. By embracing TRAI today, you're not just preparing for the future but actively shaping it.

Transformational Artificial Intelligence (TRAI) represents a paradigm shift in how we approach data manipulation and workflow management. TRAI empowers individuals and organisations to automate tasks, optimise processes, and extract greater value from information by offering user-friendly tools and a modular workflow design. Business professionals can leverage their knowledge of process design and goal-oriented thinking to become champions of TRAI adoption. TRAI's democratisation of AI removes the need for specialised technical expertise, allowing businesses to harness the power of AI to streamline operations, enhance decision-making, and foster a more collaborative and innovative work environment.

Whether analysing complex data sets, automating repetitive tasks, or optimising supply chains, TRAI offers many applications to drive efficiency, productivity, and business growth. By embracing TRAI's processes and AI-driven insights, businesses can start a future where dynamic workflows, agility, and collaboration are the norm, not the exception.

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AGE-RELATED DIFFERENCES IN INSTAGRAM USAGE AND LUXURY BRAND PERCEPTION: A STUDY IN CROATIA

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Abstract: *The study investigates Instagram usage frequency, reasons among various age groups, and potential age-related differences in customers' perceptions of luxury brands and purchase intentions. Additionally, literature on Instagram's influence on customer perception, brand image, luxury brand perception, and generational trends in digital consumer behavior was analyzed. Conducted in Croatia, the study utilized a non-random convenience sample of 192 respondents. The questionnaire comprised 32 questions split into two sections: the first gathered demographic data to profile the sample, while the second assessed social media use and participants' perceptions of the influence of Instagram marketing activities on brand image and buying intentions. Descriptive and multivariate analyses were conducted using IBM SPSS software version 22 to evaluate the hypotheses. The study found a higher participation of women than men, with an average age of 28, which aligns with previous research in the field. Significant disparities in media utilization were observed between younger (average age 22.34) and older (average age 34.75) participants. Instagram is primarily used by women and younger age groups, with 95% of younger participants accessing it daily. The study confirmed that younger users are more interested in friends' activities, sharing their own activities, and viewing appealing images, while older users follow brands/celebrities and seek personal content, which supports the hypothesis that reasons for using Instagram vary by age. Younger participants believe Instagram significantly influences luxury brand image and their buying intentions. Both age groups reported that a positive brand image influences purchase intent similarly, partially supporting the hypothesis that age affects luxury brand perception and buying intention on Instagram. The study highlights the importance of age diversity in creating effective marketing strategies on Instagram, influencing consumer behavior and purchase decisions, and enhancing understanding of Instagram's influence on luxury*

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brand perceptions and purchasing behavior across various generations in Croatia.

Keywords: *Instagram, luxury brands, customer perceptions, age groups, Croatia.*

JEL Classification: *M10, M31, D12, C83.*

INTRODUCTION

The media has seen a substantial change in the last ten years, and the popularity of social media has seen a significant increase in recent years (Mangold & Faulds, 2009). Social media is transforming how luxury brands connect with stakeholders and market their products, enhancing the likelihood of turning potential customers into paying customers and enhancing the online purchasing process. Instagram was proclaimed the dominant social media platform (Uzunian, 2013), yet many studies still primarily concentrate on social media, overlooking Instagram's significant marketing possibilities. However, researchers and brand managers do not entirely understand how social media communication affects customer views of brands (Schivinski & Dabrowski, 2015). The rising importance of Instagram and its expanding use by leading luxury brands indicates a desire to comprehend its impact on customer behavior. Brands that consistently curate visually appealing content and images on Instagram are more likely to generate favorable feedback and establish a more favorable perception among their current and prospective customers. The same is true for luxury brands. The higher the perception, the bigger the chances customers will buy certain luxury products and are ready to pay more.

This study examines Instagram's possible influence on customers' perceptions and brand images of luxury products. It strives to analyze how various customer generations engage with Instagram and whether the platform influences their purchasing intentions toward luxury brands. Furthermore, the study aims to explore the motivations driving Instagram engagement and confirm if users follow luxury companies. It also aims to investigate perceptions of luxury brands and their influence on purchase intentions while examining potential age-related changes in consumer behavior. Additionally, the study focuses on Instagram's role in influencing consumer purchasing decisions for luxury products. Understanding how consumer age groups impact decision-making processes based on Instagram's influence is given special attention. The objective is to assess the extent to which Instagram directly impacts decision-making among different age demographics and to help companies develop better marketing communication activities on social networks, primarily on Instagram.

The following text contains chapters that present data and research related to Instagram in general, followed by a discussion on the connection and impact of Instagram on customer perception and brand image. After that, the impact of Instagram on luxury brand perception is examined in more detail, followed by a review of research related to the age and generations that use Instagram the most. Based on these studies, hypotheses have been formulated and presented in the research methodology section, followed by the presentation of results and discussion. In the conclusion at the end of the paper, the limitations of the research and recommendations for its practical application are also provided.

LITERATURE OVERVIEW

Conceptual background on Instagram

The impact of social media on society is remarkable, and its emergence has provided marketers with an alternative way to engage with customers more directly and naturally (Glucksman, 2017). Whiting & Williams have identified various motivations for utilizing social media, including but not limited to „social interaction, information seeking, entertainment, relaxation, convenience, expression of opinion, information sharing, surveillance, and knowledge about others“ (Whiting & Williams, 2013). Social media platforms have the highest engagement rates based on comments and likes per post and are among the fastest-growing networks by active users (Phua, Jin, & Kim, 2017). In addition, the increasing number of social media platforms—Facebook, Twitter, Snapchat, LinkedIn, YouTube, and Instagram—has contributed to the growth of influencer marketing on social media, with the phenomenon of influencers being widely linked to Instagram as a social network (Gross & von Wangenheim, 2022). Scientific sources agree that the subject of consumer behavior research is the study of how individuals and households make decisions to satisfy their needs and how they spend their resources (money, time, and energy) on consumption. It is mainly about researching what consumers buy, why and how do they buy it and when, where, and how often do they buy it. However, the most important questions are how and why consumers decide to buy products (Kollárová, Koliščáková, & Trnka, 2023).

Instagram, a cost-free smartphone app for sharing photographs and videos online, was launched in October 2010 and now boasts 500 million daily active users and 1.3 billion monthly active users worldwide (Smith, Instagram Statistics and User Count for 2024, 2024). Currently, with 2 billion monthly active users according to a Statista report, Instagram is one of the most popular social networks worldwide, with its primary demographic being individuals aged 18-29, especially women (Statista, 2024). Its success is largely due to its focus on visuals over text, and it has recently evolved to promote more “Reels” and content sharing among users. Instagram is considered a marketing platform with different communication trends, and with the explosion of Internet users, it has become a new channel for companies to implement their sales promotion activities (Rochman & Iskandar, 2015). Users may follow others and stay informed about their favorite companies, interests, and latest trends, which is crucial for marketing (Hennig-Thurau, Gwinner, & Gremler, 2002), making Instagram a key player in social media for managing businesses across different industries.

Social media platforms for sharing photographs, such as Instagram, provide businesses with a cost-effective and high-quality marketing environment that is highly targeted at consumers and advantageous from a competitive standpoint (Safko, 2012). Today, 25 million businesses have Instagram profiles, with over 50% being active and producing a story (Smith, Instagram Statistics and User Count for 2024, 2024). Brands may implement Instagram marketing in several ways, such as banner advertising and hashtags (#) in consumer posts. Brands can establish their own brand pages to share information about their latest items with their fans (Johnston, 2017).

Traditional brand and marketing communication has undergone significant changes during the past decade, as the growth of social media is reshaping behavior, perception, and cognition. Increasing online social platforms encourages users to develop digital skills, shifting from passive to active engagement and empowering

them in new ways (Sharma & Verma, 2018). Despite its marketing potential, there is a shortage of studies specifically on Instagram. Limited information exists on its use across customer segments, its impact on brand perception, and its role in online purchases. Most social media studies are general, with few focusing on Instagram's potential. Casalo et al. categorized previous research on Instagram into three groups (Casalo, Flavian, & Ibanez-Sanchez, 2017). The first focuses on analyzing user-generated content (UGC), particularly photos with friends and selfies (Hu, Manikonda, & Kambhampati, 2014). The second group examines the link between Instagram and users' emotions, suggesting that the platform can enhance happiness and reduce loneliness (Pittman & Reich, 2016). The third group investigates motivations and satisfaction with Instagram use (Phua, Jin, & Kim, 2017). Recent research also explores the optimal timing for posting and engagement on Instagram (Singh, Jaiswal, & Singh, 2023). Although there has been a rise in empirical studies on social media, there is not enough knowledge about how social media content impacts customer views of companies and consumer actions (Schivinski & Dabrowski, 2015). While some studies focus on Instagram's influence on customer perception and image, others focus on customer engagement (Liu, Shin, & Burns, 2021). Considering the fact that customer perception of companies and products that use Instagram to connect with customers is closely linked to brand image, that is, how customers perceive the quality, values, and personality of the brand, in the following section of the paper, we will analyze in more detail the studies written on topics in these important areas.

Impact of Instagram on Customer Perception and Brand Image

This chapter outlines previous research on customer perception linked to Instagram. It explores how customers interpret a brand based on its presence and activities on the platform, focusing on aspects such as brand image, consumer perception of authenticity, relevance, and trendiness. Additionally, it discusses brands' engagement and interaction with consumers, customer reviews and feedback, and collaborations with influencers on Instagram, highlighting their significant impact on customer perception.

Customer perception is considered a key competitive advantage (Pirić, Martinović, & Barac, 2018). Statt emphasizes that customers' perception of a product or service impacts their behavior more than any objective attribute (Statt, 1997). Several studies indicate that social media marketing positively affects customers' perceptions of brands that engage in such marketing activities (Beneke, Blampied, Miszczak, & Parker, 2014); (De Vries, Gensler, & Leeflang, 2012). Social media offer different values to corporations, such as improved brand popularity (De Vries, Gensler, & Leeflang, 2012) or increased sales (Agnihotri, Kothandaraman, Kashyap, & Singh, 2012) and have significantly challenged today's advertising style (Silvira & R., 2024). Social media currently plays a crucial role in brand building (Jeswani, 2023). There is a strong relationship between brand trust and brand image, with brand impact positively affecting brand trust (Aslam, 2024). Empirical research indicates that brand effect enhances trust during online purchases (Lin & Lee, 2012). Branding is directly linked to brand equity, which affects consumer decision-making (Sallam, 2016). Brand equity and attitude positively impact purchase intention (Schivinski & Dabrowski, 2015). Positive brand attitude and image impact customer behavior, including brand contemplation, purchase intention, purchase behavior, and brand choice (Schivinski &

Dabrowski, 2015). Instagram significantly influences customers' brand choices, highlighting the need to integrate it into marketing strategies to boost brand exposure and reach a broader audience. UGC on Instagram has a substantial influence on brand valuation, according to Forrester's report (Forrester, 2014). These platforms enable customer interactions, diminishing corporations' exclusivity as the primary source of brand communication (Li & Bernoff, 2011). Brand interaction through UGC, comments, likes, and direct messages enhances customers' perception of the brand as accessible, responsive, and customer focused. Today, consumers rely on the Internet for guidance (Bilgihan, Kandampully, & Zhang, 2016).

Marketing scientists and practitioners have researched a range of topics, such as online reviews (Karakaya & Barnes, 2010), virtual brand communities (Algesheimer, Dholakia, & Herrmann, 2005), brand fun pages, advertising, and UGC (De Vries, Gensler, & Leeflang, 2012). Traditional brand communications, which were previously overseen by brand and marketing managers, are receiving a growing amount of consumer influence (Schivinski & Dabrowski, 2015). Beneke et al. found that the brand's capacity for interactivity significantly impacts positive brand perceptions (Beneke, Blampied, Miszczak, & Parker, 2014). Finally, the potential for a positive brand-consumer relationship has been enhanced, according to Duffy, by the two-way communication that social media platforms enable (Duffy, 2013). The impact on brand credibility and authentic perception can also be influenced by engaging with social media influencers, individuals with a large following, and compensating them for promoting a product (Long, 2016). All of this also applies to luxury brands, which are the focus of this paper and will be analyzed in more detail in the next chapter.

Impact of Instagram on Luxury Brand Perception and Consumer Behavior

When it comes to luxury brands, Instagram is considered very effective in developing a unique brand personality and strengthening the brand image (Vaynerchuk, 2013). Additionally, luxury brands play a risk-reduction role in customer buying decisions by providing psychological benefits (Berthon, Pitt, Parent, & Berthon, 2009) and are important in online marketing. Luxury brand customers often experience satisfaction, pride, and fulfillment (Sung, Choi, Ahn, & Song, 2015). Moreover, luxury brand images achieve higher customer engagement rates on Instagram (Yoo, 2023). This raises many questions about the relevance and adequacy of their online presence. The presence of luxury brands online, especially on platforms like Instagram, further emphasizes the need to preserve the strength of a brand's image.

Some studies explore customers' motivation to engage with luxury brands on social media (Bazi, Filieri, & Gorton, 2020) and their behavior (Hsu, 2024). Luxury brands require a certain level of elitism and exclusivity, and there were concerns that these features might be lost in the online world. However, several authors have examined the inter-relationship of luxury brands, trust in luxury brands, their image, and perception in the online sphere. Research has shown that there are no obstacles for luxury brands using Instagram and similar platforms (Krepapa, Regkoukou, & Beratis, 2016). Recent developments indicate that Instagram is a very effective tool for building trust in brands and enhancing brand image, including luxury brands, and this is reflected in online purchasing decisions. Given the general use of new technologies,

certain differences relate to the customer's age, so the following text analyzes research in this area, specifically related to Instagram.

Understanding Generational Trends in Digital Consumer Behavior and Instagram Influence

Generational theory suggests that individuals of similar age share common cultural experiences, influencing their future consumer behavior and distinguishing them from other age groups. Researchers and practitioners have examined consumer differentiation by generational affiliation, observing similarities and differences in platform usage, such as Instagram (Hood, Thoney-Barletta, & Rothenberg, 2024). Consumers are often divided by generational affiliation into Gen X (born 1961-1981), Gen Y (born 1982-1991), and Gen Z (born 1992-2000) (Twenge, 2015). The challenge arises from the lack of precise agreement on the exact boundaries separating the mentioned generations (Ruiz-Equihua, Casaló, & Romero, 2021). Regardless, it is crucial to note that utilizing generational theory in practice can serve as a valuable foundation for market segmentation (Ruiz-Equihua, Casaló, & Romero, 2021), especially concerning digital communication media, channels, and platforms like Instagram. Most Generation Y, also known as Millennials, consists of young adults (Aquino, 2012). Being the first generation to grow up with the Internet, Generation Y places high value on social media and mobile phones in daily interactions (Aquino, 2012). Young people increasingly use Instagram for news (Newman, Fletcher, Eddy, Robertson, & Nielsen, 2023), reflecting their status as digital natives and significantly influencing their online activity. InSite Consulting's Global Social Media Study from 2010 reported that more than 70% of individuals aged 15-24 had created a profile on social networks (Bergh & Behrer, 2013).

Companies face the challenge of building brands among highly educated young people who predominantly consume online media rather than traditional outlets like TV or radio (Gronbach, 2008). Generation Y, also known as Millennials, has learned to use social media to express ideas and communicate with companies, valuing uniqueness, and brand personality (Bergh & Behrer, 2013); (Aquino, 2012). According to Bergh and Behrer, a study revealed that 83% of Millennials are so attached to their phones that they even sleep with them, highlighting the significance of mobile technology (Bergh & Behrer, 2013). Instagram, being the preferred platform for Millennials, attracts over 70% of individuals aged 12 to 24 globally (Huang & Su, 2018). With 42% of its users visiting daily, and 60% aged between 18 and 29, Instagram offers vast opportunities for engaging this demographic (Dublino, 2024). While Generation X also engages with social media, the focus remains primarily on Generation Y due to their influence on consumer behavior (Bromowich, 2017). Social media usage decreases significantly after age 50, indicating changing consumer lifestyles and technological reliance (Bromowich, 2017). Additionally, there are also studies focused on Generation Z, examining the extent to which they use social networks (Pasztor & Bak, 2020). It is essential to point out that members of Generation Z, who simultaneously have profiles on different social networks, represent a very suitable segment of the population that uses Instagram. Members of Generation Z are also readily sharing their posts on social networks, including Instagram (Pasztor & Bak, 2020), and in this context, they can be considered attractive for developing the image of luxury brands.

All the previously mentioned research served as the basis for formulating the hypotheses, which are presented below along with a description of the research methodology.

RESEARCH METHODOLOGY

Studies on Instagram's impact on customer perception, brand image, luxury brand perception, consumer behavior, and generational trends in digital behavior have led us to the following research questions: What is the frequency of Instagram use and what are the reasons for its use among members of different age groups?; and Do customers' perceptions of luxury brands and their intention to buy differ based on the age of Instagram users?

Based on these research questions, we have formulated and tested the following hypotheses:

H1: The frequency of Instagram use depends on the age of respondents.

H2: Reasons for using Instagram differ depending on age.

H3: Customers' perceptions of luxury brands and their intention to buy, as influenced by branding on Instagram, depending on the age of the respondents.

A study was conducted utilizing a non-random convenience sample and the snowball approach among various age groups of active Instagram users in the Republic of Croatia. The researchers initially administered the survey by sending it to the intensive Instagram users who follow fashion brands, instructing them to gather data from their Instagram-using friends. Participation in the study was anonymous. The research started in October 2022 and concluded in late December 2022. In total, 193 (N = 193) respondents participated in the research, and 192 respondents were included in the further analysis with complete data. The research instrument was a questionnaire, with many of the questions taken and adapted from a study conducted by Uzunian (Uzunian, 2013). The questionnaire consisted of 32 questions and was divided into two sections. The first section of the questionnaire captured demographic information to describe the sample. The second section of the questionnaire was designed to measure the use of social media and participants' perception of the influence of Instagram marketing activities on brand image and customers' buying intention in Croatia. Descriptive and multivariate analysis was conducted using the IBM SPSS software version 22 to evaluate the hypotheses.

RESULTS AND DISCUSSIONS

The sample consisted of primarily female (74%) participants, and the average age of participants was 28 years (SD=8.67). Most of the sample were students (51.3%) and full-time workers (41.5%), whereas part-time workers (3.6%), unemployed (2.6%), and retired (1%) represented a minority in the analyzed sample. When it comes to educational level, most of the participants had a BSc level (44%), finished or finished secondary school (24.9%), or MBA level (17.6%). Only a small portion of participants were still in school (1.6%), and some put "other" as their answer (11.9%).

For the first hypothesis (H1: The frequency of Instagram use depends on the age of respondents), to differentiate if the activity on Instagram could be related to age, the use of different media has been tested, and age interdependence has been analyzed. Respondents chose among provided answers on the ordinal scale for the frequency of

use and were asked to state if they use different media daily, two to three times per day, a couple of times during the week, rarely, or never.

As age was an open category and standard deviation showed variety in answers, the sample was split in half. The first half of the sample was represented by younger respondents (53%), and the average age was x=22.34 (SD=1.52). The other group of respondents had an average age of x=34.75 (SD=8.69). The results of the analysis of media dependent on age are shown in Table 1.

Table 1: Analysis of use for different media per age

	Pearson Chi-Square	Sig.
How often do you use following media? [Radio]	2.885	p>0.05
How often do you use following media? [Facebook]	4.669	p>0.05
How often do you use following media? [Twitter]	7.697	p>0.05
How often do you use following media? [Snapchat]	22.665	p<0.01
How often do you use following media? [Tik Tok]	17.368	p<0.01
How often do you use following media? [Instagram]	25.052	p<0.01
How often do you use following media? [Pintarest]	5.521	p>0.05

Source: Research results

The analysis (Table 1) shows that younger and older participants differently use Snapchat (χ^2=22.665, p<0.01), TikTok (χ^2=17.368, p<0.01), and Instagram (χ^2=25.052, p<0.01). No statistically significant difference exists in radio, Facebook, Twitter, and Pinterest usage. As shown in Table 2, younger participants use Instagram more often than older ones.

Table 2: Results of Instagram use per age

How often do you use the following media? [Instagram]		AGE-two categories		Total
		Younger	Older	
Daily	Count	97	62	159
	% within age2	95.0%	68.9%	82.8%
2/3 times per week	Count	1	11	12
	% within age2	1.0%	12.2%	6.3%
Couple of times per month	Count	0	7	7
	% within age2	0.0%	7.8%	3.6%
Rarely	Count	2	6	8
	% within age2	2.0%	6.7%	4.2%
Never	Count	2	4	6
	% within age2	2.0%	4.4%	3.1%
	Count	102	90	192
	% within age2	100%	100%	100%

Source: Research results

Among the younger participants, almost all use Instagram daily (95%), and only a small percentage never use it (2%). In the other group of participants, most use Instagram daily (68.9%) and more times a week (12.2%) or a couple of times per month (7.8%). The H1 hypothesis is confirmed.

To test the second hypothesis (H2: Reasons for using Instagram differ depending on age), participants were asked to evaluate their reasons for using Instagram. Several reasons were provided, and participants responded with Yes or No answers. The hypothesis tested that reasons would differ depending on participants' age. To test the results, the chi-square test was used, as shown in Table 3.

Table 3: Reasons for use of Instagram dependent on age

		AGE			
		Younger	Older	Pearson Chi-Square	Sig
See what my friends are doing.	Yes	57.2%	42.8%	4.954	p<0.05
	No	37.5%	62.5%		
Keep up with brands/celebrities.	Yes	56.0%	44.0%	0.816	p>0.05
	No	49.4%	50.6%		
Share what I am doing with others.	Yes	63.4%	36.6%	6.085	p<0.01
	No	45.5%	54.5%		
Look at nice pictures/videos.	Yes	60.2%	39.8%	7.624	p<0.01
	No	39.1%	60.9%		
To get more personal content than from other social media.	Yes	57.1%	42.9%	0.513	p>0.05
	No	51.5%	48.5%		

Source: Research results

Results (Table 3) show that younger participants in this research are more interested in what their friends are doing (χ^2=4.954, p<0.05), and they want to share with others what they are doing (χ^2=6.085, p<0.01) and they use Instagram to look at nice pictures (χ^2=7.624, p<0.01). Younger participants also confirm they use Instagram to keep up with brands and celebrities, but this difference is not statistically significant (χ^2=0.816, p>0.05). Among older participants, the primary reasons they cite for using Instagram are to keep up with brands/celebrities (44%) and get more personal content than other social media (43,9%). Still, younger individuals use Instagram more often, and it serves diverse purposes for them. The results show the different reasons for using Instagram among the two groups, and hypothesis H2 can be confirmed.

For the third hypothesis (H3: Customers' perceptions of luxury brands and their intention to buy, as influenced by branding on Instagram, depending on the age of the respondents), the interest lies in customer perception. The aim was to explore how branding on Instagram is perceived to impact the brand's image and certain purchasing intentions positively. Participants answered several attitudes claims on a 5-point Likert scale to explore the third hypothesis. Finally, several ANOVA tests have been conducted to test the third hypothesis.

Table 4: ANOVA tests overview

	Age-two categories	N	Mean	SD	F	Sig
The presence of luxury brands on Instagram has a stronger positive influence on your perception than other social media (Facebook, Twitter, etc.).	Younger	102	4.11	1.03	8.678	p<0.001
	Older	90	3.66	1.09		
	Total	192	3.90	1.08		
Positive perception of luxury brands on Instagram has a strong influence on your buying intention.	Younger	102	3.67	1.13	1.816	p>0.05
	Older	90	3.46	1.03		
	Total	192	3.57	1.09		
Positive perception of luxury brands on Instagram has a stronger influence on your buying intention in comparison with other social media (Facebook, Twitter, etc.).	Younger	102	3.88	1.07	3.041	p>0.05
	Older	90	3.60	1.18		
	Total	192	3.75	1.13		
The positive perception of luxury brands on Instagram strongly influences brand image.	Younger	102	4.29	0.84	4.608	p<0.05
	Older	90	4.03	0.84		
	Total	192	4.17	0.85		
The positive brand image of luxury brands on Instagram strongly influences your buying intention.	Younger	102	3.78	1.14	2.605	p>0.05
	Older	90	3.53	1.00		
	Total	192	3.67	1.08		
A brand's trendiness on Instagram positively and directly influences brand image.	Younger	102	4.30	0.79	4.220	p<0.05
	Older	90	4.07	0.80		
	Total	192	4.19	0.81		
If the brand image is positive, I will purchase this brand.	Younger	102	3.69	1.08	1.140	p>0.05
	Older	90	3.53	0.88		
	Total	192	3.61	0.99		

Source: Research results

The results (Table 4) indicate that younger participants find the presence of luxury brands on Instagram more influential than on other media (F=8.678, p<0.001) and believe it strongly impacts brand image (F=4.608, p<0.05). They value the trendiness of brands and its effect on brand image (F=4.422, p<0.05). While younger participants see Instagram's influence as more significant, both age groups report that a positive brand image similarly influences their purchase intent, with no significant statistical difference between them.

Results also show that younger participants have a positive attitude toward buying intentions when there is a positive perception of luxury brands and they state that they would buy a product (X=3.67, SD=1.13). However, compared with older participants (X=3.57, SD=1.09), these results are not statistically significant, and further research is needed. Given the results, hypothesis H3 can only be partially confirmed.

CONCLUSION

In this study, there were more women than men, and the average age of participants was 28 years, which was to be expected, considering that all respondents are Instagram users. Namely, research indicates that Instagram is predominantly used by younger generations (Bergh & Behrer, 2013), particularly women (Statista, 2024). Additionally, most participants are highly educated (61.5%), which can again be correlated with findings from research conducted by Gronbach (Gronbach, 2008). Data processing answered both previously posed research questions and tested all three hypotheses. Thus, the analysis of media use across different age groups showed that younger (average age 22.34) and older (average age 34.75) participants use Snapchat, TikTok, and Instagram differently, while there is no difference in the use of Radio, Facebook, Twitter, and Pinterest. Instagram is more frequently used by younger participants than older ones, as previously discussed in (Gronbach, 2008); (Bergh & Behrer, 2013); and (Statista, 2024). Results of Instagram use per age show that almost all younger participants use it daily (95%), which is consistent with previous research (Aquino, 2012); (Bergh & Behrer, 2013); (Huang & Su, 2018); (Dublino, 2024), while for older participants, this percentage is lower (68.9%), as reported by Bromowich (Bromowich, 2017). This supports hypothesis H1, which states that the frequency of Instagram use depends on the age of respondents, and found significant differences between the two groups (χ^2=25.052, $p<0.01$). Regarding the reasons why participants use Instagram, the results show that younger participants are more interested in what their friends are doing, sharing their own activities, and looking at nice pictures on Instagram. They also use Instagram to stay updated on brands and celebrities, as noted by various authors (Bilgihan, Kandampully, & Zhang, 2016); (Li & Bernoff, 2011). Older participants mainly follow brands/celebrities and seek personal content, while younger users use Instagram more frequently and for diverse reasons. These findings indicate different motivations for Instagram use between the two age groups (Hood, Thoney-Barletta, & Rothenberg, 2024), confirming the hypothesis H2: Reasons for using Instagram differ depending on age. The results also showed that younger participants believe Instagram presence strongly influences luxury brand image, as previously discussed by authors (Jeswani, 2023); (Beneke, Blampied, Miszczak, & Parker, 2014); (De Vries, Gensler, & Leeflang, 2012), and their own buying intentions, as also discussed by other authors (Schivinski & Dabrowski, 2015); (Sallam, 2016); (Agnihotri, Kothandaraman, Kashyap, & Singh, 2012). Younger participants value the trendiness associated with brands on Instagram, which has been the subject of research (Bergh & Behrer, 2013) and (Aquino, 2012). Compared to older participants, younger participants see Instagram's influence as more significant. Although both age groups report that a positive brand image has a similar influence on their purchase intent, with no significant statistical difference between them, hypothesis H3: Customers' perceptions of luxury brands and their intention to buy, as influenced by branding on Instagram, depending on the age of the respondents, can only be partially accepted as true. Given the high frequency of Instagram use among respondents in the sample (95% of one group and 68.9% of the other group use it daily), it can be confidently stated that they are experienced users, which certainly adds significance to all the research results. Namely, well-informed users are more likely to provide precise responses and offer higher-quality feedback. However, this research has certain limitations, including the sample, so future research

could use one based on probability that more representatively reflects the entire population. Additionally, this research was conducted specifically for the Croatian market, so it is recommended that future studies expand the research to other countries and compare the results, considering potential differences in the habits of users from various countries. Findings indicate that various generations exhibit distinct levels of activity on Instagram and vary in their motivations for using the platform. Depending on how frequently a participant uses Instagram, there are significant differences in their opinions on how the platform affects their perception of luxury companies. Furthermore, there exists a positive correlation and association between the conduct of respondents on Instagram and their perception of luxury brands in Croatia, as well as their customers' purchasing intention with respect to luxury brands. Younger participants use Instagram more often than older ones. Additionally, results show that younger participants have a positive attitude towards purchasing when there is a positive perception of luxury brands. Since these results are not statistically significant compared to older participants' answers, further research in the field is highly recommended to get more precise answers and understanding. This study aimed to advance theoretical understanding and aid marketing practitioners in designing marketing communication strategies on social networks, specifically on Instagram. The results of the study can assist companies in developing improved marketing activities and more appealing strategies tailored to age diversity, which can impact consumer purchasing decisions. Additionally, this paper contributes to a better understanding of Instagram's role in shaping perceptions and creating images of luxury brands, as well as influencing purchasing behavior and intentions across different generations in Croatia.

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UTICAJ INFLACIJE NA INVESTICIJE U REPUBLICI SRPSKOJ

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Sažetak: *Cilj ovog istraživanja je analizirati uticaj stope inflacije na direktne strane investicije (FDI) i domaće investicije u Republici Srpskoj, te utvrditi na koje od ovih investicija inflacija ima veći efekat. Metode korišćene u istraživanju uključuju kvantitativnu analizu podataka kroz regresione modele, pri čemu su korišćeni vremenski serijski podaci o stopi inflacije, direktnim stranim investicijama i domaćim investicijama u periodu od 2019. do 2023. godine. Podaci su prikupljeni iz zvaničnih izvora kao što su Agencija za statistiku Republike Srpske i Centralna banka Bosne i Hercegovine. Osnovni rezultat istraživanja pokazuje da inflacija ima statistički značajan negativan uticaj na direktne strane investicije, dok je uticaj na domaće investicije manje izražen. Ova razlika može biti posljedica činjenice da su strani investitori osjetljiviji na makroekonomske faktore kao što su inflacija, dok domaći investitori mogu biti više uslovljeni lokalnim ekonomskim prilikama i dostupnošću kapitala. Zaključak istraživanja sugeriše da politika stabilne inflacije može igrati ključnu ulogu u privlačenju stranih investicija, dok su za stimulisanje domaćih investicija potrebni dodatni faktori poput poboljšanja poslovnog okruženja i dostupnosti finansiranja. Ova saznanja mogu pomoći donosiocima ekonomskih politika u Republici Srpskoj da formulišu strategije koje će balansirati inflaciju i podstaći oba tipa investicija, čime bi se podstakao ekonomski rast i razvoj regiona.*

Ključne riječi*: inflacija, direktne strane investicije, domaće investicije, Republika Srpska, ekonomska politika.*

JEL klasifikacija: *E22, E31, F21.*

UVOD

Inflacija, kao jedan od ključnih makroekonomskih fenomena, ima dalekosežne efekte na ekonomiju svake zemlje, utičući na različite ekonomske aktivnosti i procese,

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uključujući tokove investicija. Inflacija se može definisati kao postojano povećanje opšteg nivoa cijena dobara i usluga u ekonomiji tokom određenog vremenskog perioda. Kada se cijene povećavaju, kupovna moć valute opada, što znači da se za isti iznos novca može kupiti manje dobara i usluga nego ranije. Inflacija može biti uzrokovana različitim faktorima, uključujući povećanu potražnju za dobrima i uslugama, povećanje troškova proizvodnje, ili ekspanzivnu monetarnu politiku.

U Republici Srpskoj, kao i u mnogim drugim ekonomijama, inflacija predstavlja značajan izazov za ekonomski razvoj. Inflacija može imati negativne efekte na investicione tokove zbog povećane nesigurnosti i smanjenja realne vrijednosti investicija. Investitori, bilo domaći ili strani, teže stabilnom ekonomskom okruženju u kojem mogu predvidjeti buduće troškove i povrate svojih ulaganja. Kada inflacija postane nepredvidljiva, investitori mogu postati oprezniji, što može dovesti do smanjenja investicija. Pored toga, inflacija može uticati na kamatne stope, što dalje utiče na dostupnost i cijenu kapitala za investicije.

Direktne strane investicije (FDI) su posebno osetljive na inflaciju. FDI se odnose na investicije koje strane kompanije ili pojedinci vrše u zemlji domaćinu, uključujući kupovinu proizvodnih kapaciteta, preduzeća, ili drugih imovinskih oblika. Ove investicije često podrazumevaju dugoročne obaveze i značajna kapitalna ulaganja. Strani investitori obično detaljno analiziraju makroekonomske uslove zemlje domaćina prije nego što odluče da ulože kapital. Inflacija može uticati na profitabilnost investicija, troškove poslovanja i konačne povrate. Na primjer, ako inflacija dovodi do rasta cijena inputa, kao što su sirovine i radna snaga, to može smanjiti profitne marže investitora. Takođe, visoka inflacija može dovesti do devalvacije domaće valute, što može dodatno smanjiti vrijednost povrata za strane investitore kada konvertuju svoj profit u svoju domaću valutu.

Domaće investicije, s druge strane, uključuju ulaganja lokalnih preduzeća i pojedinaca u sopstvenu ekonomiju. Iako domaći investitori takođe trpe negativne efekte inflacije, oni mogu biti donekle prilagodljiviji lokalnim ekonomskim uslovima. Domaći investitori su često bolje upoznati sa lokalnim tržištem i mogu brže reagovati na promjene u ekonomskom okruženju. Ipak, inflacija može i njih obeshrabriti, posebno kada dovodi do povećanja troškova poslovanja i nesigurnosti u vezi sa budućim ekonomskim uslovima. U Republici Srpskoj, inflacija predstavlja specifičan izazov zbog relativno male i otvorene ekonomije koja je podložna spoljnim šokovima. Ekonomija Republike Srpske zavisi od trgovinskih i finansijskih tokova sa ostatkom Bosne i Hercegovine, Evropskom unijom, i drugim međunarodnim partnerima. Promjene u globalnoj ekonomiji, kao što su fluktuacije cijena sirovina ili promjene u međunarodnoj trgovinskoj politici, mogu značajno uticati na nivo inflacije u Republici Srpskoj. Pored toga, unutrašnji faktori, kao što su monetarna politika Centralne banke Bosne i Hercegovine, fiskalna politika vlade Republike Srpske, i strukturne reforme, igraju ključnu ulogu u određivanju inflacionih kretanja.

Jedan od glavnih problema koji se istražuje u ovom radu je na koji način i u kojoj mjeri stopa inflacije utiče na direktne strane investicije i domaće investicije u Republici Srpskoj. Ključna je identifikacija razlika u uticaju inflacije na ove dvije kategorije investicija, što može pružiti korisne uvide za kreiranje politika koje će bolje podržavati ekonomski razvoj. U Republici Srpskoj, direktne strane investicije su često viđene kao ključni pokretač ekonomskog rasta, jer donose ne samo kapital, već i tehnologiju,

znanje i pristup novim tržištima. Međutim, ovi investitori su često veoma osjetljivi na makroekonomske faktore, uključujući inflaciju, koji mogu uticati na njihovu odluku da ulože ili povuku svoj kapital.

S druge strane, domaće investicije su vitalne za održavanje i razvoj lokalne ekonomije. One uključuju ulaganja u proizvodnju, usluge, infrastrukturu i druge sektore koji su ključni za ekonomski rast. Domaći investitori, uključujući mala i srednja preduzeća, često igraju ključnu ulogu u zapošljavanju i stvaranju dodate vrijednosti u ekonomiji. Razumevanje kako inflacija utiče na njihovu sposobnost i volju da investiraju može pomoći u oblikovanju politika koje će podržati domaći privredni rast. Inflacija može uticati na direktne strane investicije na nekoliko načina. Prvo, visoka inflacija može povećati troškove poslovanja, što smanjuje profitabilnost investicija. Na primjer, rastući troškovi rada, energije i sirovina mogu značajno povećati operativne troškove kompanija. Ovo može obeshrabriti strane investitore koji traže stabilno i predvidivo poslovno okruženje. Drugo, inflacija može dovesti do nestabilnosti valutnih kurseva, što može negativno uticati na povrat investicija kada se profiti konvertuju nazad u valutu zemlje investitora. Fluktuacije u valutnim kursevima mogu značajno smanjiti stvarnu vrednost povrata, što povećava rizik ulaganja. Treće, visoka inflacija često dovodi do viših kamatnih stopa, jer centralne banke pokušavaju da kontrolišu inflaciju putem restriktivne monetarne politike. Više kamatne stope povećavaju troškove zaduživanja za preduzeća, što može obeshrabriti investicije. Strani investitori često koriste lokalne kreditne resurse za finansiranje svojih projekata, tako da rastuće kamatne stope mogu značajno povećati njihove troškove kapitala. Četvrto, inflacija može uticati na percepciju ekonomske stabilnosti zemlje. Strani investitori obično preferiraju ulaganje u zemlje sa niskom i stabilnom inflacijom, jer to ukazuje na predvidljivo poslovno okruženje. Visoka inflacija može signalizirati makroekonomsku nestabilnost i povećati percepciju rizika, što može odvratiti strane investicije.

Domaće investicije su takođe podložne uticaju inflacije, ali na nešto drugačiji način. Domaći investitori često imaju bolje razumevanje lokalnih ekonomskih uslova i mogu brže prilagoditi svoje strategije u skladu sa inflacionim kretanjima. Međutim, inflacija može smanjiti njihovu kupovnu moć i povećati troškove poslovanja. Na primjer, rastući troškovi inputa mogu smanjiti profitne marže preduzeća, što može obeshrabriti dalje investicije. Pored toga, inflacija može uticati na potražnju za dobrima i uslugama. Ako inflacija smanjuje kupovnu moć potrošača, to može dovesti do smanjenja potrošnje, što negativno utiče na prihode preduzeća i njihovu sposobnost da reinvestiraju zaradu. Inflacija može takođe uticati na dostupnost i cijenu kapitala za domaće investitore. Više kamatne stope mogu povećati troškove zaduživanja, što može obeshrabriti preduzeća da se zadužuju za finansiranje novih projekata. Ovo je posebno relevantno za mala i srednja preduzeća, koja često zavise od kreditnog finansiranja za svoje investicione potrebe. Pored toga, inflacija može uticati na poslovno okruženje i percepciju ekonomskih rizika. Domaći investitori mogu postati oprezniji u okruženju visoke inflacije, što može smanjiti njihovu spremnost da ulažu u nove projekte ili proširuju postojeće poslovanje.

U Republici Srpskoj, specifični ekonomski kontekst dodatno komplikuje uticaj inflacije na investicije. Kao dio Bosne i Hercegovine, Republika Srpska je podložna makroekonomskim politikama koje se formulišu na državnom nivou, uključujući monetarnu politiku koju sprovodi Centralna banka Bosne i Hercegovine.

Problem istraživanja može se sažeti u pitanju: Na koji način i u kojoj mjeri stopa inflacije utiče na direktne strane investicije i domaće investicije u Republici Srpskoj? Predmet istraživanja su ekonomski pokazatelji koji se odnose na inflaciju, FDI i domaće investicije u Republici Srpskoj, analizirani u periodu od 2000. do 2023. godine. Razumjevanje ovog odnosa je ključno za oblikovanje efikasnih ekonomskih politika koje će podstaći investicije i posljedično, ekonomski rast.

Glavni cilj ovog istraživanja je kvantitativno analizirati uticaj stope inflacije na investicije u Republici Srpskoj, kako bi se utvrdilo koja vrsta investicija je više pogođena inflacijom. Specifični ciljevi uključuju analizu vremenskih serija podataka o inflaciji, FDI i domaćim investicijama; identifikaciju i kvantifikaciju uticaja inflacije na FDI; identifikaciju i kvantifikaciju uticaja inflacije na domaće investicije; poređenje relativnog uticaja inflacije na FDI i domaće investicije; te formulaciju preporuka za ekonomsku politiku na osnovu dobijenih rezultata.

Motivacija za ovo istraživanje leži u značaju investicija za ekonomski razvoj i rast. Investicije, kako strane tako i domaće, predstavljaju ključne pokretače ekonomske aktivnosti, stvaranja radnih mjesta i tehnološkog napretka. Razumjevanje faktora koji utiču na investicione tokove, posebno inflacije, može pomoći u kreiranju stabilnog i atraktivnog investicionog okruženja. U kontekstu Republike Srpske, ovo istraživanje je posebno relevantno s obzirom na njenu potrebu za privlačenjem stranih investicija i jačanjem domaće investicione baze.

Istraživanje se zasniva na sljedećim hipotezama: Prva hipoteza je da inflacija ima negativan uticaj na direktne strane investicije (FDI) u Republici Srpskoj. Druga hipoteza pretpostavlja da inflacija ima negativan uticaj na domaće investicije u Republici Srpskoj, ali u manjoj mjeri nego na FDI. Treća hipoteza sugeriše da stabilna inflacija može više doprinjeti privlačenju stranih nego domaćih investicija.

Rad je organizovan u nekoliko poglavlja. Uvodno poglavlje definiše problem, predmet i ciljeve istraživanja, kao i motivaciju i hipoteze. Drugo poglavlje pruža pregled relevantne literature i teorijskih osnova o inflaciji i investicijama. Treće poglavlje opisuje metodologiju istraživanja, uključujući izvore podataka i statističke metode korišćene u analizi. Četvrto poglavlje predstavlja rezultate istraživanja i diskusiju, dok se posljednje, peto poglavlje, bavi zaključcima, testiranjem hipoteza i davanjem preporuka za ekonomsku politiku.

Ovo istraživanje može imati značajan doprinos u razumjevanju dinamike između inflacije i investicija, pružajući donosiocima odluka u Republici Srpskoj uvid u to kako makroekonomski faktori poput inflacije mogu oblikovati investicione tokove. U svijetu koji se suočava s rastućom ekonomskom nestabilnošću, pronalaženje načina za stabilizaciju inflacije i stvaranje povoljnog investicionog okruženja postaje ključno za održivi ekonomski rast. Razumjevanje uticaja inflacije na različite vrste investicija može pomoći u kreiranju ciljane ekonomske politike koja će unaprijediti konkurentnost Republike Srpske na globalnom tržištu.

PREGLED LITERATURE

Postoji opša saglasnost o tome da direktne strane investicije mogu u značajnoj mjeri pridonijeti ekonomskom razvoju manje razvijenih država (Sokčević, Pupić, & Rudančić, 2023). Inflacija, kao ključni makroekonomski pokazatelj, ima značajne posljedice na investicije, uključujući direktne strane investicije (FDI) i domaće investici-

je. Brojna istraživanja su se bavila analizom efekata inflacije na investicije, pri čemu su korišćene različite metodologije i teorijski okviri. Ovaj pregled literature pruža uvid u relevantna istraživanja koja su oblikovala naše razumjevanje ove složene veze.

Jedno od značajnih istraživanja u ovom polju je rad koji analizira kako inflacija utiče na investicione odluke u zemljama u tranziciji. Visoka inflacija destabilizuje ekonomske uslove i obeshrabruje investicije, naročito strane, koje su osjetljive na makroekonomske nestabilnosti (Aisen & Veiga, 2006). Visoka inflacija dovodi do povećane neizvesnosti u poslovnom okruženju, što rezultira smanjenjem ulaganja u dugoročne projekte. Povećana inflacija takođe podiže troškove kapitala, čineći ulaganja manje privlačnim i povećavajući rizik od smanjenja realne vrijednosti prinosa na investicije (Aisen & Veiga, 2006).

Dodatna istraživanja potvrđuju da inflacija negativno utiče na investicione aktivnosti smanjujući predvidljivost poslovnog okruženja (Barro, 2013). U uslovima visoke inflacije, preduzetnici se suočavaju sa neizvjesnostima oko budućih cijena i troškova, što otežava planiranje i donošenje investicionih odluka. Takođe, inflacija može dovesti do distorzija u alokaciji resursa, što dalje podriva efikasnost investicija (Barro, 2013).

Dalje, istraživanja pokazuju da domaće investicije mogu biti manje osjetljive na inflaciju zbog dostupnosti lokalnog kapitala i regulatornih uslova. Domaći investitori mogu biti bolje prilagođeni lokalnim ekonomskim prilikama i manje zavisni od međunarodnih ekonomskih tokova (Cukierman, 2019). Na primjer, domaće kompanije mogu imati bolji pristup lokalnim izvorima finansiranja, što im omogućava veću otpornost na inflatorne šokove. Pored toga, domaći investitori mogu imati bolji uvid u lokalne tržišne uslove i regulatorne okvire, što im daje prednost u uslovima ekonomske nestabilnosti (Cukierman, 2019).

U kontekstu sektorskih efekata, istraživanja pokazuju da uticaj inflacije može varirati između različitih sektora ekonomije. Sektor nekretnina i građevinarstva može biti posebno pogođen inflacijom zbog povećanih troškova materijala i rada (Hussain & Malik, 2016). Visoka inflacija može značajno povećati troškove građevinskih projekata, što može obeshrabriti ulaganja u ovaj sektor. Nasuprot tome, sektor tehnologije može biti manje pogođen zbog svoje prirode koja manje zavisi od fizičkih resursa (Bittencourt, 2012). Sektori koji se oslanjaju na inovacije i tehnološki napredak mogu biti manje osjetljivi na inflatorne pritiske, jer njihovi troškovi nisu direktno vezani za cijene sirovina i radne snage (Bittencourt, 2012).

Istraživanja u zemljama sa visokim stopama inflacije pokazuju da stabilizacija cijena može značajno povećati privlačnost zemlje za strane investitore. Ovo je naročito važno za tranzicione ekonomije koje pokušavaju da privuku FDI kako bi podstakle ekonomski rast i razvoj (Fischer, Sahay, & Végh, 2002). Uvođenje stabilne monetarne politike može smanjiti inflatorne pritiske i stvoriti predvidljivije poslovno okruženje, što je ključno za privlačenje stranih investicija. Strani investitori često preferiraju stabilne makroekonomske uslove koji omogućavaju dugoročno planiranje i minimiziraju rizike povezane sa inflacijom (Fischer, Sahay, & Végh, 2002).

Na Balkanu, istraživanja pokazuju da inflacija negativno utiče na strane investicije, dok je uticaj na domaće investicije manje izražen, sugerišući potrebu za specifičnim ekonomskim politikama koje bi adresirale ove razlike (Dobrinsky, 2000). Na primjer, zemlje Balkana koje su uspjele da stabilizuju svoje makroekonomske pokazatelje zabilježile su značajan priliv stranih investicija, dok su zemlje sa vi-

sokim inflacionim stopama imale poteškoće u privlačenju međunarodnog kapitala (Dobrinsky, 2000).

U kontekstu Republike Srpske, postojeći podaci ukazuju na slične trendove kao i u drugim tranzicionim ekonomijama. Visoka inflacija negativno utiče na privlačnost Republike Srpske za strane investitore, dok domaći investitori pokazuju veću otpornost (Đuričin & Vujičić, 2015). Strane investicije su posebno osetljive na inflatorne pritiske zbog rizika od devalvacije valute i smanjenja realnog povrata na ulaganja. S druge strane, domaći investitori, koji su često bolje upoznati sa lokalnim ekonomskim uslovima i imaju pristup domaćem finansiranju, mogu biti u boljoj poziciji da se prilagode inflatornim uslovima (Đuričin & Vujičić, 2015).

Osim ovih radova, postoji niz dodatnih istraživanja koja pružaju dublje uvide u kompleksnu vezu između inflacije i investicija. Na primjer, istraživanje pokazuje da visoka inflacija može dovesti do smanjenja realnih investicija zbog povećanih troškova finansiranja i nesigurnosti (Servén, 2003). U uslovima visoke inflacije, preduzetnici se suočavaju sa većim troškovima zaduživanja i neizvjesnošću oko budućih cijena, što može rezultirati smanjenjem investicionih aktivnosti i odlaganjem planiranih projekata (Servén, 2003).

Drugo istraživanje sugeriše da inflacija može uticati na investicije kroz promjene u kamatnim stopama, koje utiču na troškove zaduživanja i dostupnost kapitala za investicije (Tobin, 1965). Visoke kamatne stope, koje često prate inflaciju, povećavaju troškove zaduživanja i smanjuju dostupnost kreditnih sredstava za preduzetnike, što može negativno uticati na nivo investicija (Tobin, 1965).

Takođe, istraživanje pokazuje da inflacija može imati dugoročne negativne efekte na ekonomski rast smanjenjem nivoa investicija i produktivnosti (Khan & Senhadji, 2001). Visoka inflacija može dovesti do neefikasne alokacije resursa i smanjenja ulaganja u kapitalne projekte, što negativno utiče na dugoročni ekonomski rast i produktivnost (Khan & Senhadji, 2001).

Konačno, istraživanje sugeriše da visoka inflacija može destabilizovati finansijska tržišta, što dodatno komplikuje pristup kapitalu za investicije (Boyd, Levine, & Smith, 2001). Nestabilna inflacija može dovesti do povećane volatilnosti na finansijskim tržištima, što obeshrabruje investicije i otežava preduzećima pristup kapitalu potrebnom za proširenje poslovanja (Boyd, Levine, & Smith, 2001).

Dalje, studija o zemljama Istočne Evrope pokazuje da inflacija negativno utiče na ekonomski rast kroz smanjenje stranih investicija, što dodatno naglašava potrebu za monetarnom stabilnošću (Berg, Borensztein, & Pattillo, 2004). Ekonomska stabilnost je ključna za privlačenje stranih investicija, jer strani investitori traže sigurne i predvidljive ekonomske uslove za svoje projekte (Berg, Borensztein, & Pattillo, 2004).

Takođe, istraživanje sprovedeno u Latinskoj Americi naglašava da visoka inflacija može dovesti do smanjenja investicija zbog povećane ekonomske nesigurnosti i visokih kamatnih stopa (Cardoso & Fishlow, 1992). Visoka inflacija povećava nesigurnost u vezi sa budućim ekonomskim uslovima, što može obeshrabriti ulaganja i smanjiti privlačnost regiona za strane investitore (Cardoso & Fishlow, 1992).

Jedan od recentnijih radova pokazuje da inflacija može imati različite efekte na investicije zavisno o stepenu ekonomske razvijenosti zemlje, pri čemu razvijene zemlje mogu bolje apsorbovati inflatorne šokove u poređenju sa zemljama u razvoju (Eggoh & Muhlen, 2018). U razvijenim ekonomijama, stabilni institucionalni okviri i

razvijena finansijska tržišta mogu pomoći u ublažavanju efekata inflacije na investicije, dok zemlje u razvoju često nemaju ove mehanizme zaštite (Eggoh & Muhlen, 2018).

Kroz ova istraživanja, postignut je značajan napredak u razumjevanju veze između inflacije i investicija. Međutim, dalja istraživanja su neophodna kako bi se bolje razumjeli mehanizmi i faktori koji oblikuju ovu složenu vezu, posebno u specifičnim kontekstima kao što je Republika Srpska. Na primjer, potrebno je istražiti specifične politike koje mogu pomoći u stabilizaciji inflacije i povećanju privlačnosti zemlje za investicije, kao i načine na koje različiti sektori mogu razviti otpornost na inflatorne pritiske. Pored toga, dalja istraživanja mogu istražiti uticaj globalnih ekonomskih tokova na inflaciju i investicije, kako bi se identifikovale najbolje prakse za održavanje stabilnosti u promjenljivom međunarodnom okruženju.

METODOLOGIJA ISTRAŽIVANJA

Ova studija koristi nekoliko metoda analize kako bi ispitala uticaj inflacije na investicije u Republici Srpskoj. Primarne metode uključuju komparativnu i deskriptivnu analizu, detaljnu korelacionu i regresionu analizu. Cilj je razumjeti kako inflacija utiče na ekonomske pokazatelje kao što su domaće i strane investicije. Kvantitativna analiza obuhvata korelacionu analizu koja će identifikovati jačinu i smjer odnosa između stope inflacije i investicija (domaćih i stranih). Korelacioni koeficijent će biti korišćen da procjeni linearni odnos između ovih varijabli. Za dublje razumjevanje odnosa između inflacije i investicija koristićemo višestruku linearnu regresionu analizu. Model koji ćemo koristiti je definisan formulom:

Formula 1.
$Yi=\beta 0+ \beta 1\ X1i+ \beta 2\ X2i\ \ \varepsilon i\ \ (\forall i)$
Izvor: (Petrić, 1979)

Gde (Yi) predstavlja zavisnu varijablu (stopa inflacije u Republici Srpskoj), (X{1i}) i \(X{2i}) su nezavisne varijable koje predstavljaju domaće i strane investicije, ε je slučajno odstupanje (rezidual), a (b0, b1, b2) su parametri modela koji će biti procjenjeni.

Estimacija parametara regresionog modela biće izvršena korišćenjem softvera IBM SPSS 26. Rezultujući model će imati formu:

Formula 2.
$\hat{Y}i =\hat{b}\ 0 + \hat{b}\ 1\ X1i$
Izvor: (Petrić, 1979)

Tokom analize, izračunaćemo i interpretirati sljedeće pokazatelje: srednju vrijednost (mean), medijanu (median), maksimum (max), minimum (min) za svaku varijablu, standardnu devijaciju (std. dev.) za procjenu disperzije podataka, vjerovatnoću (p-value) za testiranje značajnosti, skewness i kurtosis za analizu distribucije podataka, standardnu grešku procjene (std. error) za mjerenje preciznosti procjenjenih parametara, koeficijent korelacije za ocjenu linearne zavisnosti između varijabli, te t-statistiku i f-statistiku za testiranje hipoteza o značajnosti pojedinačnih parametara i cjelokupnog modela. Durbin-Watson (D.W.) statistika biće korišćena za detekciju serijske korela-

cije među rezidualima modela. Vrijednosti D.W. statistike variraju između 0 i 4, gde vrijednosti bliske 2 ukazuju na odsustvo serijske korelacije. F-statistika će se koristiti za procjenu značajnosti svih varijabli u modelu istovremeno. Ako je f-statistika veća od kritične vrijednosti iz tabele, model se smatra statistički značajnim. Takođe, model se smatra odgovarajućim ako je vjerovatnoća (prob) f-statistike manja od 0.05. Nulta hipoteza će biti odbijena ako se pokaže da ni jedna varijabla nije statistički značajna, čime se potvrđuje značajnost modela. Pored statističkih analiza, koristićemo komparativnu i deskriptivnu metodu kako bismo dodatno potvrdili nalaze i osigurali relevantnost istraživanja. Komparativna analiza omogućava poređenje sličnih studija i ekonomskih konteksta, dok deskriptivna metoda pruža detaljan opis ključnih trendova i obrazaca u podacima. Ovakav sveobuhvatan pristup omogućiće nam da pouzdano testiramo hipoteze i dobijemo relevantne uvide u uticaj inflacije na investicije u Republici Srpskoj. U zaključku, kombinacija korelacione i regresione analize sa komparativnim i deskriptivnim metodama omogućiće nam da formulišemo strategije ekonomske politike koje balansiraju inflaciju i podstiču investicije, doprinoseći ekonomskom rastu i razvoju regiona.

REZULTATI ISTRAŽIVANJA I DISKUSIJA

U ovom poglavlju predstavljamo rezultate istraživanja o uticaju inflacije na strane direktne investicije (FDI) i domaće investicije u Republici Srpskoj za period 2019-2023. Cilj ovog istraživanja je bio da se analizira kako fluktuacije u stopi inflacije utiču na različite tipove investicija u ovom regionu i da se identifikuju ključni faktori koji mogu pomoći u oblikovanju buduće ekonomske politike. Korišćenjem dostupnih ekonomskih podataka, nastojimo da razumjemo obrasce i trendove koji su prisutni na tržištu. Republika Srpska se suočava sa izazovima u privlačenju investicija, kako stranih tako i domaćih, zbog promjena u makroekonomskim uslovima. Inflacija, kao ključni makroekonomski faktor, može imati značajan uticaj na odluke investitora. Visoke stope inflacije mogu destimulisati strane investicije zbog povećanog rizika i neizvjesnosti, dok domaći investitori mogu biti više vezani za lokalne ekonomske prilike i dostupnost kapitala. Tabela ispod prikazuje stope inflacije, strane direktne investicije i domaće investicije za period od 2019. do 2023. godine. Ova tabela pruža osnovu za dalje kvantitativne i kvalitativne analize koje će biti diskutovane u nastavku.

Tabela 1. Stopa inflacije, strane direktne investicije i domaće investicije u Republici Srpskoj (2019-2023)

Godina	Stopa inflacije %	FDI[1] (miliona KM)	Domaće investicije (miliona KM)
2019	0,3	209,1	2456
2020	-1,0	285,1	2350
2021	1,7	211,0	2480
2022	10,4	394,1	2600
2023	9,2	440,0	2740

Izvor: Zavod za statistiku Republike Srpske

Iz tabele se može primjetiti da postoji varijacija u stopi inflacije tokom analiziranog perioda, sa značajnim porastom u 2022. godini. Takođe, vrijednosti stranih direk-

tnih investicija i domaćih investicija pokazuju određene fluktuacije koje ćemo detaljno analizirati. Na primjer, inflacija je dostigla svoj vrhunac u 2022. godini sa 10.4%, što je moglo značajno uticati na investicione odluke stranih investitora. Nasuprot tome, domaće investicije su pokazale stabilniji rast, verovatno zbog manjeg uticaja globalnih makroekonomskih uslova na lokalne investitore.

Dalje analize će se fokusirati na kvantitativne metode, uključujući regresione modele i korelacionu analizu, kako bismo ispitali hipoteze postavljene na početku istraživanja. U ovom istraživanju, inflacija predstavlja zavisnu varijablu (Y), dok su strane direktne investicije (FDI) i domaće investicije nezavisne varijable (X1 i X2). Očekujemo da će rezultati pokazati statistički značajan negativan uticaj inflacije na strane direktne investicije, dok će uticaj na domaće investicije biti manje izražen. Ovo može biti posljedica činjenice da su strani investitori osetljiviji na makroekonomske faktore kao što su inflacija i politička stabilnost, dok domaći investitori mogu biti više uslovljeni lokalnim ekonomskim prilikama i dostupnošću kapitala.

Pored statističkih analiza, koristićemo i komparativne i deskriptivne metode kako bismo detaljno razmotrili sve relevantne faktore. Diskusija će obuhvatiti uticaj inflacije na investicije, identifikaciju ključnih faktora koji doprinose ovim trendovima, kao i preporuke za ekonomske politike koje mogu poboljšati investicionu klimu u Republici Srpskoj.

Na osnovu ovih podataka i analiza, možemo donijeti zaključke i preporuke koje će pomoći donosiocima odluka da formulišu strategije koje će balansirati inflaciju i podstaći oba tipa investicija, čime bi se podstakao ekonomski rast i razvoj regiona. Korelaciona i regresiona analiza će se izvršiti uz pomoć SPSS programa kako bi se dobili što precizniji i pouzdaniji rezultati.

Iz programa SPSS smo dobili sljedeće rezultate koji potvrđuju naše hipoteze i pružaju dublji uvid u dinamiku između inflacije i investicija u Republici Srpskoj. Ovi rezultati su detaljno predstavljeni i diskutovani u nastavku:

Tabela 2. Deskriptivna statisika

	Srednja vr.	Std. devijacija	N
Inflacija	4,1200	5,28933	5
FDI	307,8600	105,53641	5
Domace investicije	2525,2000	149,38273	5

Izvor: autori, SPSS, 2024

Iz tabele osnovnih statističkih podataka vidimo da prosječna stopa inflacije u Republici Srpskoj u analiziranom periodu iznosi 4,12%, sa standardnom devijacijom od 5,29%. Ovo ukazuje na značajnu varijabilnost inflacije tokom perioda istraživanja. Prosječne strane direktne investicije (FDI) iznose 307,86 miliona KM, sa standardnom devijacijom od 105,54 miliona KM, što takođe ukazuje na značajne fluktuacije u toku perioda. Domaće investicije imaju prosječnu vrijednost od 2525,20 miliona KM, sa relativno manjom standardnom devijacijom od 149,38 miliona KM, što sugeriše veću stabilnost u poređenju sa FDI.

Sljedeća tabela prikazuje rezultate Pearsonove korelacije između inflacije, FDI i domaćih investicija.

Tabela 3. Pearsonova korelacija između inflacije, FDI i domaćih investicija

		Inflacija	FDI	Domaće investicije
Pearson Correlation	Inflacija	1,000	,869	,896
	FDI	,869	1,000	,793
	Domaće investicije	,896	,793	1,000
Sig. (1-tailed)	Inflacija	.	,028	,020
	FDI	,028	.	,055
	Domaće investicije	,020	,055	.
N	Inflacija	5	5	5
	FDI	5	5	5
	Domaće investicije	5	5	5

Izvor: autori, SPSS, 2024

Rezultati Pearsonove korelacije pokazuju jake pozitivne korelacije između inflacije i FDI (0,869) kao i između inflacije i domaćih investicija (0,896). Ovo ukazuje na to da kako inflacija raste, raste i nivo investicija, što je donekle iznenađujuće, jer se obično očekuje da visoka inflacija negativno utiče na investicije. Međutim, moguće je da se u specifičnom kontekstu Republike Srpske, inflacija javlja istovremeno sa drugim ekonomskim faktorima koji podstiču investicije. Signifikantnost ovih korelacija (p-vrijednosti) takođe ukazuje na to da su ove korelacije statistički značajne. Na primjer, p-vrijednost za korelaciju između inflacije i FDI iznosi 0,028, što je ispod praga od 0,05, ukazujući na statističku značajnost. Slično, p-vrijednost za korelaciju između inflacije i domaćih investicija iznosi 0,020, takođe ispod 0,05, što potvrđuje značajnost ovog odnosa.

Uz pomoć SPSS programa, ovi rezultati nam omogućavaju dublje razumevanje dinamike između inflacije i investicija u Republici Srpskoj. Dalje kvantitativne analize, uključujući regresione modele, pomoći će nam da dodatno istražimo ove veze i pružimo preporuke za ekonomsku politiku. Iz programa SPSS smo dobili sljedeće rezultate regresione analize koji potvrđuju naše hipoteze i pružaju dublji uvid u dinamiku između inflacije i investicija u Republici Srpskoj.

Tabela 4. Rezultati regresione analize

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,933[a]	,870	,741	2,69199	,870	6,721	2	2	,130	2,341

Izvor: autori, SPSS, 2024

Iz tabele 3 možemo vidjeti da je koeficijent determinacije (R Square) 0,870, što znači da model objašnjava 87% varijabilnosti u zavisnoj varijabli (inflacija). Adjusted R Square je nešto niži (0,741), što uzima u obzir broj prediktora u modelu i pruža realniju sliku o tome koliko dobro model generalizuje. Standardna greška procjene je 2,69199, što je relativno niska vrijednost, ukazujući na dobru preciznost modela.

Durbin-Watson statistika iznosi 2,341, što sugeriše da nema ozbiljne autokorelacije u rezidualima modela.

Tabela 5. ANOVA rezultati

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	97,414	2	48,707	6,721	,130[b]
	Residual	14,494	2	7,247		
	Total	111,908	4			

Izvor: autori, SPSS, 2024

Tabela 4 prikazuje rezultate analize varijanse (ANOVA) za regresioni model. Ukupna suma kvadrata (Total Sum of Squares) iznosi 111,908, od čega regresija objašnjava 97,414, a rezidual (greška) 14,494. F-vrijednost od 6,721 sa p-vrijednošću od 0,130 pokazuje da bi za model statistički značajnije bilo da smo uzeli veći vremenski period, ali u doba Covida se desio najveći skok inflacije pa je zato taj kraći preiod bio interersantan za istraživanje.

Tabela 6. Koeficijenti regresije

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-52,248	32,524		-1,606	,249	-192,185	87,690					
	FDI	,021	,021	,428	1,023	,414	-,069	,112	,869	,586	,260	,370	2,699
	Domaće investicije	,020	,015	,557	1,331	,315	-,044	,083	,896	,685	,339	,370	2,699

Izvor: autori, SPSS, 2024

Iz tabele vidimo da su koeficijenti za FDI i domaće investicije pozitivni, što sugeriše da oba faktora imaju pozitivan uticaj na zavisnu varijablu (inflaciju). Standardizovani koeficijenti (Beta) pokazuju da domaće investicije imaju veći relativni uticaj (0,557) u poređenju sa FDI (0,428). Međutim, p-vrijednosti za oba prediktora (0,414 za FDI i 0,315 za domaće investicije) su iznad uobičajenog praga od 0,05, to može biti rezultat već ranije u tekstu objašnjenog malog uzorka ili visoke multikolinearnosti, kako je sugerisano vrednostima VIF (2,699 za oba prediktora). Na osnovu tabele koeficijenata regresije, dobijena je sljedeća regresiona jednačina:

$$\hat{Y} = -52{,}248 + 0{,}021 \cdot \text{FDI} + 0{,}020 \cdot \text{Domaće investicije}$$

Koeficijent za konstanta (Intercept) je pozitivan, ali takođe i statistički značajan ($p = 0{,}249$). Sljedeća tabela prikazuje korelacije i kovarijanse između domaćih investicija i FDI.

Tabela 7. Tabela korelacija i kovarijansi

Model			Domaće investicije	FDI
1	Correlations	Domaće investicije	1,000	-,793
		FDI	-,793	1,000
	Covariances	Domaće investicije	,000	,000
		FDI	,000	,000

Izvor: autori, SPSS, 2024

Iz tabele vidimo da postoji jaka negativna korelacija između domaćih investicija i FDI (-0,793). Ovo sugeriše da se, kako se nivo domaćih investicija povećava, nivo FDI smanjuje i obrnuto. Ovaj negativan odnos može ukazivati na određene substitucione efekte, gdje se domaći investitori i strani investitori takmiče za iste resurse ili tržišne prilike u Republici Srpskoj. Kovarijanse su sve nule, što može ukazivati na to da nema zajedničke varijabilnosti između ovih faktora u ovom specifičnom uzorku ili da su izračunate greške nula zbog specifičnih karakteristika uzorka i modela. Ovi rezultati su korisni za razumjevanje dinamike između domaćih investicija i FDI, te mogu pomoći donosiocima odluka da razviju strategije koje optimizuju oba tipa investicija i podstiču ekonomski rast. Nakon istraživanja možemo uraditi i evaluaciju hipoteza:

Hipoteza 1: Inflacija negativno utiče na strane direktne investicije (FDI). Ova hipoteza nije dokazana. Pozitivan koeficijent za FDI (0,021) sugeriše da povećanje FDI može blago povećati inflaciju, umesto da je smanjuje. P-vrijednost od 0,414 pokazuje da uticaj FDI na inflaciju nije statistički značajan.

Hipoteza 2: Inflacija negativno utiče na domaće investicije. Ova hipoteza takođe nije dokazana. Koeficijent za domaće investicije (0,020) ukazuje na pozitivan uticaj inflacije na domaće investicije. P-vrijednost od 0,315 potvrđuje da ovaj uticaj nije statistički značajan.

Hipoteza 3: Uticaj inflacije na domaće investicije je manje izražen nego na strane direktne investicije. Ova hipoteza je dokazana. Standardizovani koeficijenti (Beta) pokazuju da domaće investicije (0,557) imaju veći relativni uticaj na inflaciju u poređenju sa FDI (0,428). Dakle, uticaj inflacije je veći na domaće investicije nego na FDI, čije me je dokazana hipotezi.

Iako rezultati regresione analize ne potvrđuju sve postavljene hipoteze, oni pružaju vrijedne uvide u dinamiku između inflacije, stranih direktnih investicija i domaćih investicija u Republici Srpskoj.

ZAKLJUČAK

Istraživanje uticaja inflacije na strane direktne investicije (FDI) i domaće investicije u Republici Srpskoj za period od 2019. do 2023. godine pokazalo je neočekivane rezultate koji su oborili prve dije postavljene hipoteze i dokazali treću. Međutim, rezultati regresione analize pokazali su da pozitivan koeficijent za FDI (0,021) sugeriše da povećanje FDI može blago povećati inflaciju, dok koeficijent za domaće investicije (0,020) takođe ukazuje na pozitivan uticaj inflacije na domaće investicije. Standardizovani koeficijenti (Beta) pokazuju da domaće investicije (0,557) imaju veći relativni uticaj na inflaciju u poređenju sa FDI (0,428), što je u skladu sa trećom hipotezom. Rezultati našeg istraživanja su u suprotnosti sa nalazima mnogih istraživanja sprovedenih

u sličnim tranzicionim ekonomijama. Na primjer, istraživanja u zemljama Centralne i Istočne Evrope često pokazuju da visoke stope inflacije destimulišu strane investicije zbog povećane ekonomske nesigurnosti i smanjenog povjerenja investitora. U tim zemljama, strani investitori su posebno osetljivi na makroekonomske fluktuacije i rizike povezane sa inflacijom, što negativno utiče na njihove investicione odluke.

Slično, domaće investicije u mnogim tranzicionim ekonomijama su često negativno pogođene inflacijom. Visoki troškovi proizvodnje i neizvjesnost oko buduće ekonomske situacije smanjuju profitabilnost i dugoročne planove domaćih preduzetnika. U takvim ekonomijama, stabilnost inflacije je ključni faktor za održavanje visokog nivoa domaćih investicija.

Međutim, specifičnosti ekonomije Republike Srpske mogu objasniti zašto naši rezultati odstupaju od ovih opštih trendova. Strani investitori u Republici Srpskoj mogu biti privučeni drugim faktorima kao što su povoljni poreski uslovi, niski troškovi rada ili strateški položaj unutar Balkana. Ovi faktori mogu ublažiti negativan uticaj inflacije, pružajući relativnu sigurnost i stabilnost koja je potrebna za dugoročne investicione projekte. Takođe, domaći investitori mogu biti više fokusirani na lokalne ekonomske prilike i dostupnost kapitala, što može neutralizirati efekat inflacije.

Ovi nalazi sugerišu da je ekonomska dinamika Republike Srpske specifična i da faktori koji utiču na investicije mogu značajno varirati od onih u sličnim ekonomijama. Naša analiza pokazuje da su strani investitori u Republici Srpskoj manje osetljivi na inflaciju nego što je to slučaj u drugim zemljama. Ovo može biti zbog specifičnih lokalnih politika i ekonomskih uslova koji pružaju dodatne podsticaje stranim investitorima. Povoljne poreske politike, strateški geografski položaj i niži troškovi rada mogu igrati ključnu ulogu u privlačenju stranih investitora, uprkos fluktuacijama u inflaciji. Pored toga, naši rezultati naglašavaju važnost detaljnog razumevanja lokalnih ekonomskih uslova i specifičnosti pri formiranju ekonomske politike. Donosioci odluka u Republici Srpskoj treba da uzmu u obzir ove specifične faktore prilikom kreiranja strategija za privlačenje investicija i stabilizaciju inflacije. Posebno je važno da se poboljša poslovno okruženje i dostupnost finansiranja, što bi moglo dodatno stimulisati kako strane, tako i domaće investicije.

Takođe, naše istraživanje pokazuje da domaći investitori manje reaguju na inflaciju zbog svoje orijentacije prema lokalnim ekonomskim prilikama. Domaći investitori mogu biti više prilagodljivi i spremni da ulažu čak i u uslovima makroekonomske nestabilnosti, oslanjajući se na lokalne resurse i prilike. U svjetlu ovih nalaza, preporučujemo da se buduća istraživanja usmjere na dublje ispitivanje specifičnih faktora koji utiču na investicije u Republici Srpskoj. Korišćenje šireg spektra ekonomskih varijabli i dužeg vremenskog perioda može pružiti još preciznije uvide u ove odnose. Takođe, kreiranje politika koje balansiraju inflaciju i stimulaciju investicija ostaje ključni izazov za ekonomski razvoj regiona. Na kraju, iako naše istraživanje nije potvrdilo sve očekivane hipoteze, ono pruža vrijedne uvide u složene odnose između inflacije i investicija u Republici Srpskoj. Ovi nalazi mogu pomoći ekonomistima i donosiocima politika da bolje razumiju i upravljaju ekonomskim izazovima u regionu, sa ciljem postizanja održivog ekonomskog rasta i razvoja. Sa ovim razumjevanjem, donosioci politika mogu kreirati efikasnije strategije koje će obezbijediti stabilno i povoljno poslovno okruženje, podstičući kako strane, tako i domaće investicije.

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INFLUENCE OF INFLATION ON INVESTMENTS IN THE REPUBLIC OF SRPSKA

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Summary: *The aim of this research is to analyze the impact of the inflation rate on foreign direct investments (FDI) and domestic investments in the Republic of Srpska and to determine which of these investments is more affected by inflation. The methods used in the research include quantitative data analysis through regression models, utilizing time series data on inflation rates, foreign direct investments, and domestic investments from 2000 to 2023. Data were collected from official sources such as the Statistical Office of the Republic of Srpska and the Central Bank of Bosnia and Herzegovina. The main finding of the research indicates that inflation has a statistically significant negative impact on foreign direct investments, while the impact on domestic investments is less pronounced. This difference may be due to the fact that foreign investors are more sensitive to macroeconomic factors such as inflation, whereas domestic investors may be more influenced by local economic conditions and the availability of capital. The research concludes that stable inflation policies can play a crucial role in attracting foreign investments, while additional factors such as improving the business environment and access to financing are necessary to stimulate domestic investments. Research on the impact of inflation on foreign direct investments (FDI) and domestic investments in the Republic of Srpska for the period from 2019 to 2023 showed unexpected results that disproved the first set of hypotheses and proved the third. However, the results of the regression analysis showed that the positive coefficient for FDI (0.021) suggests that an increase in FDI can slightly increase inflation, while the coefficient for domestic investment (0.020) also indicates a positive impact of inflation on domestic investment. Standardized coefficients (Beta) show that domestic investments (0.557) have a greater relative impact on inflation compared to FDI (0.428),These findings can help economic policymakers in the Republic of Srpska formulate strategies that balance inflation and encourage both types of investments, thereby promoting economic growth and development in the region.*

Keywords: *inflation, foreign direct investment, domestic investment, Republic of Srpska, economic policy*

JEL Classification: *E22, E31, F21*

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SLOBODNE EKONOMSKE ZONE U FUNKCIJI PRIVREDNOG RAZVOJA I JAČANJA KONKURETNOSTI POSLOVANJA PRIVREDNIH DRUŠTAVA

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Sažetak: *Slobodne ekonomske zone predstavljaju jednostavnu ali stratešku vezu privrede zemalja u tranziciji sa tehnološki-tehnički opremljenim kompanijama zainteresovanim za strateško ulaganja i investiranje. Prateći globalne tokove, empirijska iskustva i uočavajući međuzavisnosti potencijala kako sirovine kao osnove, tako i resursa na globalnom tržištu, potrebno je dokazati hipotezu „međusobna povezanost tehničko-tehnoloških proizvodnih proizvodni pogona i napredak poslovanja u okviru slobodnih ekonomskih zona s ciljem jačanja lanaca snabdijevanja". U radu smo postavili i drugu hipotezu "poslovanje u slobodnim ekonomskim zonama donosi veće rezultate i mjerljive parametre u odnosu na poslovanje u poslovnim zonama lokalnih zajednica". U cilju razumijevanja postavljenih hipoteza, radom smo obuhvatili opsežna istraživanja i iskustva, koristili smo induktivnu i deduktivnu metodu, metode analize i sinteze, metoda apstrakcije i konkretizacije, metoda generalizacije i specijalizacije, metoda klasifikacije, metoda deskripcije, metoda kompilacije, kao i komparativnom metodom. Iskustva, ekonomski pokazatelji poslovanja slobodnih ekonomskih zona su bila izvorišta za obradu podataka, s ciljem da komparativno uporedimo pokazatelje i indikatore rezultata poslovanja koje su bile ključne u odlučivanju menadžmenta da kompanije preseljavaju proizvodne kapacitete, transfer tehnologije, obuke i obrazovanja potrebnog kadra za rad u slobodnim ekonomskim zonama. U zaključku jasno povezujemo globalne, regionalne i lokalne trendove i iskustva, sa preporukama da se kroz višedimenzionalan pristup, a kroz predstavljanje platforme za izradu strateških dokumenata, kao potrebnih i dovoljnih pretpostavki za pokretanje slobodnih ekonomskih zona, na konzistentan i cjelovit način definišemo osnovne razvojne pravce slobodnih ekonomskih zona i načine njihovog ostvarivanja u narednim godinama. U radu smo dokazali da razvojem slobodnih ekonomskih zona, u odnosu na poslovne zone lokalnih zajednica uspostavljamo nova strateška partnerstva sa internacionalnim kompanija-*

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ma, investitorima sa jasnim kreiranjem lanaca vrijednosti u okviru strateškog, taktičkog nivoa povezivanja i uvođenja novih tehnologija, te dodavanje novih vrijednosti u proizvodnom kapacitetu slobodne ekonomske zone.

***Ključne riječi**: slobodna ekonomska zona, menadžment, poslovna zona, model vrednovanja slobodnih ekonomskih zona,*

***JEL klasifikacija**: F10, L51, P44.*

UVOD

Na prostoru Republike Srpske, Bosne i Hercegovine, ali i šireg regiona, ne uočavaju se razlike u pojmovima između "Poslovne zone", "Industrijske zone" i "Slobodne ekonomske zone", riječ je uglavnom u različitim vrstama aktivnosti koje se obavljaju unutar tih zona i u pogodnostima koje se nude preduzećima. (Peulić V. , Analiza funkcionisanje logističkih sistema Republike Srpske i upravljanje lancima snabdijevanja Republike Srpske u funkciji pridruživanja logističkom sistemu EU, 2021)

U Republici Srpskoj, najzastupljenije su i lokalnim zajednicama najprihvatljivije, u strateškim dokumentima, u prosjeku 1,7 poslovna zona po lokalnoj zajednici. Poslovna zona je obično područje namijenjeno za poslovne aktivnosti, kao što su kancelarije, trgovine i usluge, no u našim uslovima se lociraju industrijska postrojenja i mjesto za partnerstvo sa stranim investitorima. Kod pojedinih lokalnih zajednica, napuštena ili preduzeća koja su u stečaju, ostavljena su kao područja za Poslovne zone. U većini slučaja strateških dokumenata je cilj stvoriti povoljno okruženje za poslovanje i privući kompanije koje se bave različitim vrstama poslovnih usluga.

Pojam „Industrijska zona" takođe se u posljednjim godinama eksploatiše kao specijalizovano područje namijenjeno za industrijsku proizvodnju, uglavnom se vezuju uz poslovne zone, ili uz dodatke prefiksa agro-industrijska zona. Ove zone su često opremljene infrastrukturom koja je potrebna za tešku industriju, skladištenje i distribuciju.

Vlada Republike Srpske je kroz svoja zakonska akta definisala potrebnu zakonsku regulativu za rad Slobodnih ekonomskih zona, pa se relativno nov pojam u Republici Srpskoj, Slobodna ekonomska zona (SEZ), poznata i kao „slobodna trgovinska zona", predstavlja kao područje u kojem se poslovne aktivnosti odvijaju pod posebnim carinskim i poreskim režimom. Ove zone su dizajnirane da privuku strane investicije i podstaknu izvoz nudeći olakšice kao što su oslobođenje od carina, poreza i pojednostavljeni administrativni postupci.

SEZ-ovi mogu imati različite oblike, uključujući slobodne trgovinske zone, izvozno-orijentisane zone i tehnološke parkove. Glavni cilj ovih zona je da podstaknu ekonomski razvoj privlačenjem investicija, stvaranjem radnih mjesta i povećanjem izvoza.

U cilju razumijevanja postavljenih hipoteza, radom smo obuhvatili opsežna istraživanja i iskustva, koristili smo induktivnu i deduktivnu metodu, metode analize i sinteze, metoda apstrakcije i konkretizacije, metoda generalizacije i specijalizacije, metoda klasifikacije, metoda deskripcije, metoda kompilacije, kao i komparativnom metodom.

Iskustva, ekonomski pokazatelji poslovanja slobodnih ekonomskih zona su na bila izvorišta za obradu podataka, s ciljem da komparativno uporedimo pokazatelje i indikatore rezultata poslovanja koje su bile ključne u odlučivanju menadžmenta da kompanije preseljavaju proizvodne kapacitete, transfer tehnologije, obuke i obrazovanja potrebnog kadra za rad u slobodnim ekonomskim zonama.

U zaključku jasno povezujemo globalne, regionalne i lokalne trendove i iskustva, sa preporukama da se kroz višedimenzionalan pristup, a kroz predstavljanje platforme za izradu strateških dokumenata, kao potrebnih i dovoljnih pretpostavki za pokretanje slobodnih ekonomskih zona, na konzistentan i cjelovit način definišemo osnovne razvojne pravce slobodnih ekonomskih zona i načine njihovog ostvarivanja u narednim godinama.

SLOBODNE EKONOMSKE ZONE U FUNKCIJI RAZVOJA PRIVREDE DRŽAVA

Empirijski podaci o razvoju slobodnih ekonomskih zona

Posebne ekonomske zone (SEZ) – geografski razgraničene oblasti unutar kojih vlade olakšavaju industrijsku aktivnost kroz fiskalne i regulatorne podsticaje i infrastrukturnu podršku – široko se koriste u većini zemalja u razvoju i mnogim razvijenim ekonomijama.

Mnoge zemlje u razvoju su koristile posebne ekonomske zone (SEZ) kao instrument politike za promovisanje industrijalizacije i ekonomske transformacije. Izveštaj o svjetskom razvoju za 2020. takođe prepoznaje mogućnost korišćenja SEZ kao sredstva za olakšavanje učešća u globalnom lancu vrijednosti (Svjetska banka 2019). Prema najnovijem Izveštaju o svjetskim investicijama Konferencije Ujedinjenih nacija o trgovini i razvoju (2019), zone (uključujući SEZ i druge vrste zona) koristi više od 140 ekonomija širom svijeta, skoro tri četvrtine privreda u razvoju i skoro sve tranzicione ekonomije. (World Bank, 2024)

Taj broj je naglo rastao posljednjih godina, sa najmanje 5.383 zone u 147 ekonomija. Među tim zonama najviše su multi-aktivne zone. Industrijsko specijalizovane zone i zone fokusirane na inovacije koncentrisane su na naprednijim tržištima u razvoju. Zone u većini razvijenih zemalja su redovne zone (bez posebnog regulatornog ili podsticajnog režima) i fokusirane su prvenstveno na logistiku. Kao instrument „visokog rizika, visoke nagrade“, globalni rezultati SEZ-a u zemljama u razvoju su prilično pomiješani. (UNCTAD, 2020)

Rezultati se značajno razlikuju s tim da su neki regioni ili zemlje (posebno oni u istočnoj Aziji) generalno uspješniji, dok se drugi (posebno oni u podsaharskoj Africi) bore da zone funkcionišu (Zeng 2015; Svjetska banka 2019).

Čak je i u istoj zemlji sasvim normalno da postoje i uspješne i neuspješne zone. Kao sredstvo industrijske politike, SEZ bi trebalo da dopuni tržišne snage pomažući u prevazilaženju tržišnih neuspjeha.

Kreatori politike se suočavaju ne samo sa tradicionalnim izazovima da SEZ uspiju, uključujući potrebu za adekvatnim strateškim fokusom, regulatornim i upravljačkim modelima i alatima za promociju investicija, već i sa novim izazovima koje donosi imperativ održivog razvoja, nova industrijska revolucija i promenljivi obrasci međunarodne proizvodnje.

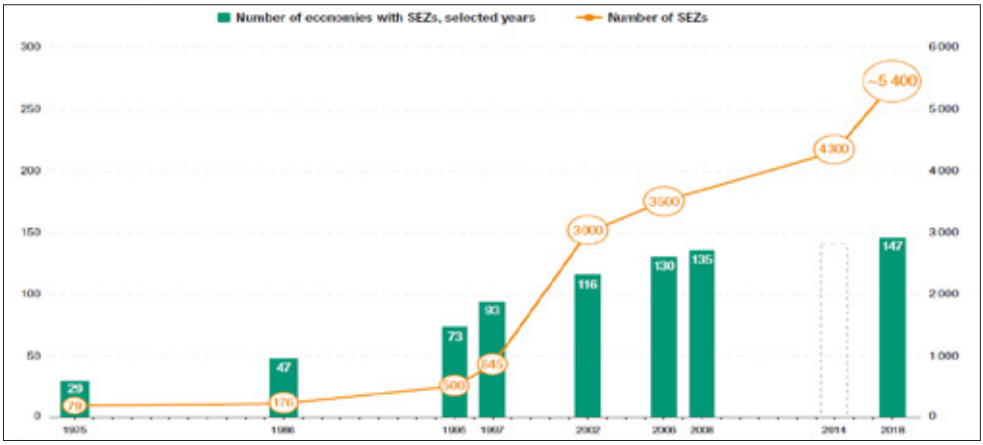
SEZ imaju mnogo imena i dolaze u mnogo varijanti i veličina. Zajedničko im

je da, u okviru definisanog parametra, obezbjeđuju regulatorni režim za preduzeća i investitore koji se razlikuje od onoga što se obično primjenjuje u široj nacionalnoj ili pod-nacionalnoj ekonomiji u kojoj su osnovani.

Koncept slobodnih luka datira mnogo vijekova, sa trgovcima koji rade sa brodova, premještaju teret i ponovo izvoze robu uz malo ili nimalo miješanja lokalnih vlasti. Moderne slobodne zone, pored pomorskih luka ili aerodroma ili duž graničnih koridora, pojavile su se 1960-ih. Istorija posebnih ekonomskih zona (SEZ) Prve SEZ su se pojavile kasnih 1950-ih u industrijalizovanim zemljama. Oni su dizajnirani da privuku strane investicije i počele su da se umnožavaju 1980-ih, sa širenjem izvozno orijentisanih strategija industrijskog razvoja u mnogim zemljama, posebno u Aziji, kao i sve većim oslanjanjem globalnih proizvođača na „offshore" proizvodnju. (Farole T. , Special Economic Zones in Africa: Comparing Performance and Learning from Global Experiences., 2011)

Ubrzanje međunarodne proizvodnje u kasnim 1990-im i 2000-im i brzi rast globalnih lanaca vrijednosti generisali su još jedan talas novih SEZ, sa mnogim zemljama u razvoju u svim regionima koje su nastojale da oponašaju rane priče o uspjehu. Očekivalo se da će globalna trgovinska pravila koja ograničavaju podsticaje vezane za izvoz i postepeno ukidanje izuzeća od tih pravila za zemlje sa niskim prihodima umanjiti rast zona za preradu izvoza (EPZ). Ipak, trend je jedva usporen, pošto su se politike SEZ (Special Economic Zone (SEZ) Meaning and Relation to FDI (investopedia.com)) prilagođavale novim pravilima, uz zadržavanje osnovne ponude investitorima – poslovno okruženje sa oslobađanjem od carina i fiskalnih obaveza.

Globalna finansijska kriza i rezultat je pad globalne trgovine samo su neznatno usporili uspostavljanje novih SEZ. Trenutno usporavanje globalizacije i međunarodne proizvodnje ima suprotan efekat, jer vlade na veću konkurenciju za mobilnu industrijsku aktivnost odgovaraju sa više SEZ i novim tipovima SEZ. Danas postoji skoro 5.400 SEZ, od kojih je više od 1.000 osnovano u poslednjih pet godina. Najavljeno je još najmanje 500 zona (otprilike 10 odsto trenutnog ukupnog broja) i očekuje se da će se otvoriti u narednim godinama.



Slika1. Istorijski razvoj slobodnih ekonomskih zona

Izvor: WIR2019_CH4.pdf (unctad.org)

Najuspješnije SEZ do sada su bile u Kini. Prema Konferenciji Ujedinjenih nacija o trgovini i razvoju, do 2022. godine bilo je više od 7.000 SEZ (WIR2019_CH4.pdf (unctad.org)). Čak i tamo gdje su se zone uspješno generisale investicije, radna mjesta i izvoz, koristi za širu privredu – ključni dio njihovog obrazloženje – često ih je bilo teško otkriti; mnoge zone funkcionišu kao enklave, sa malo veza lokalnim dobavljačima i nekoliko prelivanja.

Procesi donošenja odluka o formiranju SEZ

Tržišni nedostaci moraju biti pravilno identifikovani i obično uključuju nefunkcionisanje tržišta zemljišta (kao što je nedostupnost zemljišta, problemi sa vlasništvom nad zemljištem i preseljenje), nedostatne industrijske infrastrukture (kao što su struja, voda, gas, telekomunikacije i tretman otpada) potrebno za industrijsku aglomeraciju, i loše regulatorno i poslovno okruženje uzrokovano neuspjehom koordinacije unutar vlada ili između vlade i privatnog sektora. U zavisnosti od odgovora na ta pitanja, možda bi bilo moguće usvojiti pristup zasnovan na zonama. (Stoltenberg, 1984)

Slobodne ekonomske zone (SEZ) igraju ključnu ulogu u prevazilaženju jaza između privreda u tranziciji i tehnološki naprednih kompanija koje traže strateške investicije. Slobodne ekonomske zone nude jedinstveno okruženje u kojem preduzeća mogu napredovati zahvaljujući različitim podsticajima i efikasnijem regulatornom okviru.

Slobodne ekonomske zone (SEZ) na privrede u tranziciji diretno su usmjerene ka privlačenje direktnih stranih investicija, dizajnirane da privuku investitore, nudeći poreske olakšice, pojednostavljene carinske procedure i smanjene birokratske preprekе.

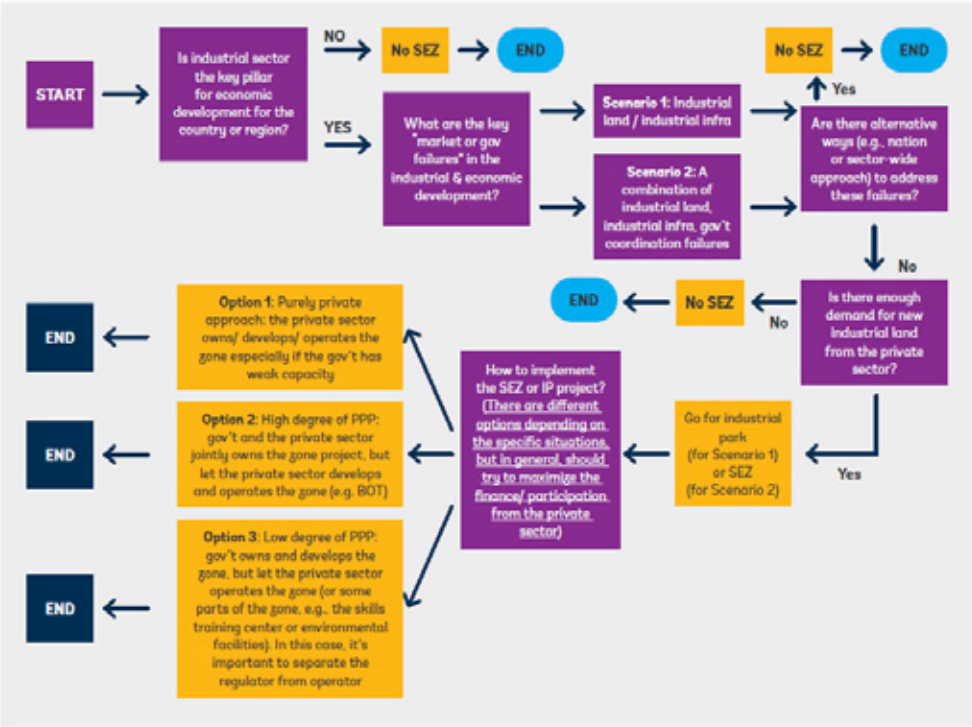
Sa druge strane slobonde ekonomske zone, utiču i na ekonomsku diversifikaciju, privlačenjem različitih industrija, SEZ pomažu državama da se uklone od zavisnosti od jednog sektora i podstiču otporniju ekonomiju

Rezultanta razvoja slobodnih zona je otvaranje radnih mesta, priliv kompanija i investicija dovodi do otvaranja radnih mjesta, što može značajno da smanji stope nezaposlenosti u privredama u tranziciji.

Kompanije dobijaju pristup novim tržištima i regionalnim čvorištima, što može biti ključno za širenje i rast uz smanjenje operativnih troškova.

Sve u svemu, SEZ služe kao strateški spoj koji može da uveća ekonomski rast, tehnološki napredak i povećanu konkurentnost i za privrede u tranziciji i za kompanije koje u njih ulažu. Kao takvi, oni su kritična komponenta u globalnom ekonomskom pejzažu, posebno za zemlje koje žele da unaprijede svoje tehnološke sposobnosti i privuku strateške investicije.

Međusobno povezivanje tehničkih i tehnoloških proizvodnih objekata u okviru slobodnih ekonomskih zona (SEZ) igra ključnu ulogu u unapređenju poslovnog napretka i jačanju lanaca snabdijevanja. (Chains. W. D., 2021)



Slika 2. Vizuelna ilustracija procesa donošenja odluka u SEZ

Izvor: World Bank Group (2021) and author's research. PPP = public-private partnership; SEZ = special economic zone

Slobodne ekonomske zone ciljevi i mogućnosti

Kada se odluči da je zonski pristup neophodan i izvodljivo, država takođe treba da odluči šta i koje vrste slobodnih ekonomskih zona su najpogodnija. Obično postoje dva tipa zona uprkos mnogim imenima koja im se daju: SEZ i industrijski parkovi. SEZ često uključuju „posebne" pravne i regulatorni režim (uključujući režime podsticaja) i može biti prikladno u slučaju da su glavna ograničenja povezana sa pravnim i regulatorna pitanja koja utiču na poslovno okruženje pored drugih ograničenja, kao što su zemljište i infrastruktura.

U drugim slučajevima, jednostavna alternativa SEZ-u je industrijska park, koji ne zahtjeva posebnu zakonsku i regulativu režima. U takvim slučajevima, industrijski park može biti prikladniji jer podrazumijeva manje složene i rizične procese, i u mnogim slučajevima, industrijski park ili samo bolje korišćenje zemljišta potrebne su politike, na primjer, umjesto režima SEZ. Dakle, u zavisnosti od konkretnog razvoja ciljeva i ograničenja, SEZ se može uzeti u obzir zajedno sa drugim mogućim opcijama (alternativama), kao što je prikazano u tabeli.

Tabela 1. Slobodne ekonomske zone - ciljevi moguće opcije

Ciljevi	Moguće Opcije
Locirajte opasne industrije	Reforma propisa o zoniranju
Promovisanje ekonomije aglomeracije	Pravilno zoniranje
Poboljšati poslovno okruženje	Nacionalne reforme
Privucite velike transformativne investitore	Pametnim podsticajima dobrim praksama
Olakšati pristup industrijskom zemljištu za MSP	Pravilno zoniranje
Poboljšati uslove rada (uključujući i radnice)	Propisi i/ili radničke prostorije u IP/SEZ
Smanjite negativan uticaj na životnu sredinu i pozabavite se klimom izazovi promene	Unapređenje ekoloških propisa (npr. postrojenja za prečišćavanje otpadnih voda) ili ulaganja u obnovljivu energiju/energetsku efikasnost u IP/SEZ

Izvor: autor

Za bilo koje zonske projekte, gdje god je to izvodljivo, uvek je a dobra praksa da se identifikuju mogućnosti za privatne investicije sa snažnim razvojnim uticajem kao i pristup eko-industrijskom parku, zajedno sa specifičnim, praktičnim i izvodljivim mjerama (politika i regulatorne reforme i, kada je opravdano, javna podrška) neophodno i dovoljno za oslobađanje ovih mogućnosti.

Pomiješani globalni rezultati jasno pokazuju da SEZ nisu lako se ispraviti, pa čak i uspješne SEZ1 obično uzimaju 5–10 godina za postizanje rezultata. U zemljama sa niskim prihodima, rezultati bi mogli da potraju duže. Stoga je oprezan pristup od vitalnog značaja. Čak i u slučaj kada je pristup SEZ dobro opravdan, kreatori politike treba da pristupi SEZ sa jasnim ciljem, dugoročnom posvećenošću, i jak tehnički tim. Dok dovoljno sredstava je važno, kapacitet implementacije je još važniji za uspjeh zonskog programa. Kreatori politike treba da aktivno revidiraju i razmatraju lekcije naučili iz uspješnih programa SEZ.

Među te naučene lekcije, ključni elementi uključuju a strateška lokacija; integrišući zonsku strategiju sa ukupnim strategija razvoja; razumijevanje tržišne potražnje i korišćenje komparativnih prednosti; i, što je najvažnije, obezbeđivanje da su zone „posebne" u smislu pilotiranja reformi za a poslovno okruženje i otporni su na različite eksterne šokove, kao što je pandemija COVID-19. Lekcije može se široko klasifikovati u četiri šta treba i četiri ne treba (vidi tabela 2), o čemu će biti više reči u nastavku sekcije. Lekcije se takođe mogu uglavnom primjeniti na redovne IP-ovi (bez posebnog režima).

Algoritam definisanja parametara i prakse projektovanja slobodnih ekonomskih zona

Postoje četiri osnovne prakse koje treba pažljivo pratiti prilikom projektovanja i razvoja program SEZ za povećanje vjerovatnoće uspjeha.

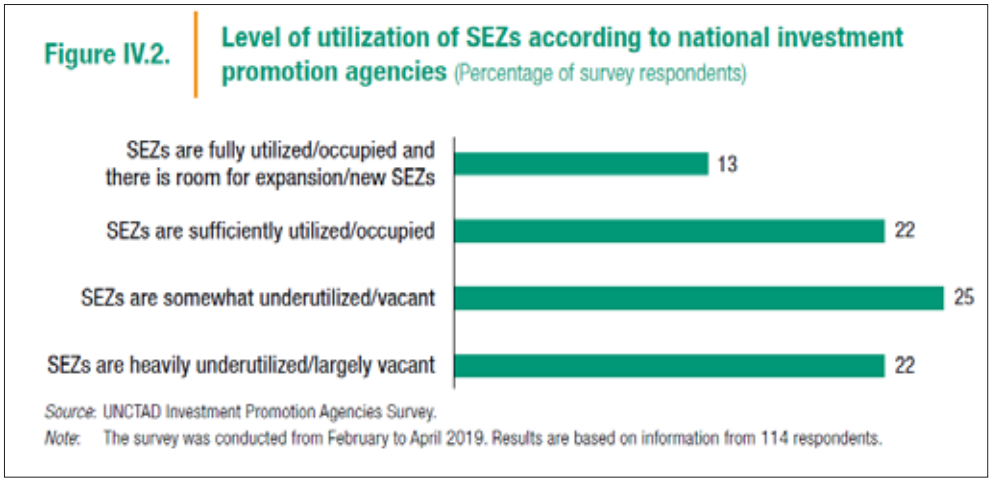
1. LOKACIJA- izaberite pravu lokaciju. Izbor lokacije SEZ-a može biti faktor „napravi ili razbij". Međunarodno iskustvo pokazuje da SEZ imaju tendenciju da cvjetaju u ključnim oblastima i oko infrastrukture prolaza. Gradovi nude karakteristike koje su obično ključne za uspjeh velikih, radno intenzivnih SEZ, uključujući pristup dubokim i specijalizovanim skupovima radne snage, specijalizovanim dobavljačim i poslovne usluge, i društvena infra-

struktura, kao i povezanost na domaća, regionalna i globalna tržišta (Svjetska banka 2019).

2. Povezanost među pojedincima, firmama, zemljama i regionima se sve više razumije kao ključni faktor u postizanju konkurentnosti i održive, inkluzivne ekonomije rasta. Slobonda ekonomska zona da bi bila katalizator za strukturne transformacije, zonama je potrebno je da imaju ili da budu povezane sa ključnim elementima transporta infrastrukturu (kao što su luke, željeznice i autoputevi) sa dobrom logistikom, usklađeni sa lokalnim resursima koji koriste komparativne prednosti kao što su agro-prerada ili elektronika, a da pri tome budu dio globalnog lanca vrijednosti usmjereni na izvoz,ali i na domaće tržište.
3. PODSTICANJE- podsticati povoljno poslovno okruženje sa reformama u prevazilaženje ograničenja za efikasno poslovanje preduzeća. Fokusiranje u velikoj mjeri o fiskalnim podsticajima, kao što su poreske olakšice i besplatno zemljište, obezbjediti pogodno okruženje za poslovanje i da podstakne konkurentnost, inovativnost, lokalnu ekonomiju na nivou preduzeća integraciju i socijalnu i ekološku održivost. Važno je da se uvjerimo da to ima koristi za privredne subjekte (npr. pojednostavljenje carinskih procedura). U skoro svim uspješnim zonama u svijetu, kao npr Šenžen (Kina), Akaba (Jordan), Panama Pacifiko (Panama), Jurong (Singapur) i Džebel Ali (Ujedinjeni Arapi Emirates), da spomenemo samo neke, osnovna infrastruktura je na visokom nivou kvaliteta.Jedna od važnih karakteristika SEZ-a sa dodatom vrijednošću je usluga na jednom mjestu (OSS). Pošto zonski program uključuje mnoge vladine aktere zadužene za to faktori kao što su zemljište, transport, komunalije, carina, porezi, finansije, imigraciju i vještine, efikasan javni servis i usluge, kao što su registracija, licenciranje, dozvole, oporezivanje i carinjenje, mnogo jednostavnije i efikasnije. Uspostavljanje funkcionalnog servisa, potrebno je uspostaviti odgovarajući dijalog, koordinaciju i mehanizam saradnje između svih nivoa vlasti. (Aghion P. J., 2015)
4. KONKURENTNOST Povećati konkurentnost tržišta kroz rigorozne procjena potražnje na tržištu i učešće privatnog sektora Imajući u vidu da je zonski program ili projekat veoma skup poduhvat, zahtjeva veoma pažljivo planiranje, dizajn i menadžment. Pored troškova razvoja, koji uključuju osnovne infrastrukture, otkup i razvoj zemljišta, i zelenih objekata, projekat obuhvata i troškove zajedničkih usluga u zoni, kao i izgubljenih javnih prihoda od raznih podsticaja koji se često povezuju sa programom zone. Procjena potražnje je obično dio sveobuhvatnog studija izvodljivosti određene lokacije i služi kao osnova za master planiranje i ekonomske i finansijske analize na predložena zona, lokalni kontekst, sklonost ka riziku privatnih investitora i vlade strategija će odrediti najprikladniju konfiguraciju privatnih učešće sektora, od potpuno privatnog do JPP pristup gdje mogu biti iskusni partneri iz privatnog sektora doveden da pomogne u planiranju, razvoju infrastrukture, i upravljanje SEZ. (Zeng G. M., Structural transformation through free trade zones, 2019)
5. MAKSIMALNI EFEKAT Maksimizirajte pozitivne efekte kroz inkluzivno i održivi pristup. Maksimizirajte pozitivno prelivanja kroz inkluzivnu i održivi pristup Uprkos prošlim uspesima nekih „enklavnih“ model zona (posebno

izvozno-prerađivačke zone) . Zone treba da se zasnivaju na lokalnom komparativne prednosti i nastojati da lokalni dobavljači kao deo njihovih lanaca vrijednosti kroz inkluzivni pristup. Proaktivno identifikaciju mogućnosti, usklađivanje napora i obuku programa između firmi unutar i van zona, u velikoj meri bi poboljšati uticaj zona. (Zeng D. Z., How do special economic zones and industrial clusters drive China's rapid development, 2011)

6. EKOLOGIJA Ekološki i društveni standardi međunarodnih investitora znače da SEZ koje usvoji principe eko-industrijskog razvoja i to uskladiti ili prevazići usaglašenost sa dobrom međunarodnom praksom zahtjevi mogu imati konkurentsku prednost u odnosu na druge lokacije koje se takmiče za iste investitore. Međutim, to se takođe koristi da odgovori na globalne zahtjeve za zelenim snabdijevanjem lanac i za smanjenje ograničenja resursa kroz poboljšane upravljanje resursima i očuvanje uz obezbeđivanje nacionalnih a međunarodne obaveze u vezi sa klimatskim promenama su ispunjene.



Slika 3. Stepen iskorišćenosti SEZ prema nacionalnim investicijama promotivne agencije (Procenat ispitanika u anketi)

Izvor: UNCTAD Investment Promotion Agencies Survey. Note: The survey was conducted from February to April 2019. Results are based on information from 114 respondents.

UPRAVLJANJE TROŠKOVIMA U SLOBODNIM EKONOMSKIM ZONAMA

Troškovi osnivanja SEZ

Slobodne ekonomske zone se baziraju na niskim troškovima uspostavljanja SEZ. Ključni razlog za SEZ je njihov nizak nivo troškova u relativnim iznosima, u poređenju sa troškovima izgradnje ekvivalentne industrijske infrastrukture u cjelokupnoj ekonomiji, čak i u apsolutnom smislu, troškovi unaprijed ulaganja mogu biti sadržane. Kapitalni izdaci za razvoj SEZ – posebno osnovnih zona nudeći parcele i osnovnu potrebnu i dovoljnu infrastrukturu zone.

Slobodne ekonomske zone privlače međunarodno mobilne investicije koje traže efikasnost, za koje se zemlje takmiče. Uprkos pojava novih oblika zona vezanih za prirodne resurse, usmjerenih na domaće tržišta ili ciljanje inovacijskih mogućnosti

(npr. nauka, visokotehnološke ili zelene zone), većina SEZ ostaju u suštini dio konkurentnog paketa za promociju investicija u zemljama, zajedno sa drugim oblicima podsticaja. Privrede koje su najuspješnije ostvarile brze industrijske razvoj kroz korišćenje SEZ naglašavaju da zone nisu samo investicija sredstvo promocije, ali prije svega sredstvo industrijske politike. (World Bank, 2019)

Regulatorni okvir i upravljanje. SEZ, kao teritorije sa režimima koji odlaze iz nacionalnih pravila, nužno su javna inicijativa. Razvoj, vlasništvo i upravljanje pojedinačnim zonama, međutim, može biti javno, privatno ili javno-privatno partnerstvo (PPP). Privatni programeri se često angažuju da minimiziraju početne javne izdatke i pristup međunarodnoj ekspertizi u projektovanju zona, izgradnji i marketingu.

Izveštaji o investicijama tokom poslednjih godina djelimično su vođeni strukturnim promenama na međunarodnom planu poslovanja, sa pomjeranjem ka nematerijalnim i prekomorskim operacijama koje su sve više aktivna svetlost. Ovi obrasci se stoga manje bave prednostima proizvodnje koje nude SEZ. Oni su takođe vođeni ekonomskim i političkim faktorima.

Rastuća težina tržišta u razvoju u globalnoj trgovini i investicijama ima implikacije na klijentelu SEZ. Povratak protekcionističkih tendencija i spor napredak u međunarodnim političkim režimima za trgovina i investicije vode industrijske investitore da stalno procenjuju strateške lokacije za jeftinu proizvodnju u svetlu potencijalnih novih trgovinskih barijera ili promena na preferencijalnom tržištu pristup. Regionalizacija trgovinskih i investicionih sporazuma ima dalje implikacije za Konkurentnost SEZ, u zavisnosti od izvora uvoza i izvoznih destinacija, kao i od status SEZ u regionalnim sporazumima.

Da bi zonske programe učvrstio na čvrstim tržišnim osnovama, privatni sektor mora biti uključen od samog početka da razume svoje specifične potrebe i ograničenja i da testira pristup zonama. Ako je zonska inicijativa opravdana, preliminarne lokacije, sektori i potencijalni investitori treba identifikovati; potrebno je sprovesti neke analize troškova i koristi; i dobro osmišljen potrebno je izraditi plan implementacije. Međutim, u mnogim slučajevima proces strateškog planiranja je preskočen ili kompromitovan. Mnogi odluke se donose čisto odozgo prema dole, bez razmatranja stvarnih potreba privatnom sektoru. Neke zone su politički motivisane čak i bez odgovarajuće studije izvodljivosti, a neki su osnovani uglavnom u svrhu ravnopravnosti, ne nužno u skladu sa ili u jednoj zemlji strategija ekonomskog razvoja regiona. S obzirom na prirodu SEZ, one možda nisu prikladne instrument razvoja u perifernom i udaljenom regionu. SEZ vođen snabdijevanjem dizajniran bez poslovna potražnja je recept za neuspjeh.

Uticaj slobodnih zona na BDP država

Slobodne ekonomske zone (SEZ) imaju značajan uticaj na bruto domaći proizvod (BDP) zemlje. One su dizajnirane da privuku strane investicije, povećaju izvoz i stvore nova radna mesta, što može doprineti ekonomskom rastu.

Privlačenje stranih direktnih investicija, SEZ često nude poreske olakšice i druge podsticaje kako bi privukle investitore, što može dovesti do povećanja investicija, koje mogu pomoći u razvoju novih industrija i tehnologija, što može imati pozitivan efekat na BDP.

Povećanje izvoza, u slobodnim ekonomskim zonama obično imaju za cilj da podstaknu izvozno orijentisane industrije. Povećanje izvoza može dovesti do poboljšanja trgovinskog bilansa i doprineti rastu BDP. Stvaranje radnih mesta je takođe

karakteristika jačanja preduzeća koji posluju u okviru slobodnih ekonomskih zona. Kreiranje novih radnih mjesta, kako direktno, tako i indirektno, kroz lanac snabdijevanja i usluge. Ovo može dovesti do smanjenja nezaposlenosti i povećanja potrošnje, što dodatno podstiče BDP.

Razvoj infrastrukture za potrebe slobodnih ekonomskih zona, koja podstiču razvoj infrastrukture kao što su putevi, luke i komunikacije. Ovo može imati multiplikativni efekat na ekonomiju, podstičući rast BDP. (World Bank, 2024)

Socio-ekonomski efekti, su u direktnoj konekciji, kao što su povećanje prihoda i cijene zemljišta u okolini, ali i potencijalno povećanje nejednakosti i uticaja na lokalne zajednice.

U Kini, na primjer, procjenjuje se da su slobodne ekonomske zone do 2007. godine, njihovi doprinesi oko 22% nacionalnog BDP-a, oko 46% stranih direktnih investicija i oko 60% izvoza, te su stvorili više od 30 miliona radnih mjesta. (Jeong, 2016)

Elementi jačanja konkuretnosti preduzeća koja posluju u okviru SEZ sa trendovima razvoja

Najčešći tipovi SEZ su varijacije slobodnih zona, koje su u suštini odvojene carinske teritorije. Pored oslobađanja od carina i tarifa, većina zona nudi i fiskalne podsticaje; poslovni propisi koji se odnose na pristup zemljištu, dozvole i licence ili pravila zapošljavanja; i administrativnu racionalizaciju i olakšavanje. Podrška infrastrukturi je još jedna važna karakteristika, posebno u zemljama u razvoju gde osnovna infrastruktura za poslovanje van ovih zona može biti loša.

U zamjenu za ove carinske, fiskalne i regulatorne ustupke; mjere podrške poslovanju; i ulaganja u fizičku infrastrukturu, vlade očekuju da investitori koji posluju u SEZ otvore radna mjesta, podstaknu izvoz, diversifikuju ekonomiju i izgrade proizvodne kapacitete. Interkonekcija doprinosi ukupnoj efikasnosti i jačanju konkurentnosti poslovanja preduzeća u slobodnim ekonomskim zonama:

Integracija naprednih tehnologija diretno je povezana sa jačanjem efikasnosti i konkurentnosti preduzeća u okviru slobodne ekonomske zone, kroz usvajanje najsavremenijih tehnologija u proizvodnim pogonima u okviru SEZ vodi efikasnijim proizvodnim procesima i logističkim operacijama. Ova integracija može značajno poboljšati brzinu i pouzdanost lanaca snabdijevanja. Zajedničko poslovno okruženje poboljšava okruženje za saradnju u kojem preduzeća mogu da dijele resurse i stručnost. Ova saradnja može dovesti do inovativnih rješenja koja jačaju lanac snabdijevanja i smanjuju troškove poslovanja preduzeća, a time jačaju otpornost. Prednost strateške lokacije slobodne ekonomske zone, koja je strateški locirana kako bi se olakšao lak pristup međunarodnim tržištima, blizina glavnih autoputeva poboljšava kretanje robe, čime se pojednostavljuju lanci snabdijevanja i optimiziraju troškovi logistike.

Regulatorne prednosti slobodne ekonomske zone, kao što su oslobađanje od poreza i pojednostavljene carinske procedure, koje mogu privući investicije u visokotehnološke industrije i podržati rast međusobno povezanih proizvodnih kapaciteta.

U okviru slobodne zone, konstanta je cjeloživotno učenje, usvajanje vještina i kompetentnosti, a direktno je oslikana koncentracijom tehničkih i tehnoloških preduzeća u SEZ-ovima može dovesti do razvoja specijalizovanih tržišta rada, što je korisno za kompanije kojima su potrebne specifične tehničke vještine za upravljanje naprednim proizvodnim kapacitetima. (Novaković, Peulić, & Matijević, 2020)

ZAKLJUČAK

Slobodne ekonomske zone (SEZ) igraju ključnu ulogu u prevazilaženju jaza između privreda u tranziciji i tehnološki naprednih kompanija koje traže strateške investicije. Slobodne ekonomske zone nude jedinstveno okruženje u kojem preduzeća mogu napredovati zahvaljujući različitim podsticajima i efikasnijem regulatornom okviru.

Slobodne ekonomske zone (SEZ) na privrede u tranziciji diretno su usmjerene ka privlačenje direktnih stranih investicija, dizajnirane da privuku investitore, nudeći poreske olakšice, pojednostavljene carinske procedure i smanjene birokratske prepreke.

Slobodne ekonomske zone (SEZ) mogu značajno uticati na konkurentnost preduzeća koja u njima posluju. Slobone zone mogu poboljšati konkurentnost, smanjenim porezima ili potpunom poreskom oslobođenju, što može smanjiti operativne troškove i povećati profitabilnost.

Regulatorna olakšanja omogućavaju lakše poslovanje, i može ubrzati vrijeme potrebno za pokretanje i proširenje poslovanja. Infrastrukturna podrška u slobodnim ekonomskim zonama bolju infrastrukturu i pristup transportnim mrežama, što olakšava logistiku i distribuciju. Slobodne zone služe kao platforme za izvoz, omogućavajući preduzećima da lakše pristupe međunarodnim tržištima. Takođe, u slobodnim ekonomskim zonama privlače se investicije u nove tehnologije i inovacije, što može pomoći preduzećima da poboljšaju svoje proizvode i procese. Kvalifikovana radna snaga je sadržaj preduzeća SEZ, nudeći preduzećima pristup talentima koji su potrebni za specijalizovane industrije.

Slobodne ekonomske zone povezuju globalne, regionalne i lokalne trendove i iskustva, sa preporukama da se kroz višedimenzionalan pristup, a kroz predstavljanje platforme za izradu strateških dokumenata, kao potrebnih i dovoljnih pretpostavki za pokretanje slobodnih ekonomskih zona, na konzistentan i cjelovit način definišemo osnovne razvojne pravce slobodnih ekonomskih zona i načine njihovog ostvarivanja u narednim godinama. Privlačenje stranih direktnih investicija, SEZ često nude poreske olakšice i druge podsticaje kako bi privukle investitore, što može dovesti do povećanja investicija, koje mogu pomoći u razvoju novih industrija i tehnologija, što može imati pozitivan efekat na BDP.

U radu smo dokazali da razvojem slobodnih ekonomskih zona, u odnosu na poslovne zone lokalnih zajednica uspostavljamo nova strateška partnerstva sa internacionalnim kompanijama, investitorima sa jasnim kreiranjem lanaca vrijednosti u okviru strateškog, taktičkog nivoa povezivanja i uvođenja novih tehnologija, te dodavanje novih vrijednosti u proizvodnom kapacitetu slobodne ekonomske zone..

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FREE ECONOMIC ZONES IN FUNCTION OF ECONOMIC DEVELOPMENT AND STRENGTHENING COMPETITIVENESS OF BUSINESS COMPANIES

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Summary: *Free economic zones represent a simple but strategic link between the economies of countries in transition and technologically and technically equipped companies interested in strategic investing and investments. Following global trends, empirical experiences and noting the interdependence of the potential of raw materials as the basis and the resource on the global market, it is necessary to prove the hypothesis of "interconnection between techno-technological production plants and business progress within free economic zones with the aim of strengthening supply chains". In the paper, we have put forward another hypothesis: "business in free economic zones brings greater results and measurable parameters compared to business activities in business zones of local communities". In order to understand the set hypotheses, our work included extensive research and experience, where we used inductive and deductive methods, methods of analysis and synthesis, methods of abstraction and concretization, methods of generalization and specialization, methods of classification, methods of description, methods of compilation, as well as the comparative method. Experiences, economic indicators of business activities in free economic zones were the source for data processing, with the aim of comparative analysis of parameters and indicators of business results that were key in the management's decision making to move companies' production capacities, transfer technology, training and educate the staff necessary for work in free economic zones. In the conclusion, we clearly link global, regional and local trends and experiences with recommendations to define the basic development directions in a consistent and integral way through a multidimensional approach and presentation of the platform for creation of strategic documents as necessary and sufficient assumptions for the launch of free economic zones and thier realization in the coming years. In this Paper, we have proven that by developing free economic zones, in relation to business zones of local communities, we establish new strategic partnerships with international companies, investors with clearly created value chains within strategic, tactical level of connection and introduction of new technologies beside adding new values in production capacity of free economic zones.*

Key words: *free economic zone, management, business zone, model od evaluating free economic zones.*

JEL classification: *F10, L51, P44.*

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GLOBALNI TREDOVI KRETANJA UPRAVLJANJA U DRUMSKOM TRANSPORTU I NJIHOV UTICAJ NA LANCE SNABDIJEVANJA

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Sažetak: *Kao početna hipoteza rada je „da li je vrijeme za izgradnju novog modela drumksog transporta budućnosti i koji su nam rokovi prihvatljivi". Pomoćna hipoteza je dopunjena „uloga podsticaja i izgradnje infrastrukture za model budućnosti". Kao druga hipoteza postavljena je „uloga i značaj drumskog transporta kao vezivnog tkiva u lancima snabdijevanja uslovljenim aktuelnim poremećajima". Cilj rada je da slijedom globalnih trendova kretanja u drumskog transportu i njihovog uticaja na lance snabdijevanja sa ciljem dokazivanja postavljenih glavnih i pomoćnih hipoteza. U toku izrade rada, koristili smo induktivnu i deduktivnu metodu, metode analize i sinteze, metoda apstrakcije i konkretizacije, metoda generalizacije i specijalizacije, , metoda klasifikacije, metoda deskripcije, metoda kompilacije, kao i komparativnom metodom. Polazni elementi analize problema, predstavlja sagledavanje globalnih trendova kretanja koji opterećuju drumsku transportnu industriju, od „zelene agende", „nedostatak i (ne)popunjenost radnih mjesta", „podsticaja za provajdere logistike", izazovi u finansiraju infrastrukture, te ispunjavanje ciljeva „dekarbonizacije – neutralnosti do 2050 godine" i drugih istraživanja koje su sprovedena uz pomoć ASTIC, CEVA Logistic), Istraživanje IRU Green Compact-a (IRU Green Compact | IRU | World Road Transport Organisation), Međunarodna drumska transportna unija IRU-ovom Globalnom izveštaju o nedostatku vozača tereta za 2023(We need your help: IRU Driver Shortage Survey 2023 | IRU | World Road Transport Organisation). Za potrebe rada, koristili smo podatke zvaničnog IRUIRU | World Road Transport Organisation - IRU je svjetska organizacija za drumski transport, 3,5 miliona operatera i logistike širom svijeta. izveštaj, koji se zasniva na istraživanju više od 4.700 transportnih kompanija u Americi, Aziji i Evropi, koje predstavljaju 72% globalnog BDP-a. Zaključci predstavljaju rezultate istraživanja globalnih trendova kretanja u drumskom transportu i njihov uticaj na lance snabdijevanja, od lokalnog ka globalnom nivou, a kojima smo dokazali postavljene glavne i pomoćne hipoteze.*

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Ključne riječi: *menadžment, drumski transport, globalni trendovi, lanci snabdijevanja.*

JEL klasifikacija: *F02, L91, R4, R5.*

UVOD

Kao početna hipoteza rada je „da li je vrijeme za izgradnju novog modela drumskg transporta budućnosti i koji su nam rokovi prihvatljivi". Pomoćna hipoteza je dopunjena „uloga podsticaja i izgradnje infrastrukture za model budućnosti". Kao druga hipoteza postavljena je „uloga i značaj drumskog transporta kao vezivnog tkiva u lancima snabdijevanja uslovljenim aktuelnim poremećajima". Cilj rada je da slijedom globalnih trendova kretanja u drumskog transportu i njihovog uticaja na lance snabdijevanja sa ciljem dokazivanja postavljenih glavnih i pomoćnih hipoteza. U toku izrade rada, koristili smo induktivnu i deduktivnu metodu, metode analize i sinteze, metoda apstrakcije i konkretizacije, metoda generalizacije i specijalizacije, , metoda klasifikacije, metoda deskripcije, metoda kompilacije, kao i komparativnom metodom. Polazni elementi analize problema, predstavlja sagledavanje globalnih trendova kretanja koji opterećuju drumsku transportnu industriju, od „zelene agende", „nedostatak i (ne)popunjenost radnih mjesta", „podsticaja za provajdere logistike", izazovi u finansiraju infrastrukture, te ispunjavanje ciljeva „dekarbonizacije – neutralnosti do 2050 godine" i drugih istraživanja koje su sprovedena uz pomoć ASTIC, CEVA Logistics, Istraživanje IRU Green Compact-a, Međunarodna drumska transportna unija IRU-ovom Globalnom izveštaju o nedostatku vozača tereta za 2023. Za potrebe rada, koristili smo podatke zvaničnog IRU izveštaj, koji se zasniva na istraživanju više od 4.700 transportnih kompanija u Americi, Aziji i Evropi, koje predstavljaju 72% globalnog BDP-a. Zaključci predstavljaju rezultate istraživanja globalnih trendova kretanja u drumskom transportu i njihov uticaj na lance snabdijevanja, od lokalnog ka globalnom nivou, a kojima smo dokazali postavljene glavne i pomoćne hipoteze.

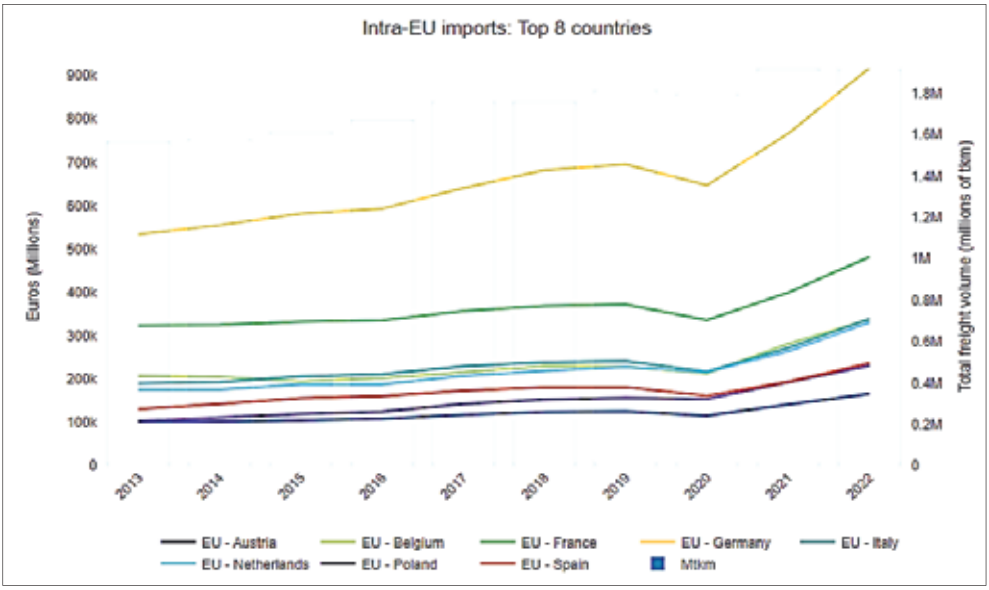
DRUMSKI TRANSPORT U LANCIMA SNABDIJEVANJA ZEMALJA EU

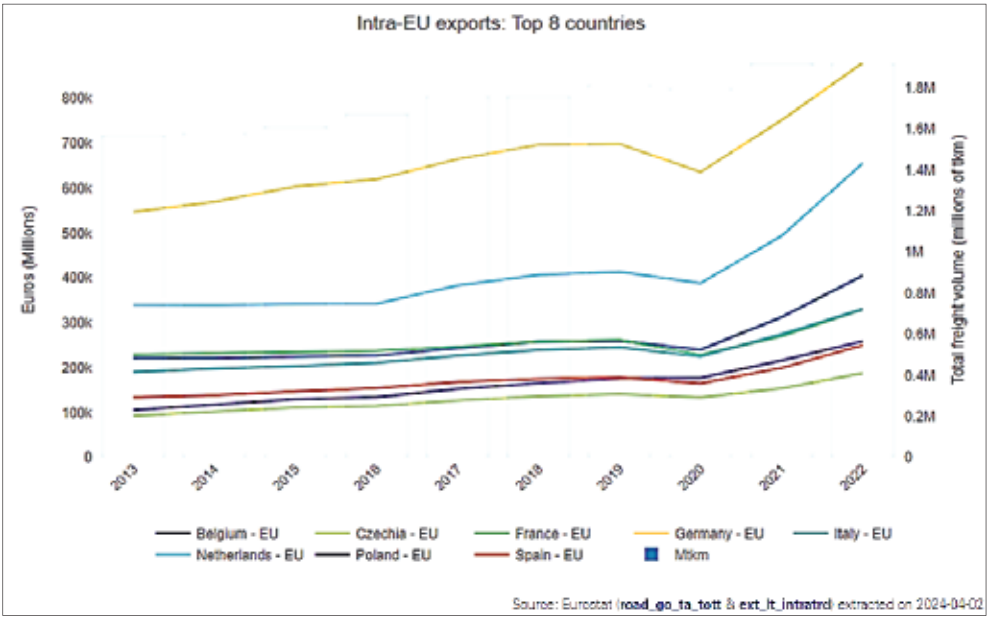
Mjesto drumskog transporta u pokazateljima lanaca snabdijavanja EU

Posmatrajući lance snabdijevanja uzvodno ili nizvodno, odnosno od izvora do cilja, transport robe je osnova ili krvotok. Lanci snabdijevanja u strukturi se oslanjaju na sve vidove i sredstva transporta, u zavisnosti od optimalnog rješenja, fleksibilnog i efikasnog omjera, tako da svaki dan drumska laka ili teška sredstva, brodovi, vozovi i avioni isporučuju, snabdijevaju svaki dio zemaljske kugle, od prehrambenih artikala, medicinskih medikamenata do svih drugi artikala neophodnih za privredne kapaciteta i potrebe potrošača. Analizirajući prikupljene i istraživanjem objedinjene podatke o robnim-trgovinskim tokovima, prema vrsti transporta, ispitivanjem kombinovanih transportnih sistema, te udela drumskih operatera u protekloj deceniji utvrdili smo zakonitosti i važnost pojedinačnih udela transportnih sistema u lancima snabdijevanja zemalja Evropske Unije. (Goldenbeld, Driving hours and rest time / hours of service regulations for commercial drivers. European Road Safety Decision Support System, 2017)

Za potrebe rada, istraživali smo dostupne podatke Eurostata , međunarodne robne tokove u kojim se naglašavaju glavni koridori transporta, a koji odgovaraju obimu lanaca snabdijevanja. Na osnovu istraživanja i komparacijom podataka pod državama,

zaključujemo da bez drumskog trasnporta se ne može kreirati lanac snabdijevanja u uvoznom i izvoznom toku, skoro svu robu u nekom trenutku svog putovanja oslanjamo na drumski transport, proučavanje ovih tokova pruža uvid u razmjere međunarodnog tržišta drumskog tereta u EU. Na grafikonima 1. i 2 . je prikazan udio drumskog transporta tereta u uvozu i izvozu, predstavljen u ostvarenom transportnom radu, mjerljivo u tonskim kilometrima, u osam najvećih lanaca nacionalnih vrijednosti je dominatan vid transporta, sa prosjekom iznad 80%. (IRU, 2023).





Grafikon 1. Obim transportnog rada drumskih transportnih operatera u uvozu/izvoz lanca vrijednosti u EU

Izvor: Eurostat, 2024.

Grafikon 2. Obim transportnog rada drumskih transportnih operatera u uvozu/izvoz lanca vrijednosti u EU

Izvor: Eurostat, 2024.

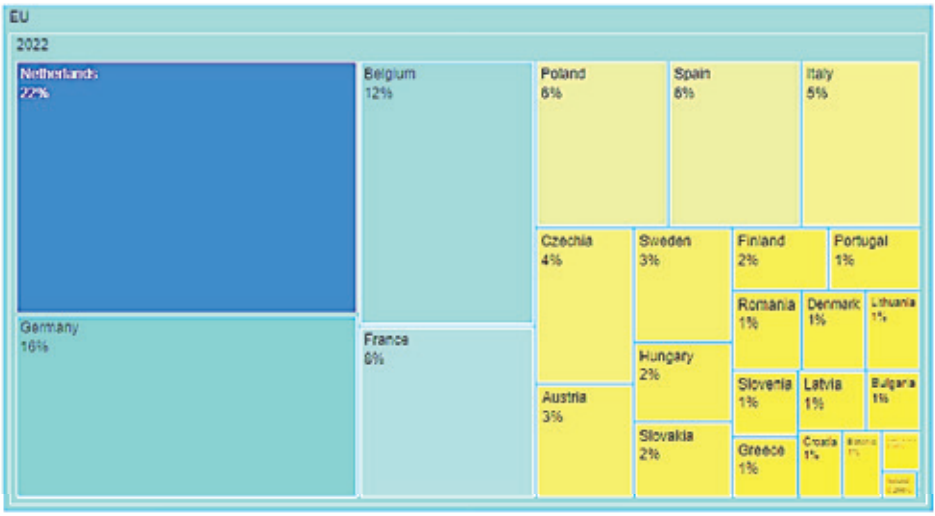
Grafikoni 3. Lanci snabdijevanja u obimu vodećih osam zemalja EU

Izvor: Eurostat, 2024.

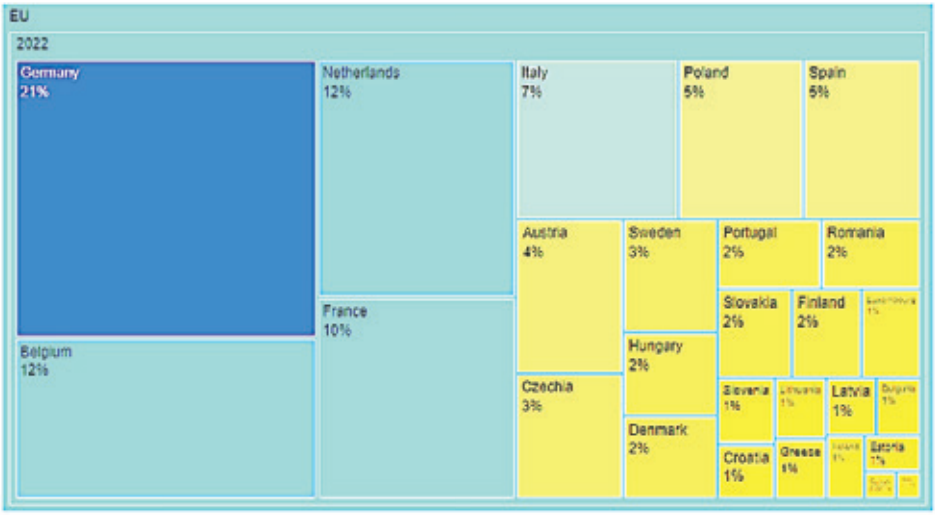
Iz grafikona 3. je vidljivo da je Njemačka primarna destinacija u uvozu ali i izvoza robe iz EU, druga destinacija ulazno/izlaznih tokova je Francuska, potom Holandija, Belgija idr. Od 2020. godine i početka pandemije Covid-19, primjetan je porast trgovine unutar EU. U 2021. obim trgovine je porastao za 8%, a vrijednosno za 21%. U 2022. obim trgovine se nije povećao već je porastao za 23% mjereno vrijednošću. Ova povećanja su povezana sa višim nivoima potrošnje dobara, podstaknutim porastom realnog BDP-a po glavi stanovnika u EU nakon 2020: +6,1% u 2021. i +3,2% u 2022. godini. Da bi se dopunile ove brojke, sledeće četiri mape stabla ilustruju proporciju uvoza i izvoza za svaki koridor unutar EU u 2022. godini, kako u smislu vrednosti tako i u smislu količine. (IRU, UPPLY, TI, 2023)

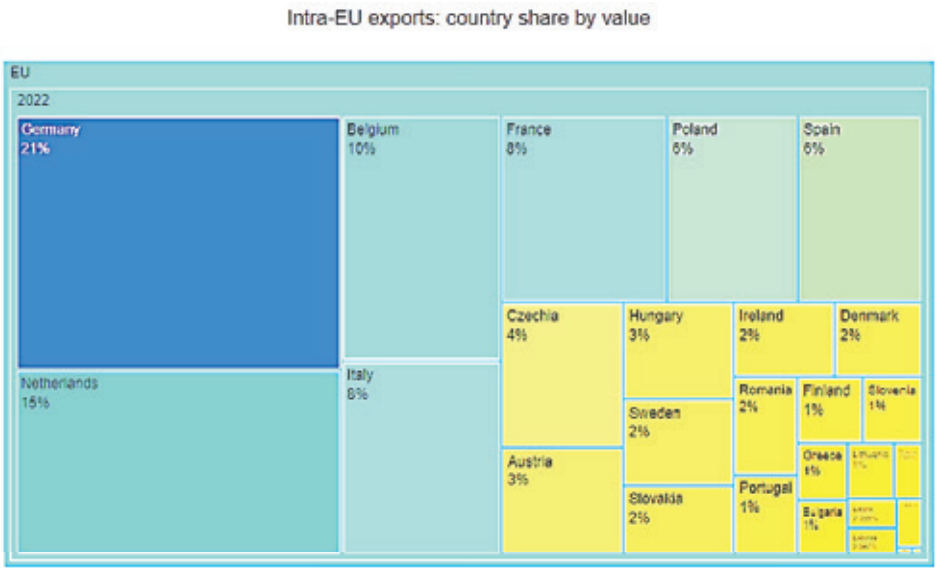
Tabele 1.-3. Uvozno-izvozni tokovi i intra – robni tokovi lanaca snabdijevanja u zemljama EU

Intra-EU exports: country share by volume



Intra-EU imports: country share by volume



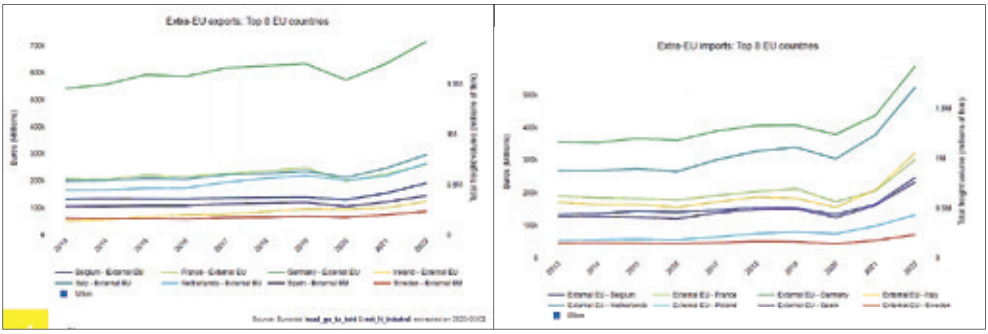


Izvor: Eurostat, 2024.

Uz nekoliko izuzetaka, lista zemalja EU među osam najvećih izvoznika i uvoznika je prilično slična, bez obzira da li se trgovina odvija interno ili eksterno. Međutim, dinamika linije trenda se razlikuje. U trgovini sa spoljnim partnerima, Nemačka, najveći uvoznik i izvoznik, nije toliko ispred ostalih zemalja EU po uvozu. S druge strane, značajno je ispred u izvozu, trgovina je duplo više u monetarnom smislu od bilo koje druge zemlje EU. U 2022., njemačka roba koja se najviše uvozi, u smislu vrijednosti, bile su hemikalije, goriva i rudarski materijali. Isto je i za Francusku i Holandiju. Što se tiče izvoza, transportna oprema je najviše rangirana za Nemačku i Francusku, dok je Holandija izvezla više goriva i hemikalija u vrijednosti. Zanimljivo je da izvoz u zemlje koje nisu članice EU nije pokazao jasan porast kao kod drugih oblika trgovine. (Hub, EU Science, 2024)

Upravljanje drumskim transportom u modalnom dijelu transportu tereta EU

Prethodni odjeljak je pokazao da su i uvoz i izvoz unutar EU i između zemalja EU i zemalja van EU porasli tokom protekle decenije u smislu vrijednosti. Ovaj odeljak ispituje distribuciju ovih tokova između različitih vidova transporta (drumski, vazdušni, pomorski, željeznički i drugi oblici, uključujući cjevovod, poštanske, unutrašnje plovne puteve i samohodne). Modalni udeo u međunarodnoj trgovini van EU Analiza počinje sa sledeća dva grafikona koji prikazuju monetarnu vrednost uvoza i izvoza između EU i zemalja koje nisu članice EU prema vidovima transporta.

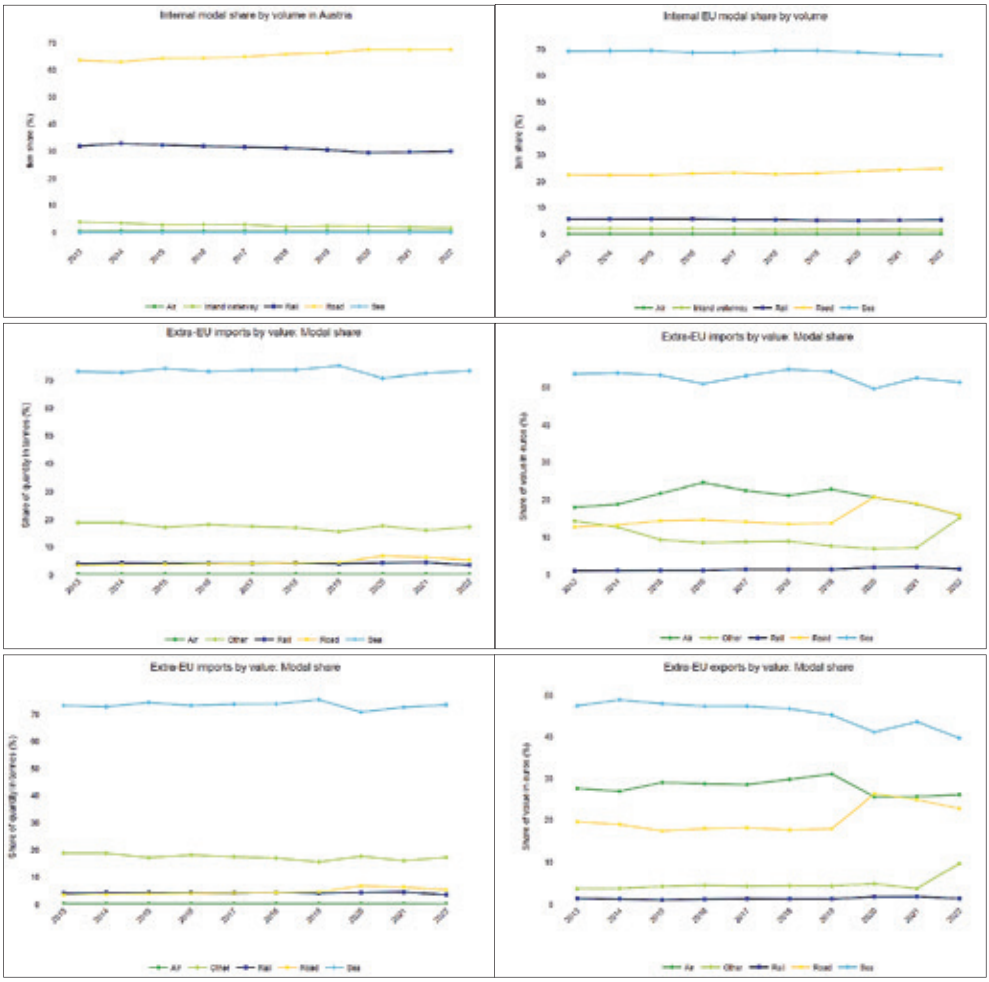


Grafikon 4. Modalni udeo u uvoz/izvoz iza zemalja EU

Izvor: Eurostat, 2024.

Gore navedeni podaci ukazuju na to da je pomorski transport odgovoran za većinu međunarodnih tokova uvoza i izvoza između EU i drugih zemalja, čineći u proseku 50% uvoza i 45% izvoza po vrijednosti. Međutim, udeo izvoza morem se smanjuje od 2014. godine, u korist drugih vidova transporta. Drumski saobraćaj je zabilježio značajan porast u 2020. godini, nadoknađujući pad vazdušnog i pomorskog transporta kada je pandemija Covid-19 poremetila vazdušni transport i snabdijevanje kontejnerskog transporta. Godina 2022. bila je jedinstvena i za druge vidove transporta, sa značajnim povećanjem novčane vrijednosti cjevovodnog, unutrašnjeg plovnog puta i transporta robe na sopstveni pogon, najviše zbog povećanja uvoza energenata kao posljedica sukoba u Ukrajini. Stopa pomorskog transporta u trgovini van EU kada se mjeri kvantitetom umjesto vrijednošću je značajna i čini preko 70% uvoznih i izvoznih tokova. Ovo pojačava značaj drumskog transporta u premještanju robe do i iz luka.

U uvozu, drugi najveći udeo po količini imaju cjevovodi, zatim drumski i željeznički. Prije 2019. godine, drumski i železnički transport su uvećavali količine, ali i tada je drumski transport doživeo značajan porast. U izvozu, drumski transport ima drugo najveće učešće po količini. Izvoz drumom je doživeo nagli porast u 2020. godini, nadoknadivši pad u pomorskom trnsportu zbog zagušenja i problema sa nedostatkom kontejnera. Modalni udeo unutrašnjeg transporta EU Fokusirajući se sada na unutrašnje transportne tokove unutar EU, grafikon ispod prikazuje modalnu podjelu u protekloj deceniji. (IRU, UPPLY, TI, 2023)



Grafikon 5. Udio vidova transporta u lancima snabdijevanja u EU

Izvor: Eurostat, 2024.

Drumski teret čini otprilike 75% ukupnog unutrašnjeg tereta EU mjerenog u tonskim kilometrima, povećavajući se na 77% kada se uzme u obzir samo unutrašnji transport. Međutim, ovi prosjeci mogu da dovedu u zabludu kada se ispituju pojedinačne zemlje EU. Zemlje kao što su Danska i Francuska prate isto rangiranje i trendove udela u EU režimu. Međutim, zemlje bez izlaza na more, kao što je Austrija, nemaju nikakav pomorski udeo. Litvanija ima veći udeo u željezničkom transportu u poređenju sa drugim vidovima prevoza, što je trend primijećen i u Letoniji, koja je doživela značajne promjene u distribuciji transporta tokom protekle decenije. Do 2015. Rumunija je zadržala uravnoteženiju podjelu, ali je drumski transport od tada povećao svoj tržišni udeo. Kada se fokusira na drumski transport, kombinovani transport uključuje putovanja u kojima se roba prenosi sa ili na kamione na ili sa drugih vidova transporta. Zakonodavstvo EU definiše kombinovani transport kao međunarodni po prirodi. Da bi se kvalifikovala kao kombinovani transport i imala koristi od regulatornih prednosti,

kao što je veća bruto kombinovana težina, roba mora da pređe granicu. Postoje mnogi drugi zahtjevi, kao što su dužina puta, pruge i mora. Transportni operateri drumskog transporta u EU, nosioci su većinskog obima robnih tokova na dva najvažnija koridora su između Poljske i Nemačke i između Španije i Francuske, sa najvećim udjelom drumskih transportnih sredstava (kamiona) , po tonskim kilometrima, koji idu prema Njemačkoj, odnosno Francuskoj. Ovo je u skladu sa njihovim ekonomskim otiskom: Nemačka ima najveći BDP u EU, a slijedi je Francuska. Oni zajedno čine 40% ukupnog BDP-a EU.

GLOBALNI TRENDOVI UPRAVLJANJA TRANSPORTNIM SISTEMIMA – MJESTO I ULOGA DRUMSKOG TRANSPORTA U LANCIMA SNABDIJEVANJA

Trendovi kretanja u drumskom transportu

Primjenom induktivne i deduktivne metode, metode analize i sinteze, sa pravom se zaključuje da su trendovi globalnog kretanja u upravljanju drumskim transportom, sa direktnim implikacijama na lance snabdijevanja današnjice, možemo sažeti kroz ključne principe i modele koji oblikuju efikasnu i održivu globalnu trgovinu u lancima snabdijevanja, sljedećim trendovima:

1. Drumski transport mijenja strukturu kalkulacije cijene usluge prevoza ka višem iznosu. Koncept mobilnosti izazova u drumskom transportu usmjerava se u dva pravca, u jednom pravcu strateško opredjeljenje EU je da učini (karbonski) ugljenično neutralnim do 2050. godine, a drugi pravac je da ispunjavajući standarde EU direktiva o mobilnosti radnika, profesionalnih kompetencija, vještina i umijeća učine zanimanje profesionalnog vozača primamljivim za mlade, odnosno da olakšaju i uklone postojeće barijere koje su vidljive. (European Commission, 2024).
2. Operativno-upravljački troškovi bilježe konstantan rast, tako da su u direktnoj proporciji su troškovima zaposlenih. Naime, pozicija profesionalnog vozača, kao nosioca profitnog centra drumskog transportnog operatera suočava se sa nedostatkom radne snage, a nezamjenjivi će biti do 2050 godine, uz korekcije i primjene novih tehnoloških rješenja. Trend je da operateri drumskog transporta pronalaze modele kako bi *riješili nepopunjenost radnih mjesta vozača motornih vozila sa mjerama:*
   - Pravednije nagrađivanje zaposlenih
   - veća ulaganja u sigurne parking prostore i prateću infrastrukturu,
   - pristojniji i kvalitetniji tretman vozača na polazno/dolazno tačkama,
   - skraćenje i eliminacija čekanja - fleksibilnije vrijeme isporuke,
   - eliminacija fizičkog napora vozača (ručni utovar i dr.)
3. Povečanje kašnjenja u isporukama pošiljaka – posljedica je nepopunjesti radnih mjesta, preko 2,6 miliona radnih mjesta za vozače kamiona bilo je nepopunjeno u 2021. u zemljama obuhvaćenim istraživanjem. Obim zemalja obuhvata: Sjedinjene Američke Države (različite metodologije), Meksiko, Argentinu, Evropu (Španija, Italija, Francuska, UK, Nemačka, Poljska, Rumunija, Litvanija, Belgija, Holandija), Rusija, Turska, Iran, Kina. Nepopunjeni poslovi vozača kamiona izračunati na osnovu ukupnog broja vozača kamiona u svakom zemlja, i udeo nepopunjenih pozicija prijavljenih u odgov-

orima kompanija za drumski transport (detaljnije u metodologiji). Logistički lanci su opterećeni sa poremećajima lanaca snabdijevanja, u dolaznom i odlaznom, neizvjesnošću koja doprinosi povećanju vremena aktivnosti na polaznim i završnim operacijama. Mjere koje se preduzimaju za smanjenje kašnjenja su ubrazavanje početnih utovarnih i istovarnih operacija. EU je uvela zakonske odredbe da se svaki sat zadržavanja pri utovaru plaća 40 eura, a auto dan sa 450 eura, svakako da kašnjenje direktno korelira ka povećanju troškova. (European Commission, 2024)

4. Princip koji se zasniva na tehnološkom napretku u sferi digitalizacije, sa ciljem da se operativno ubrzaju procesi donošenja odluka, razmjene informacija, optimizacije vremena putovanja i efikasnijeg iskorišćenja potencijala tovarnog prostora, predviđanje i upravljanje tokovima.

Primjena vještačke inteligencije u lancima snabdijevanja

Primjena vještačke inteligencije (AI) je prisutna u globalnim trendovima upravljanja transportnim sistemima kao dijela lanaca snabdijevanja, a sada se taj domen širi i na unutrašnje aktivnosti i karike samih lanaca snabdijevanja. Prilagođavanje drumskih transportnih operatera, kao i operatera u domenu logističkih provajdera je neophodan i obavezujući smijer kretanja, koordinacija i saradnja su ključne poveznice cjelokupnih lanaca snabdijevanja i dodaju novu dimenziju u poslovanju.

Učešće „AI“ u rješavanju logističkih problema lanaca snabdijevanja je sveopšte prisutna, doprinosi jačanju lanaca snabdijevanja u dijelu eliminacije „nepotrebnih aktivnosti“, analiziranju, predviđanju i dizajniranju optimalnih rješenje u definisanju novog obrasca komuniciranja, ubrazavanju procesa i rješavanju kompleksnih zahtjeva lanaca snabdijevanja.

Tehničko-tehnološka unapređenja kao posljedica upotrebe AI, biće sve više zastupljena u lancima snabdiejvanja, ali u drumskom transportu kao nadogradnja postojećih sistema aktivne i pasivne bezbjednosti, te optimizacije te nadogradnje i usavršavanja virtuelnih asistenata do autonomnosti utovarno-pretovarnih i transportnih sredstava.

Ukratko možemo zaključiti da primjena AI u upravljanju drumskim operaterima, ali u sveobuhvatnom posmatranju lanaca snabdijevanja donosi revolucionarne promjene na bolje, svakako da je potrebno adaptirati zakonski i regulacioni okvir, ali AI je tu i unapređuje postojeće sistema, olakšava rad, oprimizira troškove poslovanja.

Trendovi primjene AI, kao i potencijali u lancima snabdijevanja i upravljanju drumskim transportom su:

1. Koordinacija u nabavkama – primjena AI u dolaznom ili odlaznom lancu snabdijevanja, posebnu ulogu vidimo u dijelu obrade velikih skupova podataka koji će u revolucionarno kratkom periodu omogućiti donošenje adekvatnih odluka. Jednom riječju usklađuje, koordiniše, definiše i rješava višedimenzionalne varijable, te složene varijable u izuzetno kratkom vremenskom roku donosi optimalna rješenja u nabavci.
2. Digitalna transformacija lanaca snabdijevanja, podrazumijeva novu infrastrukturu, pravac promjena u samoj arhitekturi lanaca snabdijevanja. Zahtjevi koji su postavljeni pred transportna preduzeća, provajdere i druge oblike organizacije u sistemu lanaca snabdijevanja, svakako su imperativi i izazovi

trenda kretanja. Ukoliko operateri žele iskoristiti potencijal AI, koji je nesumnjiv, moraju biti opredjeljeni za promjene i prihvatanje digitalne transformacije kao standarda poslovanja.

3. Jačanje otpornosti lanaca snabdijevanja se postavlja kao osnova za produbljivanje analize postojećih, eliminacija nepotrebnih tačaka aktivnosti, zamjena sa otpornijim lancima snabdijevanja. Preduslov realizacije ovog trenda je dublja analiza svih lanaca snabdijevanja, primjena AI je direktno u vezi sa skraćenje u pojedinim segmentima, ali takođe dubljim uvidom u samu strukturu lanaca snabdijevanja. Značajan segment analize su zalihe, koje se u prostornoj i vremenskoj dimenziji dekompozicijom sadašnjeg stanja, dovode u ravan upravljanja i sticanja profita. (Višković, 2022)

Ukoliko želimo naglasiti značaj primjene AI u lancima snabdijevanja, izazivaju potrese i revoluciju u lancima snabdijevanja. AI imaju mogućnost koje se brzo razvijaju kroz generativnu vještačku inteligenciju, analitiku podataka, automatizaciju, mašinsko učenje, internet stvari (IoT), blockchain i još mnogo toga, „pametni“ lanac snabdijevanja je na dobrom putu da postane nova normala.

AI će moći da analizira podatke u velikom obimu, identifikuje anomalije, traži obrasce koji dovode do neočekivanih poremećaja i daje predloge kako da ih riješi – skoro trenutno. Iz perspektive tehnologije, mogućnosti za omogućavanje planiranja sa malim brojem dodira su poput kontrolnog tornja ili njegovog naprednijeg parnjaka, kognitivnog centra za odlučivanje koji uključuje mogućnosti digitalnog blizanca. (Peulić & Višković, 2020)

Poremećaji u lancima snabdijevanja

Svjedočimo poremećaju lanaca snabdijevanja kao posljedicama geopolitičkih faktora koji izazivaju poremećaje na izvoru ili na cilju. Prije svega ističemo rastuće trgovinske tenzije, rizike na putanjama kretanja, kritičnost plovnih puteva, što je u direktnoj korelaciji sa strategijom „kupovina za svaki slučaj“ ili špekulativni udari na cijene proizvodnje, transporta, zaliha i dr. Poremećaji u lancima snabdijevanja, bili oni posljedica pandemije, geopolitike ili drugih faktora, direktno utiču na ekonomsku efikasnost privrednih potencijala industrijskog tržišta.

Posljedice poremećaja lanaca snabdijevanja utiču na trasnportne rizike, potražnju za teretom i fluktacijom trasnportnih i skladišnih kapaciteta, a odraz je na svim vidovima transporta.

Organizacija rada transportnih operatera se mora prilagoditi novim uslovima, a prije svega u smjeru smanjenja troškova i stvaranja novih vrijednosti u lancima snabdijevanja prilagođenim promjenama sadašnjosti. Organizacija će biti otpornija na nove šokove i poremećaje u lancima snabdijevanja uz primjenu trendova koji pokrivaju primjenu i automnosti mašina, vještačke inteligencije, elektrifikacije voznog parka, te strukturne promjene su zahtjev za sve činioce lanaca snabdijevanja.

Mjesto i uloga drumskog transporta u strategiji „poslednja milja“

Logistika „poslednje milje“ i upravljanje lancem snabdijevanja (SCM) su ključne komponente transportnog sektora, posebno u pogledu zadovoljstva i efikasnosti kupaca. Naime, isporuka od vrata sa optimizacijom i smanjenjem težine pošiljke, obu-

hvataju ključne trendove i tačke strategije „posljednja milja“:

1. Složenost logističkog procesa posljednja milja, prije svega nalazi se u dijelu eksperimentisanja i testiranja, sa trenutno upravljanjem značajnim troškovima u cilju da se učini ekonomski prihvatljiva i primjenljiva. Logistika poslednje milje je poznata po svojoj složenosti i visokim troškovima, što čini značajan deo ukupnih troškova isporuke. Kompanije se fokusiraju na rješavanje izazova koji uključuju organizaciju, integraciju i optimizaciju kako bi smanjili ove troškove. Drumski transport je dominatan i troškovno prihvatljiv model u današnjem okviru, no za očekivati je da će isporuku u segmentu poslednje milje preuzeti autonomna vozila.
2. Prilagođeni zahtjevi za isporuku obuhvataju raznovrsnost transportovanih artikala i različite potrebe za isporukom, kao što su transport hladnjačama ili prevelika vozila, zahtevaju specijalizovana rješenja. Partnerstvo sa specijalizovanim prevoznicima i korišćenje naprednih softverskih platformi za sortiranje i otpremu isporuke postaju sve češći
3. Vještačka inteligencija (AI): AI se sve više integriše u logističke platforme poslednje milje, omogućavajući kompanijama da koriste prediktivnu analitiku za povećanje efikasnosti, kao što je određivanje kada da pređu sa partnerstava na interne mogućnosti za specijalizovane isporuke
4. Održivost poslednje milje, Sve je veći naglasak na održivosti u okviru isporuke poslednje milje. Kompanije istražuju načine da ugrade održive prakse na svim nivoima poslednje milje, iako je trenutni fokus prvenstveno na operativnom nivou.
5. Tehnološke inovacije: Inovacije kao što su dronovi, roboti i kamioni bez vozača se istražuju za autonomne isporuke poslednjeg kilometra. Ove tehnologije bi mogle da revolucionišu poslednji korak u lancu snabdevanja poboljšanjem brzine i smanjenjem troškova ljudskog rada.
6. Očekivanja kupaca: Rastući troškovi isporuke i potražnja za besprekornom uslugom podstiču preduzeća da ponovo razmisle o svom pristupu isporuci na poslednjem kilometru. Ispunjavanje očekivanja kupaca na isplativ način predstavlja značajan izazov za SCM. (IRU, 2022)

EMPIRIJSKA ISKUSTVA I KONCEPTI BUDUĆNOSTI UPRAVLJANJA DRUMSKIM TRANSPORTOM U POLAZNIM (IZVOR) I ZAVRŠNIM OPERACIJAMA LANCIMA SNABDIJEVANJA

Drumski transport je ključna veza karika lanaca vrijednosti, empirijski, posamtrajući trendove koje usmjeravaju modeliranja, možemo zaključiti da se radi na tehnološkim alatima omogućavanje otpornosti ili jačanja postojećih lanaca snabdijevanja. Primjena tehnologije koja trenutno omogućava prinose na ulaganja u lance snabdijevanja, neprikosnoveno se izdvaja drumski transport, a sa druge strane omogućava otpornost lanca snabdijevanja zahtijeva veliku pažnju na povraćaj ulaganja. Dok neka velika preduzeća imaju resurse da se kockaju sa novim tehnologijama, većina igrača u prostoru lanca snabdijevanja neće potrošiti na digitalnu transformaciju bez skoro izvjesnog povrata svoje investicije u razumnom periodu.

Izgradnja snažnog lanca snabdijevanja je dugoročan proces, bilo da se radi o prilagođavanju politike zaliha i usvajanju novih tehnologija ili suštinskom opremljenosti

izvora putem izbora dobavljača ili međunarodne diversifikacije. i dalje je potrebna otpornost, potrošnja nije zagarantovana.

FedEx je bila prva kompanija za isporuku koja je koristila hibridna vozila pre više od 20 godina. Međutim, obim ovih kompanija koje usvajaju ciljeve nulte emisije na globalnom nivou je bez presedana. FedEx sada planira da ceo svoj vozni park za preuzimanje i dostavu paketa pretvori u električna vozila do 2040. godine. Ove alternative nude značajan potencijal za smanjenje emisija, ublažavanje zagušenja u saobraćaju i podizanje efikasnosti isporuke i zadovoljstva kupaca. Brže isporuke. Sa tehnologijom koja ubrzava većinu aspekata naših života, sasvim je prirodno da današnji potrošači očekuju da će njihove isporuke biti jednako brze.

Očekivanja za isporuku sljedećeg, pa čak i istog dana se povećavaju, pri čemu 78% potrošača daje prednost isporuci u roku od dva dana prilikom kupovine. Neispunjavanje ovih očekivanja može dovesti do značajnog gubitka kupaca. Studije su otkrile da će skoro polovina potrošača napustiti svoja kolica za kupovinu na mreži ako su rokovi isporuke predugi. Da biste bili sigurni da je vaša usluga isporuke u skladu sa očekivanjima kupaca, ključno je uspostaviti autentične i dostižne obaveze. Pozicionirana u gusto naseljenim područjima, ova lokalizovana čvorišta strateški smanjuju vrijeme isporuke tako što sadrže veće zalihe robe visoke potražnje. Preduzeća takođe moraju da pojednostave proces isporuke primjenom pouzdanih planera ruta. Ovi alati obezbeđuju tačne i trenutne informacije o procijenjenom vremenu dolaska kupaca.

Ispunjavanje očekivanja kupaca oslanja se na proaktivnu komunikaciju i blagovremeno dijeljenje informacija o praćenju u realnom vremenu. Ponovo osmišljavajući isporuku u poslednjem kilometru kroz inovativne tehnologije i održive prakse, preduzeća mogu da zadovolje rastuće zahtjeve potrošača dok minimiziraju uticaj na životnu sredinu. Dronovi i autonomna vozila. Nekada spekulativni pojam, isporuka dronova je brzo prešla u stvarnost u sektoru logistike. Preduzeća koja razmišljaju unapred aktivno integrišu ovu tehnologiju u svoje poslovanje, prepoznajući ograničenja konvencionalnih metoda isporuke. Walmart je, između ostalog, proširio svoju mrežu da ponudi dostavu dronom u sedam država, izvršivši preko 10.000 isporuka od pokretanja svog programa 2021. Slično tome, Amazon.com je nedavno predstavio svoje nove dronove „Prime Air“, koji će se uskoro koristiti za dostavu paketa u Velika Britanija, Italija i tri lokacije u SAD do kraja godine.

Bespilotne letelice su dizajnirane da isporuče pakete do pet funti za manje od jednog sata, a mogu čak i da lete po laganoj kiši. Dostava dronom rješava izazove koje predstavljaju zakrčeni putevi, geografske barijere i potražnja za brzim uslugama. Međutim, on takođe uvodi prepreke kao što su upravljanje vazdušnim prostorom i zabrinutost za privatnost, što zahteva pažljivo razmatranje i jasnu usklađenost sa propisima.

ZAKLJUČAK

Posmatrajući sve vidove transporta zajedno, poljoprivredni proizvodi su najviše transportovana roba po količini (u tonama) duž poljsko-nemačkih koridora. Građevinski materijal je roba koja se najviše prevozi po količini (u tonama), a zatim slijede poljoprivredni proizvodi, duž španskо-francuskih koridora. Takođe se čini da je veličina koridora ravnomjerno podijeljena između oba smjera putovanja. Kada se kombinovani transport koristi u jednom smjeru, suprotni pravac generalno slijedi blisko u smislu korišćenja kamiona. Fokusirajući se sada na lokacije za „utovar“, gdje se roba

prenosi sa kamiona na druge vidove., Podaci pokazuju da najveći udeo imaju Nemačka (18%), Francuska (12%) i Poljska (10%). Među zemljama odredišta, zemlje koje nisu članice EU predstavljaju 6,6% ukupnog obima tereta. Drumski transport ostaje ključni vid transporta za sve zemlje EU, kao što pokazuju podaci o modalnoj podjeli. Kombinovani transport, gdje se roba prenosi između kamiona i drugih vidova transporta, predstavlja 30% obima drumskog tereta unutar EU.

U zaključku, kombinacija dobro osmišljenih podsticaja i snažnog razvoja infrastrukture je neophodna za prelazak na model zelenog transporta koji je održiv, efikasan i dostupan svima. Otpornost lanca snabdijevanja biće jednako danas kao i prethodnim godinama, ali volja i sposobnost preduzeća da investira u upravljanje zalihama i više izvora mogu biti ograničeni padom profita i visokim troškovima finansiranja. Isporuka poslednje milje je puna izazova. Rastući troškovi isporuke, glomazni procesi i rastuća potražnja za besprijekornom uslugom naglašavaju hitnost da preduzeća preispitaju svoj pristup ovoj ključnoj fazi. Poslednji deo isporuke je glavni doprinos povećanju emisija i naprezanju životne sredine, uglavnom zbog oslanjanja na vozila na fosilna goriva. Osim emisija izduvnih gasova, isporuka na posljednjem kilometru povećava gužvu u saobraćaju, posebno u gusto naseljenim urbanim oblastima gdje se mnoštvo odredišta za dostavu konvergira unutar ograničenih prostora za manevrisanje vozila. Kako bi se suočili sa ovim ekološkim izazovima, i kompanije i kreatori politike aktivno istražuju alternativne metode isporuke, uključujući električna i hibridna vozila, te kurire za bicikle i pješake. Prelazak na novi model upravljanja drumskim transportom je zaista u toku, vođen napretkom tehnologije i potrebom za održivošću. Vremenski okvir za implementaciju takvog modela može varirati u zavisnosti od nekoliko faktora, uključujući tehnološku spremnost, okvire politike i društveno prihvatanje.

Kratkoročno, upravljanje drumskim transportom je da se fokusiramo na promjene koje su u toku, a tek ih je za očekivati, prilagoditi povećanje ulaganja u istraživanje i razvoj, ažuriranje politika za podršku inovacijama i početak postepenog uvođenja novih tehnologija kao što su električna vozila (EV) i funkcije autonomne vožnje.

U srednjoročnom razdoblju, upravljanje drumskim trasnportom (2025. – 2030.), potrebno je da započne široku implementaciju novih tehnologija i infrastrukture. U ovom periodu će verovatno doći do širenja mreža za punjenje električnih vozila, većeg usvajanja autonomnih i povezanih vozila i integracije pametnih transportnih sistema.

Dugoročni plan je da se upravljanje drumskim transportnim operaterima u lancima snabdiejvanja (2030. i dalje), obuhvata široko usvajanja i standardizacije novih transportnih modela. Do ovog trenutka se očekuje da će autonomna vozila postati češća, a većina novih vozila koja se prodaju biće električna. Pored toga, trebalo bi da dođe do značajnog pomeranja ka deljenoj mobilnosti i platformama mobilnosti kao usluge (MaaS).

Važno je napomenuti da ovi rokovi nisu fiksni i da na njih mogu uticati različiti spoljni faktori, uključujući ekonomske uslove, tehnološka dostignuća i promjene u ponašanju potrošača. Vještačka inteligencija nudi kompanijama za isporuku rješenja za navigaciju kroz složenost logistike poslednje milje. Njegove mogućnosti se protežu na optimizaciju ruta isporuke, alokaciju resursa, predviđanje potražnje i ublažavanje uticaja na životnu sredinu. Integracija kognitivne robotike predstavlja intrigantne mogućnosti za rješavanje zamršenih scenarija isporuke posljednje milje. Opremljeni naprednom veštačkom inteligencijom i obradom prirodnog jezika, kognitivni roboti

mogu da se kreću po složenim okruženjima. Prediktivna analitika igra ključnu ulogu u poboljšanju efikasnosti isporuke na poslednjem kilometru optimizovanjem ruta zasnovanih na obrascima saobraćaja, što rezultira smanjenim vremenom isporuke i operativnim poboljšanjima. Revolucionarna rešenja za pakovanje. Tržište pametne ambalaže igra ključnu ulogu u poboljšanju efikasnosti i transparentnosti isporuke. Procenjen na 35,92 milijarde dolara 2023. godine.

Drumski transport ostaje ključni vid transporta za sve zemlje EU, kao što pokazuju podaci o modalnoj podjeli. Kombinovani transport, gde se roba prenosi između kamiona i drugih vidova transporta, predstavlja 30% obima drumskog tereta unutar EU. Najveći koridori za kombinovani transport su između Nemačke i Poljske i između Španije i Francuske. Uprkos povećanoj političkoj spremnosti da se promoviše modalna promjena, performanse kombinovanog transporta ostale su nepromenjene tokom protekle decenije. Ovaj stabilan udeo bi se mogao objasniti ograničenim povećanjem željezničkog kapaciteta zbog neispravne infrastrukture, viših cijena energije, socijalne neizvjesnosti i niže komercijalne brzine. Dok kombinovani transport takođe služi spoljnoj trgovini izvan EU, njegova upotreba u ove svrhe se smanjivala tokom protekle decenije. Geopolitički poremećaji i cijene energije objašnjavaju ove cifre. Ipak, on ostaje važan deo transportnog ekosistema EU.

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GLOBAL TRENDS IN ROAD TRANSPORT MANAGEMENT AND THEIR IMPACT ON SUPPLY CHAINS

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Summary: *As the world grapples with the challenges of a rapidly changing global landscape, the road transport industry is facing unprecedented pressures. With the increasing emphasis on sustainability, green agenda, and carbon neutrality by 2050, the industry is forced to adapt and innovate. This study aims to investigate the current state of the road transport industry, identify global trends, and analyze their impact on supply chains. The research is based on a comprehensive review of existing literature, as well as data from reputable sources such as the International Road Transport Union (IRU), ASTIC, and CEVA Logistics. The study employs a mixed-method approach, combining inductive and deductive methods, analysis and synthesis, abstraction and concretization, generalization and specialization, classification, description, compilation, and comparative methods. The research findings suggest that the road transport industry is facing significant challenges, including a shortage of drivers, lack of investment in infrastructure, and environmental concerns. The IRU's Global Driver Shortage Survey 2023 highlights the severity of the issue, with over 4.7 million drivers needed to meet global demand. Furthermore, the lack of investment in infrastructure is a major concern, with many roads and highways in need of repair or upgrade. Despite these challenges, the study also highlights opportunities for innovation and growth, particularly in areas such as electric and autonomous vehicles, alternative fuels, and logistics optimization. The IRU's report on "Green Logistics" emphasizes the importance of sustainable practices in the logistics industry, highlighting opportunities for reduction of greenhouse gas emissions through efficient route planning and mode selection. The study demonstrates that the road transport industry plays a critical role in global supply chains, connecting producers to consumers across the globe. As such,*

it is essential to address the challenges facing the industry and work towards a sustainable future. The results of this study provide valuable insights for policymakers, industry stakeholders, and researchers seeking to understand the complexities of the road transport sector. In conclusion, this study contributes to the ongoing debate on the future of road transport by providing a comprehensive analysis of global trends and their impact on supply chains. The findings highlight the need for innovative solutions and investment in infrastructure to ensure a sustainable future for the industry. By understanding the challenges and opportunities facing the road transport sector, we can work towards a more sustainable and efficient transportation system that benefits both individuals and society as a whole.

Key words: *management, road transport, global trends, supply chains,*

JEL classification: *F02, L91, R4, R5*

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EKONOMIJE ZAPADNOG BALKANA U NEOLIBERALNOJ GLOBALIZACIJI

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Sažetak: *Ovaj rad ima za cilj da istraži svijet u kojem živimo, to jest svijet neoliberalne globalizacije, svijet dinamičnih, nepredvidivih i neizvjesnih promjena koje utiču na sve narode i njihova društva, njihove ekonomije, politike i kulture. To je svijet desuverenizacije država i denacionalizacije društava, a posebno onih u tranziciji. U radu su dominantno korišćene metode analize i sinteze i istorijskokomprativne metode. Sveobuhvatnim istraživanjem i analizom prikupljenih podataka nedvosmisleno je potvrđeno da su brojni globalizacijski faktori koji dovode do desuverenizacije savremenih država i denacionalizacije njihovih društava, a neki značajniji će biti posebno razmatrani u ovom radu. Od početka sedamdesetih godina do danas naglašeno je uočljivo globalno skretanje prema neoliberalizmu u političko-ekonomskim procesima, ali i u mišljenju. Deregulacija, privatizacija i povlačenje države iz mnogih sfera socijalne podrške predstavljaju opštu karakteristiku društvene stvarnosti. Najveći broj zemalja nastalih raspadom Sovjetskog saveza i Varšavskog pakta, raspadom SFRJ, kao i jedan broj starih socijalnih demokratija, odnosno država blagostanja kao što su Švedska i Novi Zeland su, djelom dobrovoljno, a većim dijelom pod pritiskom, prihvatile neke verzije neoliberalne teorije i prilagodile ih svojim politikama i praksama. Neoliberalizam je tim načinom postao dominantna ideologija koja prožima javnu politiku mnogih vlada u razvijenim zemljama i zemljama u razvoju. Ova ideologija se temelji na postulatu da su smanjenje državnih intervencija u ekonomskim i društvenim aktivnostima i deregulacija tržišta rada i finansijskih tržišta, kao i trgovine i investicija, oslobodili ogroman potencijal kapitalizma da stvori eru društvenog blagostanja bez presedana. Sagledavajući cjelinu neoliberalnog iskustva može se zaključiti da je primjena neoliberalnih politika dovela do značajanog rasta društvenih nejednakosti kako u zemljama u kojima se takve politike primjenjuju, tako i među zemljama u ostatku svijeta.*

Ključne riječi: *neoliberalizam, neoliberalna ideologija, globalizacija, hegemonija.*

JEL klasifikacija: *N40, P51, Z13.*

UVOD

Svijet u kojem živimo jeste svijet neoliberalne globalizacije, svijet dinamičnih, nepredvidivih i neizvjesnih promjena koje utiču na sve narode i njihova društva, njihove ekonomije, politike i kulture. (Barašin, 2023). Istovremeno, to je i svijet desuverenizacije država i denacionalizacije društava, a posebno onih u tranziciji. Brojni su globalizacijski faktori koji dovode do desuverenizacije savremenih država i denacionalizacije njihovih društava. Upravo zato su globalizacijski prostori i procesi globalizacije povoljno područje kritičkog sociološkog promišljanja. Pod uticajem sociologije kao kritičke nauke o društvu, i ne samo nje, sve više se pojavljuju kritički otpori prema globalizaciji kao neoliberalnoj ‘’korporativizaciji’’, ‘’vesternizaciji’’, pa i ‘’amerikanizaciji’’, i ističe zahtjev za utemeljenje alternativne, pravedne i humane globalizacije. Današnja utopija jedinstvenog globalnog tržišta, tvrdi J. Gray, ‘’pretpostavlja da se ekonomski život svakog naroda može preustrojiti po obrascu američkog slobodnog tržišta. Ali u Sjedinjenim državama slobodno tržište je razbilo liberalnu kapitalističku civilizaciju koja se utemeljila na Ruzveltovom Nju Dilu i na kojoj se temeljio poslijeratni prosperitet’’ (Gray, J., 2002., str. 24).

Svjetska ekonomija prolazi kroz najtežu krizu u posljednjih 80 godina. Kriza je najprije zahvatila značajan segment američkoga financijskog sistema – kreditiranje nekretnina, a postepeno se širila na bankarski sistem, osiguranje, fondove, berze. Iz američkih finansija kriza se proširila na evropske finansije, bankarstvo, berze. Kriza se počela reflektovatati i na realni sektor. Stopa rasta svjetskog BDP-a ozbiljno usporava, padaju cijene nekretnina, neki industrijski sektori trpe velike gubitke. Veliki broj pokazatelja ukazuje da se globalna ekonomija našla u ozbiljnoj recesiji. U nastojanju da spriječe širenje krize vlade i centralne banke velikog broja zemalja preduzele su energične mjere upumpavajući svježi kapital u bankarski sektor. Osim toga, nekoliko velikih bankarskih imena u SAD-u i Velikoj Britaniji više ne postoje. Uz to, američka Vlada praktično preuzima neke banke, a isti scenarijo slijede i neke zemlje EU.

Walter Lipman je u velikoj knjizi objavljenoj 1937. godine pod nazivom “THE GOOD SOCIETY” (Lipmann, W., 1938), slavio liberalizam i odbacio socijalizam, fašizam i konzervatizam. Međutim, knjiga je isto tako odbacivala *laissez faire* (slobodno tržište) s jednakim žarom, ali se mora zbilja pročitati veći dio knjige da bi se to uočilo. Lipman je bio pristalica keynzijanske kritike slobodnog tržišta. Pokušao je spojiti nemoguće: protivljenje etatizmu, ljubav za slobodom i ono što je nazivao liberalnim ciljem kroz kvazi-etatistička sredstva. Bio je to novi način gledanja na liberalizam. To je demokratija koja toleriše širok pojas regulacije, socijalna država, javna edukacija, državno zdravstvo. Ali zadržao je srž kompetitivnog procesa tržišne ekonomije. Ideja mu je bila osmisliti stabilnu mješavinu politika koje bi dovele do prosperiteta i donijele svakome ono nužno zbog čega bi narodi odbacili fašizam i socijalizam. Ubrzani napredak i potreba za novim tehnologijama takođe bi nadjačali konzervativne sentimente na političkom tržištu ideja.

PRIRODA NELIBERALNE IDEOLOGIJE I NJENE UNUTRAŠNJE PROTIVRJEČNOSTI

Fizionomija liberalnokapitalističkog poretka

Posmatrano iz vizure pristalica neoliberalizma, svijet duguje neoliberalizmu. On je formulisao i inspirisao mnoge zemlje da liberalizuju ekonomiju, pa čak i neka

olakšanja za ekonomiju SAD-a. Neoliberalizam je doveo do reformi u Latinskoj Americi, Kini, pa čak i u istočnoj Evropi nakon propasti socijalizma. Neoliberalna ideologija, iako loša, djelimično je zaslužna za izvlačenje milijardi ljudi iz patnje, siromaštva i tiranije, ali istovremeno je, na drugoj strani, produkovala glad i ratna razaranja i masovna ubitstva nedužnih ljudi pod morbidnom kovanicom ‘’kolateralna šteta’’ koja predstavlja očekivane i neizbježne žrtve za uspostavljanje ‘’demokratije’’ i eliminisanje ‘’tiranije’’. Pojam neoliberalizam se, dakle dovodi u vezu sa interesima bogatih koji preko ekonomske doktrine i ideologije proizvode ekstremnu socijalnu nejednakost. To je jedna od varijanti liberalizma gdje je ‘’pojedinac bitniji od svake zajednice’’. Kako navodi Harvi, ‘’Od 1970-tih godina na ovamo svuda vidimo naglašeno skretanje prema neoliberalizmu, kako u političko-ekonomskim aktivnostima tako i u mišljenju. Deregulacija, privatizacija i povlačenje države iz mnogih područja socijalne potpore umnogome su opšta karakteristika. Gotovo sve zemlje, od onih novoformiranih, nastalih posle raspada Sovjetskog Saveza, pa do starih socijalnih demokratija i država blagostanja, kakvi su Novi Zeland i Švedska, prihvatile su, nekad dobrovoljno, a u drugim slučajevima kao odgovor na pritiske i prinude, neku od verzija neoliberalne teorije i, u skladu sa tom verzijom, prilagodile bar neke od svojih politika ili praksi›› (Harvi, D., 2012., str. 15.).

Istorija ideologije neoliberalizma počinje od kraja Drugog svetskog rata kao povezani skup vrijednosti, vjerovanja, teorijskih koncepata, političkih orijentacija i stečenih interesa. Njegovo porijeklo se vezuje za društvo Mont-Pelerin koje je osnovao Fridrih fon Hajek 1947. godine, koje je okupilo renomirane naučnike kao što su Ludvig fon Mizes, Milton Fridman i Karl Poper. Društvo Mon Pelrin je dobilo nazv po jednoj švajcarskoj banji gdje su se prvi put sastali. Malu grupu povlašćenih i strastevnih zagovornika Neoliberalizma (uglavnom akademskih ekonomista, istoričara i filozofa) okupio je austrijski politički filozof Fridrih fon Hajek (Fridrich fon Hayek). Ovo društvo su finansijski podržali milioneri i njihove fondacije. Uz njihovu pomoć, počelo je stvaranje nečega što će neki teoretičari opisat kao ‘’neku neoliberalnu internacionalu’’, kroz transatlantsku mrežu akademika, biznismena, novinara i aktivista. Bogati pobornici pokreta, kako piše u autorskom tekstu George Monbiot, objavljenom u Gardijanu, finansirali su seriju istraživačkih centara koji bi poboljšali i promovisali ideologiju. Među njima su bili American Enterprise Institute, Heritage Foundation, Cato Institute, Institute of Economic Affairs, Center for Polici Studies i Adam Smith Institute. Takođe su finansirali akademske pozicije i odeljenja, posebno na univerzitetima u Čikagu i Virdžiniji. Kako je evoluirao, neoliberalizam je postajao sve izraženiji (Monbiot, G., 2016.). Ovo društvo mislećih ljudi bili su opterećeni strahom od komunističkih nedemokratskih društava kontrolisanih od strane države. Oni su videli opasnost u moći vlade i njenom širenju. Vjerovali su u nadmoć tržišta i potpuno nepovjerenje u vladu, a takav stav potiče od klasičnih liberalnih ekonomista kao što je Adam Smit, koji je smatrao da država treba da igra ulogu ‘’noćnog čuvara’’.

Uloga države je samo da sprovodi ugovore između privrednih subjekata, a ne da se miješa u ekonomske procese. Smit je smatrao da skrivena ruka tržišta predstavlja najbolje sredstvo za mobilisanje čak i najsirovijih ljudskih nagona, kao što su halapljivost, pohlepa i žudnja za bogatstvom i moći, za dobrobit svih.

U uvodnom saopštenju društva između ostalog se ističe: ‘’Spoljašnje vrednosti civilizacije su u opasnosti. Nad prostranstvima Zemljine površine već su iščezli suštin-

ski uslovi ljudskog dostojanstva i slobode. Između ostalog, oni se nalaze pod stalnom pretnjom koju čini razvoj sadašnjih političkih tendencija. Širenje arbitrarne moći progresivno podriva položaj pojedinca i dobrovoljnih grupa. Čak i ona najdragocijenija svojina zapadnog čoveka, sloboda misli i izražavanja, ugrožena je širenjem verovanja koja, tražeći privilegiju tolerancije kada se nalaze u položaju manjine, tragaju samo za tim da usposatve položaj moći u kojem mogu da potisnu i ponište sva gledišta osim svog vlastitog. Mišljenje je grupe da je on potpomgnut padom vere u privatnu svojinu i konkurentsko tržište, jer je bez difuzno raspoređene moći i inicijative, povezane sa ovim institucijama teško zamisliti društvo u kojem se sloboda može delotvorno sačuvati'' (Harvi, D., 2012., str. 37). Glavna protivrječnost neoliberalizma leži u uvjerenju da je tržišna ekonomija sama po sebi stabilna.

Ako se ima u vidu da je liberalna ideologija, kako navodi Dušanić, u funkciji interesa moćnih i bogatih, odnosno da je u funkciji povećanja materijalnog bogatstva uskog sloja društva na račun ogromne mase stanovništva, onda je logično što se država našla na meti oštrih napada liberala, jer se ona pojavila kao glavna prepreka u ostvarivanju njihovih interesa. Napad je motivisan činjenicom da država ima obavezu da vodi računa o opštim nacionalnim interesima koji se realizuju u korist većine građana. ''Poslije fijaska ideologije liberalizma nakon Velike depresije, činilo se da će definitivno doći do napuštanja iluzije liberalnog kapitalizma, ali je posljednja *laissez-faire* inkarnacija - neoliberalizam doveo do aktuelne svetske krize.'' (Dušanić J., 2016., str. 102). Ronald Regan je početkom osamdesetih godina po dolasku na vlast u Americi sproveo u djelo Fridmanov fundamentalizam slobodnog tržišta. Tom prilikom je Regan izjavio da u sadšnjoj krizi država ne rješava probleme, ona je postala problem, zbog čega namjerava da ograniči njen obim i uticaj. Sa tom idejom Regan uvodi sljedeće mjere: smanjenje poreza na visoke prihode, ograničavanje federalnih rashoda, veća deregulacija i predaja ključnih državnih funkcija privatnom sektoru.

Istovremeno, sa druge strane Atlantika, vlada Margaret Tačer je uhvatila duh vremena, kako navodi Gray, i odgovorila na neke britanske potrebe. U svojim prvim godinama konzervativci su okončali razbijanje britanskog korporatizma što je bio preduslov za ekonomsku modernizaciju, ali taj nužni odgovor doveo je do degenerisanja univerzalne ideologije. Tako je M. Tačer postala ikona globalnog slobodnog tržišta, a njene politike su imitirane širom svijeta. Neoliberalna hegemonija, promovisana upravo od strane tržišnih fundamentalista (Fridman i ostali) i pomenutih filozofija reganizma i tačerizma, uspostavljena je zahvaljujući multidimenzionalnim kriznim situacijama koje je proizvela dotadašnja politika države kao i način funkcionisanja pojedinih međunarodnih institucija.

Neoliberalizam je sve više instrument hegemonije američkog kapitala, a sve manje ideal ljudi koji teže slobodnom i nesputanom razvoju. Ovu tezu je potvrdio i sam Buš koji je tvrdio da je težnja za slobodom i demokratijom univerzalna, da nije vezana za određene kulture i da će Amerika biti posvećena podršci demokratskim pokretima "s konačnim ciljem okončanja tiranije u našem svijetu". Epilog je više nego poražavajući, Demokratija koju su SAD donijele na krilima krstarećih raketa Tomahavk rezultirala je da su Iran, Libija i Liban sve dalje od demokratije, a svakodnevnica im je sve krvavija. Avganistanska demokratizacija je ponovo završila u rukama Talibana. Tamo više niko ne broji slučajeve nasilja sa masovnim žrtvama, niti broji poginule u tom nasilju. To je, u kasnijim istupima, konstatovao i sam autor ''kraja istorije'', F.

Fukujama, nazvavši tu situaciju ‘’razočaravajćom, iako je bila inspirativna za razvoj demokratije na Bliskom istoku.” Koliko god je nastojao da revidira svoj stav o ‘’kraju istorije”, Fukujama nije umanjio svoj neoliberalni aplogetski karakter. Na unutrašnjem planu u državama egzistiraju političari i političke partije, kao i birokrate sa svojim aktivnostima dizajniranja novih javnih politika koje bi relaksirale preopterećenu državu, a sa druge strane, na međunarodnom planu uloga institucija globalnog upravljanja, Svjetska banka, Međunarodni monetarni fond, Svjetska trgovinska organizacija, Grupa 7, se svodi na promociju neoliberalnih principa. Posebna tema je politička i ekonomska moć pojedinih nacionalnih ekonomija, prije svega američke ekonomije, koja svojim neoliberalnim uređenjem nameće promjene na globalnom planu, odnosno unutrašnjem planu vodećih ekonomija evropskog kapitalizma.

Budućnost neoliberalizma

Da li su odgovori vlada na krizu korona virusa širom svijeta dokaz da su dani neoliberalizma odbrojani, pita se Igor Matutinović u svom autorskom tekstu objavljenom u žurnalu Greeneurope (Matutunovic, I., 2020.) Krahom hipotekarnog tržišta u SAD i nastanak globalne finansijske krize 2008. godine, kredibilitet ideološke ponude neoliberalizma za izlazak iz višestrukih kriza je trajno narušen. Matutinović upozorava na prirodu neoliberalnog pogleda na svijet i njegove društvene i ekološke posljedice i dodaje: ‘’Od pandemija do rastućih nejednakosti i klimatskog sloma, složeni problemi našeg vremena zahtijevaju nova rješenja. Sa američkim Kongresom koji je odobrio tri triliona dolara federalne potrošnje na pomoć COVID-19 i EU koja je odobrila 750 milijardi evra za ekonomski oporavak nakon pandemije, neoliberalizam – sa svojim naglaskom na tržištu i minimalnim miješanjem države – može izgledati sve irelevantniji. Dvije masovne državne intervencije u ekonomiji, prvo nakon finansijske krize 2008. i sada još jednom, sigurno moraju značiti kraj ionako klimavog ideološkog uticaja neoliberalizma. Međutim, istorija pokazuje da moćne ideje teško umiru. Čak i kada se sruše, nikada ne nestanu u potpunosti, posebno ako se uče na univerzitetima kao neosporne istine.” (Matutunovic, I., 2020.)

Korijeni aktuelne globalne krize, najveće poslije one iz tridesetih godina prošlog vijeka, konstatuje J. Dušanić, nalaze se u neoliberalizmu, ideologiji koja odražava duh posmoderne i dodaje: ‘’Očigledno da je u sudaru sa stvarnošću savremeni neoliberalizam doživio krah, kao što je to bilo i sa liberalizmom tridesetih godina prošlog stoljeća. To ne znači da se društvo u budućnosti neće ponovo suočiti sa nekom novom inkarnacijom liberalizma jer je ovo ideologija moćnih i bogatih, koji raspolažu kolosalnim, finansijskim i svakim drugim resursima i u stanju su da izlobiraju izvršnu vlast i najmoćnijih država kako bi donijela odluke koje su u njihovom interesu.” (Dušanić J., 2016., str. 160).

Šošana Zubof je u interesantnoj studiji pod nazivom ‘’Nadzorni kapitalizam” uočila da su još 2011. godine neki događaji ukazali na ogroman potencijal i ozbiljne prijetnje koje su se nadvile nad informacionom civilizacijom. ‘’Eksplozivan rast digitalne industrije ni posle čitave decenije nije uspeo da sanira posledice niske javne potrošnje svojstvene neoliberalnoj ekonomiji i ekstremne nejednakosti koja je iz nje proistekla. Previše ljudi je smatralo da im je oduzeta šansa za budućnost, a bes i nasilje ostali su im jedino pribežište.” (Zubof, Š., 2020., str. 39.). Možemo se, takođe, složiti sa tvrdnjom Šošane Z. da su se utješni snovi o pravednoj digitalnoj budućnosti

vrlo brzo pretvaraju u košmar, najavivši globalno političko nadmetanje oko mješavine digitalnih mogućnosti i kapitalističkih ambicija. Time se civilazacija dovodi u poziciju osuđenosti da se neprekidno vrti u tom začaranom krugu dok kroz demokratske procese, moć privatnih društava, neznanje ili lutanje ne pronađe dušu svoje informacione civilizacije. ‘’Početkom trećeg milenijuma, u vreme uobličavanja osnovnih mehanizama nadzornog kapitalizma ‘maksimalno uvećanje vrednosti za akcionare’ opšte je prihvaćeno kao ‘ciljna funkcija’ preduzeća.Ta načela, potekla od nekada ekstremističke filozofije, kanonizovana su kao standardna praksa u svim komercijalnim, finansijskim i pravnim domenima’’ (Zubof, Š., 2020., str. 53).

Oni koji vjeruju da slobodna tržišta omogućavaju formiranje racionalnih očekivanja u pogledu budućnosti gledaju to na osnovu američkog ekonomskog poleta od početka 1980-ih godina do danas. Oni su uvjereni da se ekonomije, koje su se podvrgle zahtjevima Vašingtonskog konsenzusa, ne moraju bojati iznenadnih lomova i dugih depresija koje su ih potresali u prošlosti. Međutim, pouka je potpuno jasna, globalni kapitalizam kako je danas organizovan je krajnje neprilagođen da bi se nosio sa opasnošću od geopolitičkog sukoba u svijeti sve veće oskudice. Sve je izvjesnije da koncept *laissez-fairea* neće biti u stanju da se reformiše, već će se lomiti i fragmentisati. Zbog sve veće oskudnosti resursa i sukoba interesa između velikih sila otežat će se međunarodna saradnja. Dakle, budućnost čovječanstva je sve dublja međunarodna anarhija.

NOVI SVJETSKI POREDAK I LIBERALIZAM

Prema (Mander, Dž.&Goldsmit, E., 1997.) proces globalizacije dobija na značaju u vrijeme ekspanzije industrijalizma, posebno sa trećom industrijskom revolucijom i završetkom hladnog rata, a ključna odrednica tog procesa je da je globalizacija i globalna privreda doprinijela osiromašenju ljudi i dovela do uništenja planete, odnosno ‘’dovela do ovog društvenog, ekonomskog i ekološkog ćorsokaka u kojem smo sada. U posljednjoj deceniji mi na zapadu sve više naziremo jedno drugo globalno selo u kojem se ekonomska podjela produbljuje, a kulturni izbor sužava. U tom selu ima multinacionalnih kompanija koje ne samo da ne poravnavaju teren globalnog igrališta poslovima i tehnologijom za sve nego eksploatišu najsiromašnije i najzaostalije zemlje ove planete da bi ostvarivale nezamislive profite. To je selo u kojem živi Bil Gejts koji je nagomilao ogromno bogatstvo mjereno stotinama milijardi dolara, dok trećina njegove radne snage ima status privremeno zaposlenih’’ ((Klajn, N., 2003.). Analizirajući dosadašnja iskustva sa globalizacijom i svim njenim sadržajima može se nepobitno utvrditi da je višestruki uticaj globalizacije iznjedrio niz negativnih posljedica. Rasprave o globalizaciji tendencijski se grupišu u dvije struje, međusobno veoma udaljene. Jednu čini literatura o međunarodnim odnosima, a drugu ona koja pripada ‘’svjetskosistemskoj teoriji’’, posebno kada je riječ o Imanuelu Valerštajnu (Immmanuel Wallerstaein). ‘’Za teoretičare međunarodnih odnosa karakteristično je da se usredsređuju na razvoj sistema nacionalnih država, analizirajući njegov nastanak u Evropi i kasnije širenje po svetu. Polazeći od pretpostavke da su suverene države, uglavnom se prvo pojavljuju kao nezavisni entiteti, koje imaju manje-više potpunu administrativnu kontrolu unutar svojih granica. U meri u kojoj sistem dražava sazreva, i zatim postaje globalni sistem nacionalnih država, obrasci međusobne zavisnosti se sve više razvijaju’’ (Gidens, E., 1998., str. 70). Ovaj proces se ne završava međusobnim

uspostavljenjem veza u međunarodnoj areni. Ovaj proces prati bujanje međunarodnih organizacija koji označavaju proces kretanja prema ''jedinstvenom svijetu'', iako ih ratovi neperekidno remete. Na taj način nacionalne države postaju sve manje suverene kada je riječ o kontroli nad njihovim unutrašnjim poslovima. Sa druge strane, Valerštajn konstatuje da je širenje kapitalizma na globalnom nivou počelo vrlo rano sa početkom modernog doba. On smatra da je kapitalizam od samog početka oblik svjetske ekonomije, a ne nacionalnih država. Ta činjenica dokazuje da kapitalizam nikada nije dozvolio da njegove ciljeve određuju nacionalne granice. ''Dakle, možemo reći da je u godinama 1945-1970. liberalizam imao svoju drugu apotezu. Ako je, nekoliko decenija prije 1914. godine izgledalo da je trijumfovao u Evropi, u periodu od 1945-1970., izgledalo je da je trijumfovao širom svijeta. Sjedinjene Države su, kao svjetski zagovornik liberalizma, bile hegemonistička sila.'' (Valerštajn, I., 2005, str. 134.), a Harvi u tom kontekstu ističe da okrutna sveprisutnost američke imperijalne moći možda leži iza rapidnog umnožavanja neoliberalnih državnih formi širom svijeta od sredine 1970-tih godina na ovamo. ''Na međunarodnom planu, novi svetski poredak je izgrađen na osnovu sporazuma iz Breton Vudsa, a različite institucije, kao što su Ujedinjene nacije, Svetska banka, MMF, i Banka za maeđunarodna poravnavanja u Bazelu, uspostavljene su da bi potpomogle stabilizaciji međunarodnih odnosa'' (Harvi, D., 2012., str. 25.).

U. Bek globalizam označava kao shvatanje da svjetsko tržište gura ili zamjenjuje političko djelovanje, odnosno ideologiju vladavine svjetskog tržišta, odnosno ideologiju neoliberalizma. ''Ono se odvija monokauzalno, ekonomistički, reducira višedimenzionalnost globalizacije na jednu, ekonomsku dimenziju, o kojoj se još misli linearno, a o svim drugim dimenzijama-ekološkoj, kulturnoj, političkoj, civilno-društvenoj globalizaciji-ako uopće, onda ih se spominje tek pod navodnom dominacijom sistema svjetskog tržišta'' (Beck, U., 2003., str. 24.)

Prema B. Kovačeviću (Kovačević B., 2019.), liberalizam je bio suprotstavljen državi, dok je neoliberalizam suprotstravljen javnom sektoru, izuzev jedne njegove značajne tržišne i profitabilne funkcije-naoružavnja. Korporativizam je više od obične privatizacije, koja podrazumijeva prenos državne ili vladine odgovornosti, tzv. oblasti javnog sektora na privatne, profitne koncerne. Dobar primjer za ilustraciju ove tvrdnje je bila privatizacija američkog rata u Iraku, pri čemu, prema različitim procjenama, skoro pedeset posto obavljenog posla u Iraku za američku vladu i vojsku, od prehrambenih usluga, do transporta i logistike, građevinarstvo, vojsku i obezbeđenje ambasada, kao i tajni rad za CIA-u obavljali su 'privatni' pojedinci i kompanije koje podugovaraju velike, multinacionalne korporacije, kao što su Haliburton i KGR. Blekvoterska ubistva nevinih ljudi na Trgu Nisour u Bagdadu, Irak, 16. septembra 2007. razotkrio je mračnu stranu ovih operacija. Out-sourcing je samo jedna vrsta privatizacije. (Waite,D.&Waite,S.F., 2010.) U tom pogledu, možemo se saglasiti da neoliberalizm artikuliše maglovite i lažne semantičke priče o ''demokratiji'', ''ljudskim pravima'' i pravnoj državi, a zapravo će se naoružavati i davati prvenstvo vojsci i militarizaciji s ciljem kontrolisanja, preuzimanja i kolonizovanja tuđih nacionalnih privreda i njihovih resursa.

Koristeći modele i sredstva ''tvrde'' i ''meke'' moći, neoliberalizam nastavlja unuverzalističku misiju sa totalitarnim pretenzijama Zapada. Bombardovanja, vojni i ekonomski ratovi (sankcije) kao i ''humanitarne intervencije'' i bezočne pljačke resursa, uključujući i sredstva hegemonije predstavljaju sredstva kojima neoliberalizam održava svoju krvavu dominaciju. Dakle, neoloberalizam pokazuje dva lica svog imperijalnog i

hegemonog karaktera. J. Dušanić (Dušanić J., 2016.), smatra da je neoliberalizam u ekonomskom i socijalnom pogledu ideologija jer se realizuje u interesu bogatih i moćnih. Oni imaju ogromnu finansijsku (i ne samo finansijsku) moć pomoću koje oblikuju politički, medijski i (kvazi) naučni prostor. Mnogo manje se govori o nejednakosti, odnosno o neravnomjernoj i nepravednoj raspodjeli i da rješenje treba tu tražiti.

EKONOMIJA ZAPADNOG BALKANA

Problemi tranzicije

Pad Berlinskog zida i završetak hladnog rata doveo je zemlje Istočne i Jugoistočne Evrope pred vrata neoliberalizma i globalizacije sa ponudom da se napusti državnoplanski model ekonomije, i dalji razvoj usmjeri na tržišnu ekonomiju. Socijalizam se urušio, a negdje je i nasilno srušen, a znanja i ideja kako u tranziciju i izgradnju demokratskih institucija i tržišne ekonomije nije bilo. U nedostatku vlastitih strategija, a možda i nekih drugih razloga, zemlje su raširenih ruku prihvatile strane eksperte i rješenja koji su im kreirale međunarodne finansijske institucije na čelu sa Međunarodnim monetarnim fondom. Kakvi su to bilio eksperti i do čega je sve to dovelo uglavnom je poznato i vrlo opsežno opisano u mnogim publikacijama. Ekonomska politika zemalja Zapadnog Balkana u tranziciji se sprovodi po neoliberalnoj doktrini. Razlika je samo u intezitetu i shvatanju političkih struktura šta je to neoliberalna doktrina. Taj koncept se sprovodi kroz slobodno djelovanje tržišta, dominaciju privatne svojine nad drugim oblicima svojine, privlačenje stranih investicija za veći rast i razvoj privrede, veća zaposlenost stanovništva kroz programe zapošljavanja, smanjenje uticaja države u javnom sektoru kroz privatizaciju javnih preduzeća, eliminisanje uticaja države u realnom sektoru, smanjenje stepena zaduženosti države.

Bila je to šok terapija (sve, odmah i istovremeno), u kombinaciji sa deset preporuka Vašingtonskog konsenzusa (prvobitno su geografski koncipirane za zemlje Latinske amerike, a kasnije proširene i na Evropu). Šok terapija po receptu MMF i Svjetske banke podrazumijevala je potpunu privatizaciju javnih preduzeća, garantovanje punih svojinskih prava stranim firmama, punu repatrijaciju profita, privatizaciju banaka i otvaranje istih za stranu kontrolu, nacionalni tretman za strane kompanije, eliminisanje svih trgovinskih barijera, od zaduženih zemalja je traženo da smanje troškove na ime socijalne pomoći, fleksibilniji zakon tržišta radne snage. Ovim je izmišljeno ”strukturno prilagođavanje”. Prema Harviju, ”ovaj tretman je postao uobičajena praksa poslije 1982. godine, perioda koji je Stiglic (Stiglitz) označio ”čistkom” od svih kejnsijanskih uticaja, koju je proveo MMF: Otada su MMF i Svetska banka postali centri za propagiranje i jačanje ”fundamentalizma slobodnog tržišta” i neoliberalnog pravovjerja” (Harvi, D., 2012., str. 4).

Sve ovo, najkraće rčeno, trebalo je da dovede do privatizacije, deregulacije i makroekonomske stabilizacije. Eksperti i reformatori u tim zemljama su isticali da će taj prelaz dovesti do privremene krize, nakon čega će se, za kratko vrijeme, privrede tih zemalja oporaviti, a njihova nova svojinska struktura će obezbijediti brzo eliminisanje privremenog pada i brzi rast koji će dovesti do približavanja zajednici razvijenih zemalja.

Nakon više od tri decenije tranzicije u zemljama Zapadnog Balkana institucionalni ambijent u svim tranzicionim zemljama temeljno je promenjen. Uglavnom, sve zemlje su vrlo brzo liberalizovale najveći dio cijena, liberalizovale spoljnu trgovinu, radikalno smanjile subvencije, proglasile konvertibilnost domaće valute, uvele manje

ili više restriktivnu kreditnu politiku, otvorile granice za priliv stranog kapitala, privatizovale najveći dio državnih preduzeća. Primjenjeni model je pretpostavljao da će tržišne institucije (tržište i privatna svojina) spontano dovesti do kapitalizma. Dakle, model je zamišljen kao ''spontana prečica u kapitalizam'', odnosno otvorenu tržišnu privredu zapadnog modela. Međutim, rezultati postignuti tokom tri decenije tranzicije nisu dovele do obećenog blagostanja i ne mogu dobiti prolaznu ocjenu. Umjesto obećanog prosperiteta zabilježen je veliki i dugotrajan pad bruto domaćeg proizvoda, industrijske proizvodnje i životnog standarda. Slovenija je, za razliku od ostalih balkanskih državica bila izuzetak jer nije htjela prihvatiti preporuke MMF i drugih savjetnika i možemo se složiti da nije ostvarila očekivan prosperitet, ali je otišla mnogo dalje od ostlih. Pomenute promjene, međutim, nisu bile praćene i odgovarajućim privrednim kretanjima u realnoj situaciji, a osnovni rezultati koji su u ovom segmentu postignuti uglavnom nedvosmisleno ukazuju na veliki promašaj. Veliki broj zemalja Zapadnog Balkana se opredijelio za apresirani kurs domaće valute koji je destimulisao izvoz, a stimulisao uvoz.

Prvi slovenački ministar finansija nakon osamostaljenja, Dušan Šešok i prvi guverner Narodne banke Slovenije France Arhar zahvalili su se Džefriju Saksu na uslugama i otpustili ga iz Vlade Slovenije. Nakon toga Slovenija je svoju valutu tolar do ulaska u evrozonu depresirala prema marki za četiri puta, spasivši tako izvoznu konkurentnost svoje industrije, a istovremeno je inflaciju zadržala na nivou jednocifrene. Svakome ko se za takvo šta zalagao u ostalim zemljama Zapadnog Balkana objašnjavano je da to nije moguće. Rezultat toga je bio potop nacionalnih industrija. Zahvaljujući upravo toj politici i očuvanju slovenačke izvozne industrije u periodu od državnog i monetarnog osamostaljenja do preuzimanja evra, Dušan Šešok je danas u superiornoj poziciji da može redom preuzimati najperspektivnija industrijska izvozna preduzeća u zemljama Evrope i Zapadnog Balkana.

Ekonomska kriza je praćena i drugim negativnim posljedicama, kao što su pad broja stanovnika, širenje bolesti, opadanje fertiliteta, porast mortaliteta. Sve izraženije su pretpostavke da je upravo masovna privatizacija uzrok rasta smrtnosti u postkomunističkim zemljama, a cijela ova problematika zahtijeva posebna istraživanja, koja još uvijek nedostaju. Tranzicija je dovela do ogromnog rasta socijalnih troškova i porasta siromaštva, porastu nezaposlenosti, povećanoj nejednakosti, pogoršanju javnih usluga, kriminalu, rastu korupcije i najzad čestim konfliktima različitih oblika. I konačno, ovome treba dodati ogromno zaduživanje zemalja u tranziciji, jer veliki priliv sredstava od privatizacije nije iskorišćen proizvodno, pa čak ni za poboljšanje zaostale infrastrukture, već se prelio u potrošnju, prvenstveno iz uvoza jer domaća proizvodnja nije u stanju da zadovolji potrebe. Enorman rast potrošnje iz uvoza podstaknut je liberalizacijom spoljnotrgovinskih tokova koja je tako nekritički i brzo sprovedena početkom tranzicionog perioda, u skladu sa zahtijevima koji su proistekli iz Vašingtonskog konsenzusa.

Izostajanje obećanih i očekivanih rezultata u ekonomijama Zapadnog Balkana objašnjava se izostankom reformi i nedoslednošću u njihovom sprovođenju, ali i ograničenjima u političkom sistemu. Na taj način se problem u manjoj ili većoj mjeri svodi na tehničko pitanje sprovođenja reformi, a konceptualne postavke reformi i izabrane strategije se uopšte ne dovode u pitanje, čime se najdirektnije isključuju rasprave o uzrocima krize i mogućim putevima izlaska iz nje. Nije pitanje bez osnova da li su nekadašnji borci protiv ''komunističkog'' jednoumlja nakon preuzimanja vlasti postali

time i protagonisti jednog novog jednoumlja, a možda čak i bezumlja? Iako su apologete neoliberalizama odmah po padu Berlinskog zida proglasili ''kraj istorije'', ipak, ta rasprava je neizbježna i do nje mora doći. Moraće doći do preispitivanja, ne samo Vašingtonskog konsenzusa, već i teorijske osnove na kojoj je on nametnut i na kojoj tako snažno djeluje već više od tri decenije. Mnoge zemlje su kao direktna posljedica negove primjene zapadale u velike krize i nezadrživo se kretale ka siromaštvu. Jedno je sigurno, ne možemo se zavaravati da je generalni koncept u redu, a da treba korigovati samo neke nijanse, odnosno posebne politike ili mjere koje nisu bile dobre, ili nisu dobro sprovedene, ili možda dozirane.

Krajem juna 2003. godine, Evropska unija (EU) i zemlje Zapadnog Balkana – Albanija, Bosna i Hercegovina, Kosovo*, Crna Gora, Severna Makedonija i Srbija, VB6 – sastale su se na Samitu u Solunu, gde su usvojile Deklaraciju u kojoj se naglašava da ''budućnost Balkana je unutar EU i učvršćuje nepokolebljivu podršku EU za integraciju VB6. Tokom protekle dve decenije, ova posvećenost je oblikovala put regiona ka pristupanju, sa fokusom na postizanju ekonomske konvergencije sa EU.'' (OECD 23, 2023.)

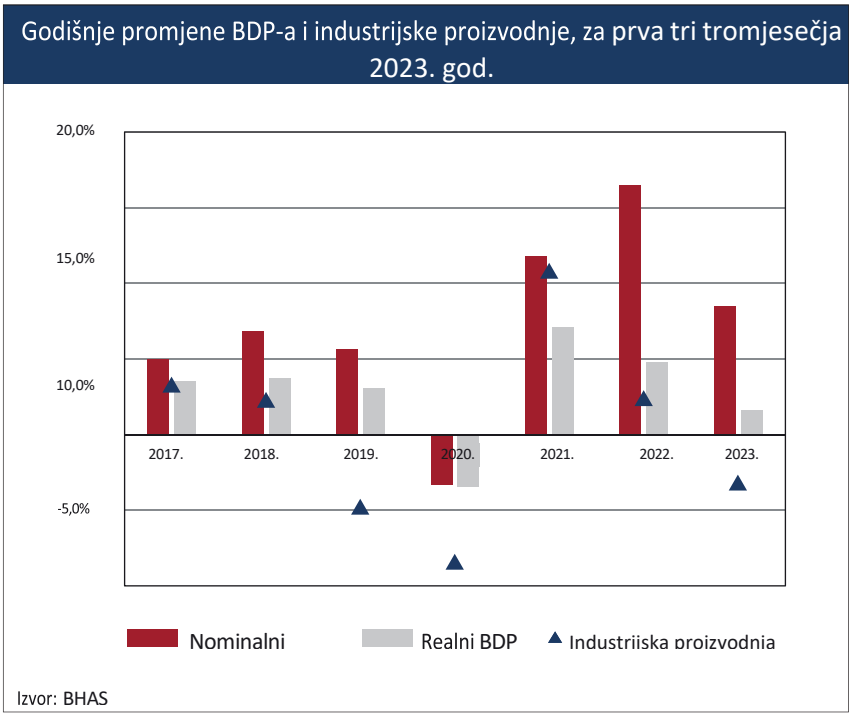
Prema ovom izvještaju OECD-a, zemlje Zapadnog Balkana su ostvarile skroman napredak u smanjenju jaza koji ih odvaja od zemalja Istočne Evrope koje su integrisane u EU i OECD. Posmatrano sa sadašnjeg prosječnog nivoa rasta za Zapadni Balkan i za EU, konvergencija će se postići tek 2076. godine – drugim riječima, za više od pet decenija. Međutim, stopa konvergencije varira među privredama zbog baznog efekta, koji se brže javlja kod onih sa nižim početnim nivoom BDP-a po glavi stanovnika. Na primer, između 2008. i 2022. godine, Kosovo* i Bosna i Hercegovina su prijavili porast od 10 procentnih poena u svom BDP po glavi stanovnika (PPP) u odnosu na prosjek EU. Nasuprot tome, Crna Gora i Sjeverna Makedonija su zabilježile rast od samo pet procentnih poena tokom istog perioda, što ukazuje da su ekonomije sa višim prihodima u regionu ostvarile sporiji tempo konvergencije. Međutim, iako su se razlike između pojedinačnih ekonomija na Zapadnom Balkanu smanjile u veličini, značajni dispariteti i dalje postoje.

Stanje ekonomije u Bosni i Hercegovini

Kada je u pitanju Bosna i Hercegovina, prema procjenama Centralne banke BiH, iznesenoj u Godišnjem izvještaju za 2023. godinu, u 2024. godini očekuje se skroman rast ekonomske aktivnosti, prvenstveno zbog dugotrajnih i snažnih inflatornih pritisaka, kao i slabih trgovinskih prilika domaće industrijske proizvodnje i izvoza. Pomenuti problemi obilježili su cijelu 2023. godinu, posebno pad vanjske potražnje. Smanjenje vanjske potražnje uslijedilo je nakon pogoršanja monetarnih uslova i visokih inflatornih pritisaka. Ključne pretpostavke za rast domaćeg BDP-a u 2023. godini su rast investicione potrošnje (lične i državne), praćen rastom nominalnih plata i zaposlenosti. Na rast investicija privatnog sektora uticaj imaju još uvijek niže domaće kamatne stope od kamatnih stopa u evrozoni te zadržana financijska dobit iz prethodne godine u kojoj su mnoge firme zabilježile rekordnu neto dobit. Očekuje se povećanje investicione potrošnja države uzrokovane radovima na velikim infrastrukturnim projektima, koji se posebno mogu očekivati u 2024. godini zbog lokalnih izbora. U 2024. godini projektovana je stopa rasta BDP-a od 2,1%, pod pretpostavkom slabljenja inflatornih tokova, i očekuje se da će se u 2024. godini kretati u visini od 2,9% gdje će opet u strukturi rasta najveći doprinos imati bazna inflacija i cijene hrane.

U 2024. godini prevladavaju negativne pretpostavke za ekonomsku aktivnost, što se posebno odnosi na pad neto izvoza, koji je nastavljen i u januaru 2024. godine kada je zabilježen pad robnog izvoza od 16,6%. Sa druge strane, rast inflacije je pod sve većim uticajem bazne inflacije, deglobalizacije i klimatskih promjena.

Godišnji izvještaj CBBiH za 2023. godinu u prvih devet mjeseci 2023. godine bilježi skroman godišnji rast realnog BDP-a od 1,7%, što je, prema tvrdnji CBBiH, u skladu sa kretanjima realne ekonomske aktivnosti u okruženju. U posmatranom periodu zabilježeno je značajno smanjenje godišnje stope rasta nominalnog BDP-a (do nivoa od 8,5%). Kontrakcija domaće ekonomske aktivnosti u velikoj mjeri je determinisana padom industrijske proizvodnje, koji je iznosio 3,2% za prvih devet mjeseci 2023. godine, u odnosu na isto razdoblje prethodne godine. Grafikon 1. prikazuje godišnje promjene u nominalnom i realnom BDP-u, prema proizvodnom pristupu, te stopu promjene obima industrijske proizvodnje, za prva tri kvartala, u odnosu na isti period prethodne godine.



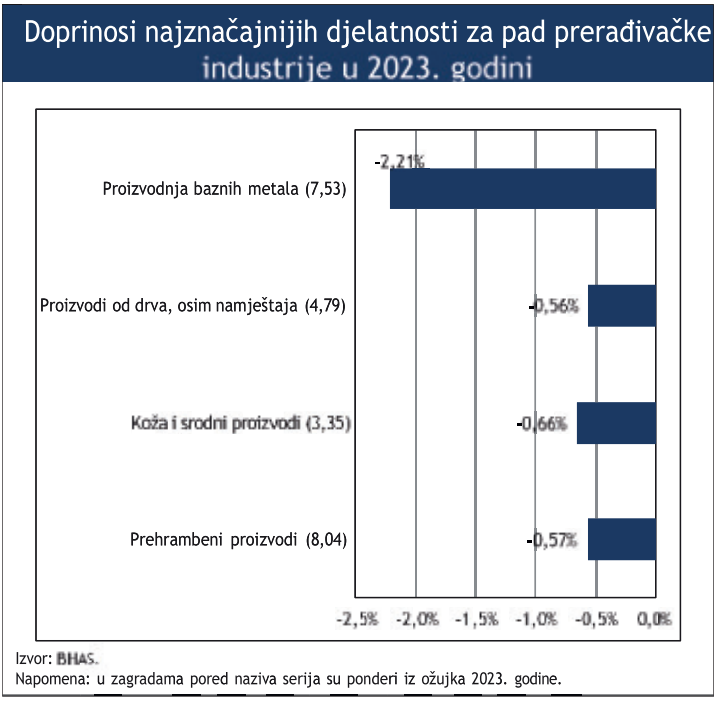
Grafikon 1. Godišnje promjene BDP-a i industrijske proizvodnje, za prva tri tromjesečja 2023.godine

Izvor: (Centralna banka BiH, 2024., str. 19)

Posmatrano po područjima klasifikacije djelatnosti, iako skroman, rast realne BDV (bruto dodata vrijednost) je posljedica rasta uslužnih djelatnosti, dok su proizvodne djelatnosti zabilježile godišnji pad ili zanemarive stope rasta. Najizraženiji rast realne ekonomske aktivnosti na godišnjem nivou, za prva tri kvartala, zabilježile su djelatnosti hotelijerstva i ugostiteljstva, kao i trgovina na veliko i malo (koja je imala najveće učešće u ukupnom godišnjem porastu BDV od 19,1%). Djelatnost prerađi-

vačke industrije, koja takođe ima značajno učešće u BDV, u posmatranom periodu zabilježila je značajnu stopu pada na nivou 4,7%.

Posmatrajući strukturu BDP-a po rashodovnom pristupu, izvoz roba i usluga je djelatnost koja je posljednjih godina zabilježila najveći doprinos rastu realnog BDP-a, ali je u prva tri kvartala 2023. godine zabilježila pad. Izvoz roba i usluga (čije učešće je u strukturi potrošnje u prva tri kvartala iznosilo 39,3%), zabilježio je stopu pada od 6,3%. Djelatnost rudarstva godinama bilježi trend pada proizvodnje, uz snažnu cikličnost unutar godine, a u 2023. godini, petu godinu u nizu, ostvarila je pad od 6,9% u odnosu na 2022. godinu. S druge strane, djelatnost proizvodnje i snabdijevanja električnom energijom i plinom zabilježila je rast od 2%, čime je ublažen ukupan pad industrijske proizvodnje. Grafikon 2. prikazuje djelatnosti u prerađivačkoj industriji koje su najznačajnije doprinijele padu industrijske proizvodnje u 2023. godini, od kojih se svakako izdvaja djelatnost proizvodnje baznih metala., koja je zabilježila godišnji pad od 29,4%, u odnosu na prethodnu godinu, čime je dijelom doprinio zastoj u proizvodnji željezare Zenica, jednog od najvećih pogona za proizvodnju čelika. Navedeni godišnji pad direktno je uticao na vrijednost izvoza ove grupe proizvoda. Dodatno, negativan uticaj na obim proizvodnje ove djelatnosti, kao i na vrijednost izvoza, imao je i globalni pad potražnje za čelikom, koji je procijenjen na 6,3% za 2023. godinu. Slaba vanjska potražnja uticala je i na godišnji pad ostalih najznačajnijih grana prerađivačke industrije. Neke od djelatnosti industrijske proizvodnje (kao što je popravak i instaliranje strojeva i opreme) su zabilježile značajan rast u 2023. godini, međutim njihov ponder u industrijskoj proizvodnji je nizak, te je samim tim i njihov uticaj na ukupan obim bio zanemarljiv.



Grafikon 2. Doprinos najznačajnijih djelatnosti za pad prerađivačke industrije u 2023.godini

Izvor: (Centralna banka BiH, 2024., str. 20)

ZAKLJUČAK

Iako Milton Fridman i drugi monetaristi i ideololozi neoliberalizma smatraju da je tržišna ekonomija sama po sebi stabilna, ponavljajuće recesije i finansijske krize, koje redovno dovode do državne intervencije suprotstavljaju se takvoj tvrdnji. Neoliberali se ne protive državnoj intervenciji kada ona usmjerava novac poreskih obveznika da pokrije gubitke u privatnom sektoru ekonomije. Međutim, uvijek poslije tih intervencija države oni iznova traže od države da se distancira od ekonomije i smanji socijalne izdatke. Ova nedoslednost neoliberala jedino koristi interesu korporativnog sektora. I dalje će se insistirati na smanjenju poreza na dohodak do deregulacije banaka od čega će korist imati jedino mala, ali moćna manjina. Cjelovito društveno ponašanje se jednostavno posmatra kao zbir akcija pojedinaca, a ne kao dio ukupnog političkog ili društvenog sistema. Čuvena izjava Margaret Tačer da ne postoji takva stvar kao što je društvo, postoje samo pojedinačni muškarci i žene i postoje porodice, na najbolji način ilustruje ovaj način razmišljanja A tamo gde nema društva, nema ni društvene solidarnosti, nema zajedničkih ciljeva ili stremljenja, a još manje odgovornosti prema budućim generacijama ili okruženju od kojeg zavisimo. U takvom ambijentu jedino što je ostalo je besmisleni ekonomski rast i individualna akumulacija bogatstva za manjinu odabranih. Ekonomija je sve nestabilnija, a korporativna ulaganja u opadanju što je dovelo do smanjenja produktivnosti i stopa rasta, smanjenja usluga javnog sektora, rasta javnog duga, naglog porasta nesigurnosti rada i porasta nejednakosti prihoda. Današnja pandemijska kriza pokazuje da je privatni sektor izuzetno slab u smislu kapitalnih rezervi. To potvrđuje činjenica da kompanije ne mogu izdržati više od dva do tri mjeseca neaktivnosti bez velikih otpuštanja i državne pomoći. Kapitalizam sa neoliberalnom ideologijom je vjerovatno dotakao najniži nivo otpornosti.

Živimo u svijetu destrukcije životne sredine koja ugrožava biofizičke granice, a najteža situacija je u oblasti klimatskih promjena i gubitka biodiverziteta. Kao što primjećuje Braco Kovačević, korporacije stvorene u razvijenim industrijskim zemljama prebacuju ‘’prljave industrije’’ na područja nerazvijenih zemalja. Na taj način se, uz labave i gotovo nikakave ekološke zakone, prirodna sredina nerazvijenih zemalja pretvara u prostore deponija opasnih materija koje zagađuju tlo, vodu i vazduh ugrožavajući zdravlje ljudi, biljaka i životinja. Rast populacije ljudi i izumiranje vrsta otvorili su vrata novim patogenima, kao što je Covid-19. Ove bolesti ugrožavaju i zdravstvene sisteme i naš svakodnevni život. Ekstremna nejednakost u prihodima i neravnomjeran razvoj planete razara društveno tkivo i direktno podriva globalnu stabilnost. Dosadašnja iskustva pokazuju da su potrebna ogromna ulaganja u infrastrukturu, socijalne, zdravstvene i obrazovne sisteme da bi se efikasno pariralo navedenim problemima. Bez odlaganja se mora promijeniti odnos prema prirodi, stilovima života i našim vrijednostima uopšte. Sa ideologijom neoliberalizma koja ne prepoznaje društvo i društvenost i koja budućnost prepušta hirovima tržišta i neobuzdanom ekonomskom rastu šanse za budućnost su svedene na minimum. Istorija ljudskog razvoja potvrđuje da nismo preživeli kao izolovani i sebični pojedinci grupisani u apstraktne grupe, već naprotiv kao članovi kulturološki različitih zajednica povezanih zajedničkim vrijednostima, vjerovanjima i osjećanjem pripadnosti. Pojedinac postaje istinski čovek samo kroz socijalizaciju, a to se nikada ne dešava samo na nivou nuklearne porodice. Ideja da nema društva je neodrživa i nije osnova za zdravu ekonomsku i javnu politiku.

Iz prethodne analize nedvosmisleno se nameće zaključak da je neoliberalizam

kao ideologija i kao ekonomski sistem u dubokoj krizi i vodi nas u neizvjesnu budućnost. To nameće pitanje kakva je budućnost ekonomije Zapadnog Balkana koja je ideolčoški i strukturalno zasnovana na vrijednostima neliberalizma i njegovih globalnih institucija. Analiza ekonomskih kretanja u BiH, prema Godišnjem izvještaju CBBiH za 2023. godinu pokazuje skroman godišnji rast realnog BDP-a od 1,7%, što je u skladu sa kretanjima realne ekonomske aktivnosti u okruženju. Ovaj podatak jasno potvrđuje da je model neoliberalne ''šok'' terapije na Zapadnom Balkanu kamen o vratu ekonomije i da ne treba očekivati značajniji iskorak u pozitivnom pravcu. Međunarodni monetarni fond (MMF) od vlasti u BiH i dalje traži zaustavljanje daljeg rasta plata u javnom sektoru, smanjenje poreskih olakšica, ukidanje subvencija za električnu energiju, da izbjegavaju diskreciona povećanja socijalnih davanja i novih mjera pomoći, ali i da preispitaju ostalu tekuću potrošnju, kao i uspostavljanje fonda za finansijsku stabilnost cijele BiH, što predstavlja samo neke od mjera koje treba da sprovedu domaće vlasti prema zahtjevu Međunarodnog monetarnog fonda (MMF). Svaka zemlja koja je prihvatila ili kojoj je nametnut koncept ekonomskog neoliberalizma, zapala je u tešku ekonomsku krizu. S druge strane, zemlje koje su napustile koncept neoliberalizma ili ga nikada nisu prihvatile, postigle su i dalje postižu vrlo solidne privredne performanse. Nažalost, u zemljama Zapadnog Balkana to još nije shvaćeno.

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THE ECONOMY OF THE WESTERN BALKANS IN NEOLIBERAL GLOBALIZATION

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Summary: *The goal of research in this paper is the world we live in, i.e. the world of neoliberal globalization, a world of dynamic, unpredictable and uncertain changes that affect all peoples and their societies, their economies, politics and cultures. Simultaneously, it is also a world of de-sovereignization of states and de-nationalization of societies, especially those in transition. The method of analysis and synthesis, as well as the historical-comparative method were used in this paper. Comprehensive research and analysis of collected data unequivocally confirms that there are numerous globalization factors that lead to the de-sovereignization of modern states and the denationalization of their societies, and some of the more significant ones will be specifically discussed in this paper. From the beginning of the 1970s until today, a noticeable global shift towards neoliberalism has been emphasized in political and economic processes, but also in opinion. Deregulation, privatization and withdrawal of the state from many spheres of social support represent a general characteristic of social reality. The largest number of countries created by the collapse of the Soviet Union and the Warsaw Pact, the collapse of the SFRY, as well as a number of old social democracies, i.e. welfare states such as Sweden and New Zealand, partly voluntarily, and mostly under pressure, accepted some versions of neoliberal theory and adapted them with their policies and practices. Neoliberalism thus became the dominant ideology that pervades the public policy of many governments in developed and developing countries. This ideology is based on the postulate that the reduction of state intervention in economic and social activities and the deregulation of labor and financial markets, as well as trade and investment, have unleashed the enormous potential of capitalism to create an era of unprecedented social welfare. Looking at the entirety of the neoliberal experience, it can be concluded that the application of neoliberal policies has led to a significant increase in social inequalities both in the countries where such policies*

are applied and among countries in the rest of the world. With the ideology of neoliberalism, which does not recognize society and sociability and which leaves the future to the whims of the market and unbridled economic growth, the chances for the future are reduced to a minimum. The history of human development confirms that we did not survive as isolated and selfish individuals grouped into abstract groups, but on the contrary as members of culturally diverse communities connected by common values, beliefs and a sense of belonging. An individual becomes truly human only through socialization, and this never happens only at the family level. The idea that there is no society is not sustainable and is not the basis for a sound economic and public policy. The previous analysis showed that neoliberalism, as an ideology and as an economic system, is in a deep crisis with an uncertain future. This raises the dilemma as to what the future of the economy of the Western Balkans will be, as it is ideologically and structurally based on the values of illiberalism and its global institutions.

Keywords: *neoliberalism, neoliberal ideology, globalization, hegemony.*

JEL classification: *N40, P51, Z13*

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KRATKO ILI PRETHODNO SAOPŠTENJE / SHORT OR PRELIMINARY REPORT

MANAGERIAL AND INDIVIDUAL IMPACT OF APPRAISAL ON EMPLOYEES' PERFORMANCE IN LOCAL GOVERNMENT UNITS IN BOSNIA AND HERZEGOVINA

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Abstract: *Establishing an evaluation system can be considered a key step towards the institutional development of the civil service. The valorization of employees work is equally important in the public sector as in the real sector. The first rules on evaluation that were adopted by agencies for the civil service/administration in Bosnia and Herzegovina were based on the traditional European assessment model, which is based on a larger number of standardized evaluation criteria. The application of this model showed its weaknesses in practice due to the difficulty of objectively determining the performance evaluation, so a few years later, all levels of state structures in BiH began the transition to modern evaluation models that are based on work goals as the main criterion for performance appraisal. In this research paper, in the context of human resource management in public administration, the measurement of employee performance will be described with procedural, substantive problems and errors that lead to serious and long-term consequences for organizational development, general management culture and individual performance of employees on the basis of examination of units local governments in Bosnia and Herzegovina. This paper also includes an analysis of the results of the research conducted in 12 (twelve) local self-government units in Bosnia and Herzegovina, through a presentation of the typical impact of evaluation on the work results, commitment and employee performance in the public sector.*

Keywords*: human resource management, local self-government units, performance appraisal, employee performance.*

JEL classification: *O15, J28, H83.*

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INTRODUCTION

The strategic orientation of human resources management aims to optimize business processes. When it comes to the public sector, the strategic direction would be to identify the competencies that would be adequate for the work in the civil service structures in Bosnia and Herzegovina in upcoming period, which would be capacity strengthening that enables the civil service to cope with the challenges that are likely to be faced by all public institutions in the process of EU integration. The human resources planning system also includes the harmonization of human resources goals that are crucial for business processes and which could ensure the competitiveness of public sector, availability and retainment of good employees and quality work, employee's development, improvement of employee satisfaction and commitment, followed by proper performance management towards culture of cooperation and teamwork. In the performance management, the crucial task remains to connect organizational goals and targets with individual performing and achievement using performance appraisal tools. In the countries of the European Union, public administrations use the practice of evaluating employees in order to provide feedback to each employee about the random performance achieved, further directly connected with human resource practices, institutional decisions and the process of strategic planning. The legal framework of the currently valid evaluation and appraisal system in local self-government units in Bosnia and Herzegovina includes laws that regulate the civil service (civil servants and employees) in the Federation of Bosnia and Herzegovina and cantons, the Republic of Srpska and Brčko District, as well as by-laws regulations on the evaluation of the work of civil servants in civil service bodies on all administrative levels. As a rule, it is prescribed that the evaluation of employees in civil service bodies is determined by the head of the civil service body at the proposal of the immediate superior in an evaluation cycle of at least every twelve (12) months with evaluations of work results: "extremely successful", "successful", "satisfactory" and "does not satisfy". The evaluation cycle is a continuous process and consists of several key stages: determination of work objectives; competencies required, monitoring work during the entire assessment period; evaluation discussions, filling out forms for determining the evaluation proposal and determining the final evaluation with the possibility of using legal means to challenge it. The evaluation of the work of civil servants in local self-government units is carried out with the aim of quality and professional work performance and general or specific institutional goals, as well as the incentive of the officials to constantly improve their professional knowledge and skills in order to maintain the status of a civil servant and acquire the prerequisites for advancement in the civil service. In accordance with legally defined competences and powers, the head/mayor is the main bearer of all activities of the municipality/city, who, along with human resources, as a lever of the functioning of the municipality, has the obligation to continuously improve organizational efficiency and effectiveness. The process of measuring work performance is a formal process of periodic analysis and evaluation of the performance of all employees and the process of planning goals and activities for its improvement and development. Measuring performance as a procedure can be defined as "the monitoring and analysis of work performance is carried out in three essential and interconnected steps that together represent the procedure of measuring work performance or efficiency": determination of work goals (criteria of success);

evaluation of work performance; providing feedback - discussing performance.

When measuring and evaluating the performance of employees, various objective and subjective problems and errors may occur, which must be minimized in order to preserve the goals and purposes of the evaluation process and the individual impact on employees.

LITERATURE OVERVIEW

(Armstrong M. , 2009) dealt with performance management(PM) in general, where the establishment of the evaluation system can be considered as a key step towards the organizational development. As a part of performance management, the effective appraisal system is very powerfull HR tool for measuring and improving workforce. Evaluating performance plays a significant role in the utilization of human resources and maximizing its contribution to organizational achievements (Anstey, 1976). Performance appraisal is considered a complex, continuous and demanding practice with vital reflection in affecting individual and organizational productivity. Because of the business and citizen centric orientation, local government units tends to have the biggest struggle in the field of organizational effectiveness. (Palguta, 2001) claims that evaluation methods would be less relevant in a case of building goal-oriented organizational culture with productive approach between employees. In addition to organizational effectivenes in LG, EU integration processes emphasizes and encourages local economic development, where local leadership bears responsibility for creating a favorable business environment, better quality of public services, responsible, accessible and responsive local government (Šašić, 2020).

According to (Dessler, 2015), the high-effective working systems are made of policies and practices that jointly contribute to employee effectiveness, so the new approach to human resource planning and internal management flow should be based on the strategic needs of the institution and must be linked to the human resources development function.

Motivation is a generator of employee's productivity and efficiency, both in the private sector and in public administration, but also a central issue in the development of effective human resources management policies. The functions of human resources management in public administration related to motivational philosophy include remuneration, promotions, compensation, training, rewards, job security, autonomy of employees, but also issues of mutual interaction arising from working conditions, working environment, affiliation, recognition, trust, interpersonal relationships , levels of self-actualization, etc (Tanović, Šašić, & Vranješ, 2023).

A successful organization tries to recognize the value of its employees, and in that context to make the most of their potential for some higher goals, where (Albinger, 2000) point out, the logical sequence is knowledge - creativity - innovation - competitive advantage. Employee evaluation is considered a complex and demanding practice in the process of personnel management in local self-government units and the public sector as a whole, because monitoring work is a continuous process of evaluating achievement of individual norms, tasks and goals. Complexity of performance appraisal mostly refers on connection of evaluation and making further decisions on employees (salaries, other benefits), recommendations for training and career development, technical issues and skills related to interpersonal relationships (interview, feedback), as the common

basis of individual impact (Berman, 2018). Generally, performance management is the identification, measurement and development of the work efficiency of individuals and teams in order of alignment with the goals of the organization (London, 2004). There are three types of purposes for performance management systems: strategic, administrative and development purposes, so the effective functioning of the performance appraisal or periodic evaluation system requires right-set phases (job defining norms, actual performance measurement, feedback) and methods, techiques, patterns based on characteristics, behaviorly anchored rating system (BARS) or management on objectives-MBO (Halaschmi, 1995). According to „early stages" of overall aspects of PAR process in Bosnia and Herzegovina, performance appraisal should be used as a managerial guiding tool for abandoning bureaucratic practices, changing administrative culture and democratizing public governance at all administrative levels (Tanović, 2018)). Performance appraisal means investing significant efforts in raising trust, transparency and level of knowledge both evaluators or staff involved in human resources management and civil servants/employees themselves as an active participants through evaluation process. When it comes to implementation, studies referring to different organizational contexts (Rusu, 2016) emphasize connection between strategy, technology, prevailing cultural norms, perceived purposes and uses of employee performance appraisal data as contextual factors influencing employee performance appraisals in organizations (Haines III, 2015) HR department ensures that employee performance appraisal is adjusted to the organizational context where it takes place (Molapo, 2002). So, if it is performance appraisal one of powerful means ensuring LGU or public sector strategic goals to be achieved, it also should contribute to talent management, learning, career development and reward management. Otherwise, the challenge of performance appraisal and its smooth connection between organizational and individual goals may experience many procedural or technical problems which undermine the basic aim of the systematic evaluation and its benefits for organizations and individuals.

METHODOLOGICAL CONCEPT OF RESEARCH

Characteristics of the sample

This research work analyzes the process of evaluation and performance appraisal process of LGU civil servants and employees in Bosnia and Herzegovina in order to support the most efficient performance management practices dependent on individual impact and better performance outcomes. The general aim of this paper is to provide insight into institutional arrangements and actual implementation of the evaluation procedure in LGU with the empirical evidences of the way of using appraisal results towards employee development and productivity. The analysis provides empirically based recommendations, so as the exchange of experiences starting a discussion on better appraisal practices for the local government units in Bosnia and Herzegovina, so therefore the following hypotheses were defined:

H0: The existing evaluation system in local self-government units has no positive effects on the work performance of civil servants and employees.

H1: The evaluation system is not based on a performance measurement and reward system for civil servants and state employees.

H2: Without a clear goals and purposes of the evaluation, performance appraisal can not be a tool for improving work processes.

H3: Evaluators in local self-government units do not continuously monitor the employees, which negatively affects work performance.

The main indicators would be: productivity and efficiency in work; effectiveness; complex evaluation system and unclear purpose of assessment.

So under scientific goals we can group the following: Analysis of the actual impacts and formal foundation of the evaluation process and performance appraisal in the general management framework of local self-government; analysis of the issues in the context of the employee evaluation institute through formal establishment in the Law on Civil Service, other regulations and by-laws for different categories of employees in local self-government; application of employee evaluation in practice at selected local self-government units(LGU): key shortcomings, observed weaknesses, use of results and appraisal outcomes.

The research was conducted in 12 (twelve) local self-government units in Bosnia and Herzegovina during January and February 2024 (Municipality of Bugojno, Jablanica Municipality, Municipality of Vitez, City of Goražde, City of Tuzla, City of Živinice, Municipality of Centar Sarajevo, Municipality of Novo Sarajevo, Ilijaš Municipality, Municipality of Grude, City of Bihać). Based on the survey questions and the results of the survey, the hypotheses were tested.The research that was carried out in local self-government units aimed to provide insight into institutional arrangements, as well as the process of evaluating employees in local self-government, and the way of resulting information use, to detect key shortcomings in the evaluation process.

Civil servants and employees employed in local self-government units took part in the research process(63.30% of civil servants who are employed in non-management positions, i.e. 18.35% of senior civil servants and 18.35% of other employees) and the respondents gave their own assessments of the level and extent to which the evaluation of employees in local self-government units affects work performance. For the purposes of the research, a survey questionnaire was compiled using a Google form, and respondents gave answers on a five-degree Likert-type scale, ranging from "strongly disagree" to "strongly agree" with the third degree as neutral, "neither agree nor disagree", for each individual statement. A total of 109 respondents participated in the research, of which 73 were female (66.97%) and 36 were male (33.03%). From the above, it can be concluded that there is a higher percentage of women in local self-government units. The average age of the respondents was 45.5 years, while the most respondents were in the 46-55 age group, 32.11%, and the least respondents were in the age group up to 25 years, 2.75%. Considering the educational structure, the majority of the respondents, 54.63% of them, have a university degree, while 11.11% of the respondents have completed high school/high school. Also, 32.41% of respondents have a master's degree in profession/science, while 1.85% of respondents have PhD.

RESULTS AND DISCUSSION

The main aim of the research was to answer questions that are directly related to the hypotheses set forth in methodology:

- Is the existing evaluation system in local self-government units based on the performance measurement and reward system for civil servants and state employees?
- Does the existing evaluation system in local self-government units have

positive effects on the work performance of civil servants and state employees?

Upon the question *"How do you evaluate the existing system of evaluation of the work of employees in local self-government units"?* it is visible that 44.44% of the respondents evaluated the existing system of evaluation of the work of employees in local self-government units as bad, 32.41% as very bad, 17.59% as good, 4.63% as very good, and 0.93% respondents rated the existing work evaluation system as excellent.

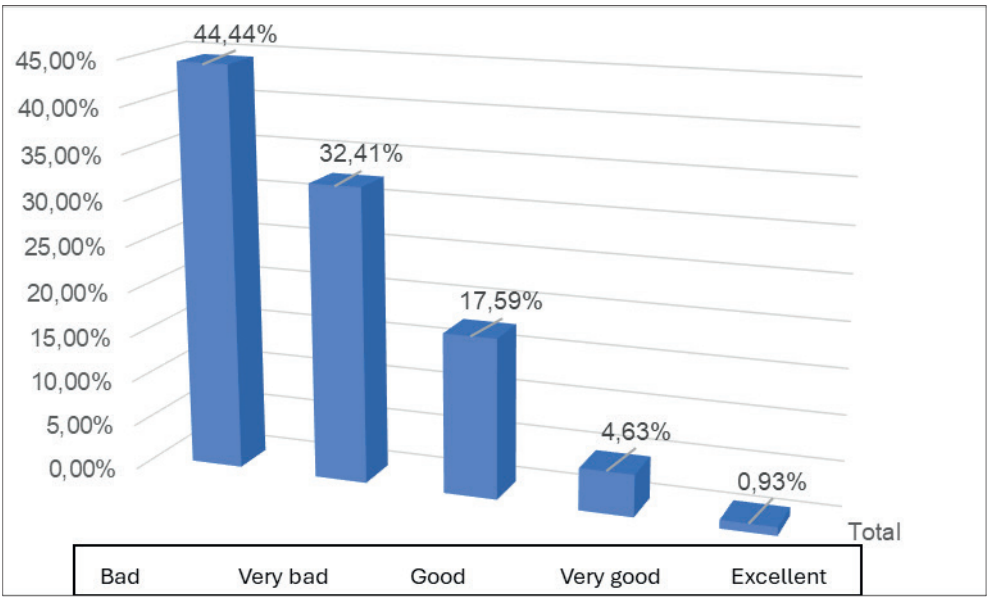

Figure 1. "How do you evaluate the existing system of evaluation of the work of employees in local self-government units"?

Source: Author's

The following table presents the results of respondents' answers to questions regarding attitudes about the importance of performance measurement, employee evaluation, the reward system, the realization of goals, and the importance of evaluation as a basis for employee advancement.

Table 1. importance of performance measurement

Questions	The level of agreement/ disagreement %				
	I completely agree	I agree	I agree to certain extent	I do not agree	I do not agree at all
Consistency in the application of the rulebook on performance evaluation of civil servants	3,70	10,19	13,89	19,44	52,78
The existing method of evaluation contributes to the professional development of employees,	1,85	7,41	12,04	31,48	47,22
The evaluation criteria are closely related to the concrete results of your work	2,75	11,93	12,84	21,10	51,38
"All employees receive evaluations according to their efficiency"	2,75	7,34	11,01	39,45	39,45
"To what extent are you satisfied with the communication and feedback you receive through evaluation"?	2,75	2,75	17,43	33,94	43,13
The existing evaluation system has a positive effect on employee motivation"	1,83	10,09	11,01	28,44	48,62
"The existing evaluation system provides an opportunity for advancement at work"	1,83	6,42	8,26	32,11	51,38
The highest grades are adequately rewarded"	0,92	2,75	9,17	27,52	59,63
The set individual work goals are aligned with the strategic goals, that is, with the annual work plan of the administrative body and strategic documents."	4,72	6,60	16,04	19,81	52,83
Clear and measurable individual work goals can significantly contribute to the improvement of work processes"	52,34	39,25	4,67	2,80	0,93
Evaluators in local self-government units do not continuously monitor the employees, which negatively affects work performance	46,3	29,63	12,04	7,41	4,63

Source: Author's

As shown in the graph, 57.41% of respondents declared that the degree of fulfillment of their work goals was 76-99%, while 35.19% of respondents declared that they fulfilled work goals in 100%, percentage, 6.48% of respondents, work goals fulfilled in the percentage of 51-75%, and only 0.93% of the respondents stated that they fulfilled the work goals in the percentage of 26-50%.

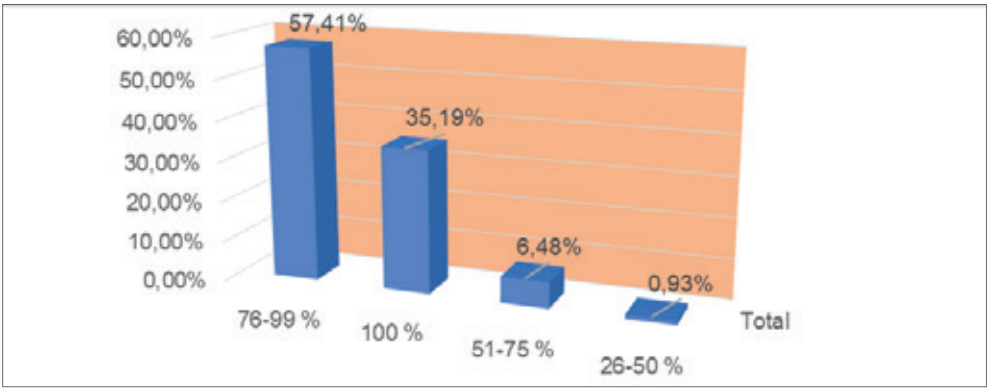

Figure 2. The degree of fulfillment of work goals

Source: Author's

Hypothesis testing

The results of the multiple linear regression where the auxiliary hypotheses (H1, H2 and H3) were observed and included as predictors of the main hypothesis as dependent variables, show that the model with the included auxiliary hypothesis contributes 84.9% in explaining the variance of the main hypothesis (H0- work performance of civil servants and employees).

The coefficient of determination (R Squared) or r2 indicates the percentage amount of variation in the dependent variable (main hypothesis) that can be explained by the regression model. Looking at all the respondents in our case, 72.1% of the variation in the increase work performance of civil servants and employees can be explained by changes in the three mentioned hypotheses (H1: The evaluation system is not based on a performance measurement and reward system for civil servants and state employees; H2: Without a clear goals and purposes of the evaluation, performance appraisal can not be a tool for improving work przocesses; H3: Evaluators in local self-government units do not continuously monitor the employees, which negatively affects work performance), while the rest of 27.9% of the changes are due to the action of other factors.

Table 2. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	**.849**[a]	**.721**	.714	.76556

a. Predictors: (Constant), H1,H2,H3

b. Dependent Variable: H0

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	224.384	19	56.096	95.713	.000[b]
	Residual	86.740	86	.586		
	Total	311.124	105			

a. Dependent Variable: H0

b. Predictors: (Constant), H1,H2,H3

Source: Author's calculation based on SPSS 22.0

Based on the results of the conducted research, as well as on the basis of theoretical research, we can conclude that the hypothesis set at the beginning of the work was confirmed, which reads:

H1: The existing evaluation system in local self-government units has no positive effects on the work performance of civil servants and state employees.

In this regard, the conducted research indicates that the legal framework of the currently valid evaluation system in local self-government units does not represent an effective managerial tool for managing the performance of employees in the civil service.

Regarding the evaluation of work performance, the work performance of civil servants, the research showed that the evaluation system in the civil service in the Federation of Bosnia and Herzegovina has been formally established, that is, the evaluation is carried out exclusively for the formal satisfaction of legal obligations.

Also, the existing evaluation system does not contribute to the professional development of employees and does not provide the possibility of advancement at work, it is not efficient, nor is it objective, which is best shown by statistical data on the number of employees rated with the highest ratings.

Communicating the results of the work performance assessment, i.e. giving feedback increases the transparency and legitimacy of the entire evaluation process, because the fact that the process is not secret allows employees to identify weaknesses and question undeserved evaluations. In this context, respondents in the survey expressed their dissatisfaction with the communication and feedback they receive through evaluation.

The conducted research points to the inconsistent and improper application of the Rulebook on the evaluation of the work of civil servants in civil service bodies in the Federation of Bosnia and Herzegovina, as well as the Law on Employees in civil service bodies in the Federation of Bosnia and Herzegovina, by the evaluators.

The results of the research, that is, the results of the survey questions, point to the acceptance of the other two hypotheses from the paper, according to which:

H2: The evaluation system is not based on the performance measurement and reward system for civil servants and employees.

H3: Without a clear idea about the goal and purpose of evaluation, evaluation cannot be a tool for improving work processes.

Namely, the evaluators do not approach the entire evaluation process seriously enough, and the reason for the aforementioned actions of the evaluators is that the evaluation in the existing evaluation system is not connected to the reward and promotion system. According to the respondents, there is no high correlation between the existing evaluation system and professional development as well as the career path of employees in local self-government units, and evaluation is not used as a tool for improving work processes.The links between employee appraisals and organizational goals are often unclear, and it is critical that the process ensure that employees understand how their individual performance goals contribute to the overall performance of the organization. This direct connection contributes to the creation of joint responsibility and motivation of employees, which, according to the research results, was missing in the existing evaluation system.

In the opinion of the respondents, 59.43% of them believe that the set individual

work goals are not aligned with the strategic goals, that is, the work plan of the administrative body and strategic documents.

Also, by analyzing the opinions of the respondents, it is evident that the vast majority, as many as 91.59% of them, believe that clear and measurable work goals can significantly contribute to the improvement of work processes.

A key component of performance appraisal is a participatory environment and consensus on individual work goals prior to the appraisal itself. They highlight for employees the clarity and understanding of their contribution to the achievement of the goals of the organization as a whole and thereby determine the direction for future achievements and results. According to the research results, 72.22% of the respondents declared that their immediate superiors do not establish clear and measurable "agreed work goals" within the legal deadline, and even 76.15% of the respondents declared that they are not involved in all stages of evaluation - the process of determining work goals, giving opinions on proposed work goals.

H4 According to the research results, the fourth hypothesis, according to which evaluators in local self-government units do not continuously monitor the work of employees, which negatively affects the work performance of employees, is accepted.

Also, by analyzing the opinions of the respondents, it is evident that the vast majority, even 75.93% of them, think so that evaluators - immediate superiors, do not continuously monitor the work of employees, giving them advice and instructions, so that employees meet standards and improve their work performance.

The performance of employees is evaluated at least once every 12 months. During the regular evaluation cycle, the degree of fulfillment of work goals is evaluated quarterly. The deadline for evaluating the performance of employees is 30 days after the end of the period for which it is being evaluated. The immediate superior - the evaluator is obliged to continuously monitor the work of employees during the entire evaluation period, point out omissions and irregularities in the work by writing down and commenting on important examples and evidence of how the employee worked.

CONCLUDING REMARKS

This research work provides a theoretical and empirical overview of the impact of evaluation on the work performance of civil servants and employees in local self-government units in Bosnia and Herzegovina.Special emphasis was placed on the process of evaluating employees in local self-government units as a fundamental function for all other activities of the internal flow (pay system, mobility, advancement in the service, professional development, etc.).

The set goals of the research were fully achieved, and they showed that the existing evaluation system is not based on the performance measurement and reward system and that it does not have positive effects on the work performance of civil servants and employees, as well as that there is an evident avoidance of the application of the legal framework of the currently valid evaluation system in local self-government units in Bosnia and Herzegovina, by evaluators, i.e. superiors.

Namely, one of the main problems in Bosnia and Herzegovina is the insufficient management framework on which the assessment of the individual performance of employees in local self-government should be based. In the paper, one of the problems of the research is to find out whether and to what extent certain factors disrupt the

quality implementation of employee evaluation in local self-government units. Along this line, problems range from existing management tools in public administration (eg value for money, performance budgeting, QMS, etc.) to the weak practical application of those tools that have been introduced (strategic planning, establishing organizational goals). In a similar way, employee evaluation is only minimally (or not at all) horizontally connected with other HR functions, especially recruitment and training. This is additionally emphasized by the limited managerial responsibility, which in practice means that the managers are not sufficiently directed and committed to the achievement of the organization's results.

In such an unfavorable environment for management culture, employee performance appraisal (as one of the tools of performance management) is isolated and has an unclear purpose.

According to the constitutional organizational-territorial structure, local self-government units are closest to the citizens, who in today's turbulent environment have increasing demands towards the authorities. Due to the scope of work and the nature of their position, LGUs are continuously adapting to the needs of citizens, which requires motivated, professional and educated human resources. Human resources represent the most important factor of any organization. Today, municipalities are in a time of transition, i.e. at a turning point from a bureaucratic to a user approach where the primary goal must be efficient and effective satisfaction of the needs of its users.

Without prejudice to general legal provisions, local authorities must be able to determine an effective administrative structure with an effective organizational design to adapt them to local needs and ensure effective management.

The working conditions of employees in local self-government must be such that they enable the employment of high-quality staff based on clearly defined criteria, necessary competencies, experience and abilities. In addition, it is necessary to provide adequate opportunities for training and training, as well as prospects for advancement and a successful career. The efficiency and effectiveness of employees is directly proportional to the efficiency and effectiveness of local self-government.

Employee motivation is extremely important for the efficiency of processes in any organization, as well as for its effectiveness. One of the most important factors affecting employee motivation is the assessment of work results, that is, work performance.

In addition to by-laws such as the Rulebook on the Evaluation of Public Servants, the strategic management of human resources in the organization is very important. Strategic management of human resources implies systematic planning of the incoming, internal and outgoing flow of human resources. It is the evaluation of work performance, as well as the analysis and improvement of employees' competencies that directly affect the efficiency and effectiveness of the organization. The strategic purpose of the work efficiency monitoring system is reflected in connecting employees with the organization's goals.

Therefore, measuring the success of the organization is one of the major problems that HRM faces through its operations.

The general approach to managing the performance of employees in local self-government units in Bosnia and Herzegovina is not significantly different from management in other organizations. The basic difference stems from the very charac-

ter of public administration, i.e. its hierarchical way of organizing and the legal acts prescribed by state authorities.

The effective functioning of the performance evaluation system requires investing significant efforts in raising the level of knowledge about performance evaluation of both evaluators and staff involved in human resources management, as well as civil servants/employees themselves, who should be active participants in the evaluation process. Evaluation also requires the development of the highest degree of trust and continuous dialogue between the evaluated and the evaluator, as well as the achievement of the greatest possible transparency in the work. The goal is to understand assessment as a positive instrument development of civil service human resources.

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INSTRUCTIONS TO AUTHORS

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Upon the positive decision on publishing, and following proofreading and editing, the paper shall be submitted to the authors for their opinion and check prior to publication.

The author may, upon request, be issued with an appropriate confirmation of the status of his paper. The table "Structure and Form of Paper" provides detailed instructions to authors in relation to the technical layout of the paper, as well as to its recommended structure.

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Must include the title of paper, name of author, his/her academic title, name and address of institution where the author works, position and contact details in both Bosnian/Croatian/Serbian and English (if the paper is written in languages of the people of Bosnia and Herzegovina).

FIRST PAGE

Must include the title of paper, abstract, key words and JEL classification.

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a. If the paper is written in the languages of the people of BiH, the abstract will contain between 150 and 300 words. At the end of the paper, an extended summary (English version) is written behind the list of references, which should be 400-500 words long. The abstract is written in the third person, in one paragraph and must contain: (1) the aim of the research, (2) research methods, (3) the basic result of the research, and (4) the conclusion of the research.
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Key words are written in both languages of the people of BiH and English (if the paper is written in the languages of the people of BiH) and must contain the gist of the paper. Up to 5 key words should be provided.

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It should define the problem, subject matter and aim of research, as well as the motive for undertaking such research. The Introduction should also offer one or several hypotheses of the paper, which should be developed in the final chapter of the paper – the Conclusion. The Introduction ends with the description of the paper's structure.

[1] Depending on the specifics of the topic, and in agreement with the Editorial Board, the paper may be conceptualized differently.

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Methodology must be described clearly and precisely, the methodological contribution of authors (if available) must be established and it must all be done in a fashion that it allows for its testing by other authors.

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Empirical evidence represents the documentation background to the research conducted.

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Results and discussion represent part of the paper in which results of the research conducted are explained and compared to similar research, the limits of the interpreted results are analysed, as are their significance and potential implications.

6. Conclusion

Conclusion is the final chapter of the paper. It should not be confused with the paper's abstract. It should contain the elaboration of the original hypothesis, the evaluation of the results of research, its contri- bution, the overview of limitations and problems relative to research implementation, the guidelines for future research, the recommendations stemming from the results of research etc. As is the case with abstract, the Conclusion should be contained in one paragraph.

LITERATURE

The list of literature should be provided at the end of paper, and it should only contain those titles which are referred to by the author throughout the text. It should be provided in the alphabetical order of the last name of authors of the mentioned works with no classification per types, and data on the work must be complete, in accordance with the standards of bibliography. If several works of the same author have been published in the same year, the year should be accompanied by designations "a,b,c".

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Chapters in books/papers in the collections of papers: last name, initials of the first name. (year) Title of chapter/section'. In: Title of book, last name, initials of the first name of author/editor. Place of publication: publisher: pages. (if there are two or three authors, their last names and initials should be listed in order, separated by a comma).

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