

EKONOMIKA A MANAŽMENT

Vedecký časopis Fakulty podnikového manažmentu
Ekonomickej univerzity v Bratislave



ECONOMICS AND MANAGEMENT

Scientific Journal of the Faculty of Business Management,
University of Economics in Bratislava

Ročník XXI.

Číslo 2

Rok 2024

ISSN 2454-1028

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<https://fpm.euba.sk/veda-a-vyskum/vedecky-casopis/ekonomika-a-manazment>

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Vedecký časopis Fakulty podnikového manažmentu Ekonomickej univerzity v Bratislave zaregistrovaný na Ministerstve kultúry Slovenskej republiky dňa 26. júna 2003, evidenčné číslo 1577/08. ISSN 2454-1028 pridelené Národnou agentúrou ISSN, Univerzitná knižnica v Bratislave, Michalská 1, 814 17 Bratislava dňa 28. 4. 2017, č. j. 124/2017.

Časopis vychádza 3 krát ročne ako online recenzovaný open access vedecký časopis.

Vydavateľ

Nadácia Manažér, Dolnozemska cesta 1/b, 852 35 Bratislava, IČO 31812562.

Dátum vydania tohto čísla: 30. 10. 2024

ISSN 2454-1028



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Ekonomická univerzita v Bratislave
Fakulta podnikového manažmentu

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OBSAH (CONTENTS)

VEDECKÉ PRÍSPEVKY (SCIENTIFIC CONTRIBUTIONS)

Eva Jelínková, Marta Nosková, Petra Špačková
Identifying the testing possibilities for the relationship between ESG and business performance **9**

Katarína Grančičová, Dana Hrušovská
Spotrebiteľské správanie na Slovensku v kontexte udržateľnosti
Consumer Behavior in Slovakia in the Context of Sustainability **22**

PRÍSPEVKY DO DISKUSIE (CONTRIBUTIONS TO THE DISCUSSION)

Zuzana Skorková
The Hirsch Index: A Metric of Success or a Source of Controversy in Academic Evaluation? **39**

Zuzana Dzilská
Rozvoj ľudských zdrojov prostredníctvom online platforiem v post pandemickej ére
The Development of Human Capital through Online Platforms in the Post-Pandemic era **52**

Miroslav Tóth
Printed Media – Newspaper and Magazines in a Digital World **66**

VEDECKÉ PRÍSPEVKY

SCIENTIFIC CONTRIBUTIONS

Identifying the testing possibilities for the relationship between ESG and business performance

Eva Jelínková, Marta Nosková, Petra Špačková

Abstract

The paper aims to map the area of ESG and its impact on business performance via systematic literature review and apply the findings to the Czech environment. The research questions are stated and answered via systematic literature review of articles indexed in the Web of Science database. The results show that the data for the existing research come from third-party databases that have created their methodologies for establishing ESG scores or ratings. The data in research papers are from large market-listed enterprises or directly from stock market indicators. The hypotheses of all the analyzed papers were tested using statistical tools, and the positive relationship between ESG and financial performance was proven, except for the banking sector. The findings of this research are applied to the Czech environment, a research question for empirical research is developed, and possible directions are suggested for further research activities in this area.

JEL classification: M 14

Keywords: ESG score, business performance, Covid, relationship

1 Introduction

The recession triggered by the Covid pandemic and subsequently deepened by the invasion of Ukraine, which has evolved into a war lasting already more than two years, is reflected in the economic situation of businesses, institutions and entire national economies across the globalized world. The crucial question is: What will enable businesses to withstand the crisis and maintain stable performance despite such significant external impacts from the macro-environment? One option that can help businesses is taking a sustainable direction and implementing care for ecological, social and government activities, i.e. ESG, into their business activities. ESG is an extension of Corporate Social Responsibility (CSR) and Socially Responsible Investment (SRI) and is globally understood as one of the main pillars of sustainability. In addition, relatively recently, following the approval of the European Parliament and the Council's Corporate Sustainability Reporting Directive (valid as of 5 January 2023), the number of companies that will have to provide information regarding sustainability has been significantly expanded. More detailed reporting requirements have also been introduced concerning companies' impacts on the environment, human rights, social standards and sustainability-related risks, i.e. ESG reporting. The obligation will apply to all large companies, and small and medium-sized companies listed on the stock exchange. ESG very clearly represents an urgent step towards a sustainable economy and sustainable development; however, it remains unclear how to assess or quantify each company's level of ESG and what impact companies' positive approach to ESG has on their financial performance. For this reason, this paper aims to map the area of ESG and its impact on business performance via systematic literature review of papers contained in the Web of Science database and apply the findings to the Czech environment.

The structure of the paper is as follows: First, the strategy for conducting systematic literature review is outlined, including establishing research questions and defining the article sourcing protocol. Subsequently, using Pareto's 80/20 rule applied according to the frequency of each paper's citations, the final number of papers that are subject to further research via

abstract analysis is selected. Based on the abstract analysis, the relevance of the paper is evaluated based on the criteria of interest, i.e. whether the paper is related to the relationship between ESG and business performance; whether it is original data-driven research; whether the abstract lists information on the performance indicator, the studied period, dataset and research design, and whether the paper examines performance during the crisis. Based on an assessment of whether these criteria are met, the articles are categorized into four areas of relevance, i.e. yes, likely yes, no and likely no. The 11 articles assessed as relevant (yes category) become the subject of the following step of the research, the content analysis. The content analysis aims to find answers to the established research questions for the second area, which encompasses the method in which ESG activities are measured, the method of exploring the relationship between ESG activities and business performance, and whether this relationship is confirmed or refuted. In conclusion, the findings are summarized and discussed, a research question for empirical research is developed and further research activities are suggested in the studied area.

2 Research Design

Determining the current state of knowledge is done via systematic literature review (SLR). SLR overcomes the shortcomings of traditional types of literature review such as subjectivity, bias, lack of rigor or a limited number of reviewed papers (Ahmad et al., 2020; Tranfield et al., 2003). The procedure for conducting SLR is formed by a combination of the authors' previous procedures (Manoharan & Singal, 2017; Tomašević, Stojanović, Slović, Simeunović, & Jovanović, 2020) and carried out in four phases: keyword definition; database definition and article sourcing protocol; search for papers; and data analysis of the created portfolio.

The SLR will utilize resources available in the WoS database, which is considered to be the world's most trustworthy global citation database independent of publishers. The search will be carried out based on the search protocol listed in Table 1 and will be limited to the title of the source, abstract and keywords, i.e. "topic". The first step of SLR is to formulate specific research questions that will be answered in the conclusion. For this study, specific research questions were set in two steps - for basic and detailed searches. The basic search maps the topic of ESG and its impact on business performance in general without considering the further refining inclusion criteria of the SLR in order to gain comprehensive insight. The main research question for this area is: What are the characteristics of scientific literature concerning ESG in relation to business performance? The specific research questions are as follows:

- How have publications in the researched area of the relationship between ESG and business performance evolved and what types of publications are these?
- In which research areas and categories of WoS does this topic appear?
- Which countries do the published papers come from?

The detailed search focuses on a specific research direction and incorporates into the SLR process additional inclusion criteria refining the requirements for final SLR outputs. These criteria include the article document type; WoS categories of Business Finance, Business, Management; and the Business Economics area of interest. In addition, the year of publication has been set as 2021 and later due to the interest in post-Covid era outputs in order for Covid pandemic-era data to be included in the published outputs. The research questions in this area are:

- How are ESG activities measured?
- How is the relationship between ESG activities and the financial performance of a company measured?

- Is this relationship confirmed/refuted?

The systematic literature review aims to analyze current literature and provide answers to these questions.

Table 1

Article sourcing protocol

Database	Web of Science
Publication year	No restrictions (for basic search), respectively (for detailed search) 2021
Search field	Topic, i.e. title, abstract, keywords, keywords plus
Search string combination	"ESG" OR "Environmental, Social and Governance " AND "business performance" OR "corporate performance" OR "financial performance" OR "measuring ESG performance" OR "stock performance"
Search date	17 April 2023
Inclusion criteria	Article document type, WoS categories of Business Finance, Business, Management, area of interest Business Economics

Source: own source, 2023.

The article search itself was carried out according to the criteria above as of 17 April 2023. The search results were exported into MS Excel using the Export Records to Excel, All Records on Page and Record Content Full Content options. This method of reporting makes it possible to obtain search results including article abstracts, number of citations, year of publication and other criteria that are important for the following steps of the analysis. Because only one database was used, no duplicities (which would otherwise have to be removed in this step) were created during the search. The gathered data was further processed in order to obtain answers to the set research questions. Thus, as the first step, the complete database of papers containing 709 outputs was processed. Subsequently, papers from the second detailed search including all inclusion criteria (see Table 1) and publication year 2021 and newer were processed, resulting in 213 outputs. In regard to the fact that the process of searching, categorizing and reading the literature is time consuming (Antony et al., 2021) and it is ineffective to include all sources in the analysis, the Pareto principle of 80/20 was applied while taking into account the frequency of each paper's citations – i.e. 80% of the citations account for 20% of the papers. These papers are the subject of the next step of research – the abstract analysis. The Pareto principle – specifically the Pareto principle per publisher/journal – has been used in a similar way by e.g. (Antony et al., 2021; Psomas & Antony, 2019). Times cited, WoS score was chosen as an indicator of the significance of the paper or published topic. Citations are a means for measuring the attention and acknowledgment of a paper on a published research topic; they are a basic metric for authors and researchers, and it is assumed that the higher the number of citations the published research has, the more attention it deserves (Menegaki et al., 2021). Based on the abstract analysis, papers are screened in terms of quality and relevance; unsatisfactory articles are excluded and satisfactory ones become the subject of the next step of the research, i.e. content analysis, which will make it possible to answer the specific research questions established for the second area.

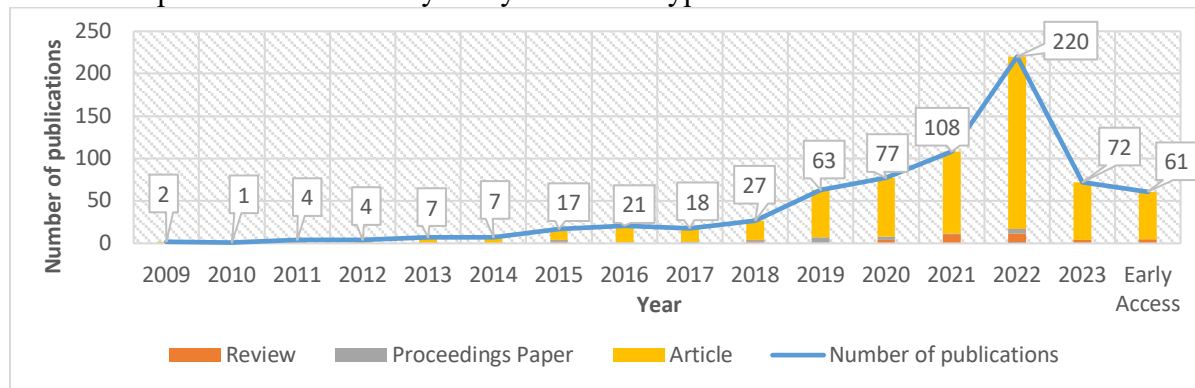
3 Research Results

Out of the total of 709 publications from the whole period, Article type publications predominate (641). In 2015, 2017 and 2022, there was always one paper both – an article and a proceedings paper (included in the Article category); in 2022, there was one Editorial Material published, and in total there were 5 review-type documents published over the whole period.

The first two papers date back to 2009; since then, an increasing trend can be observed, with a peak in 2022 at 220 papers; for 2023, 72 papers were published as of the date of the SLR, and another 61 are available in Early Access mode.

Figure 1

Number of publications in each year by document type

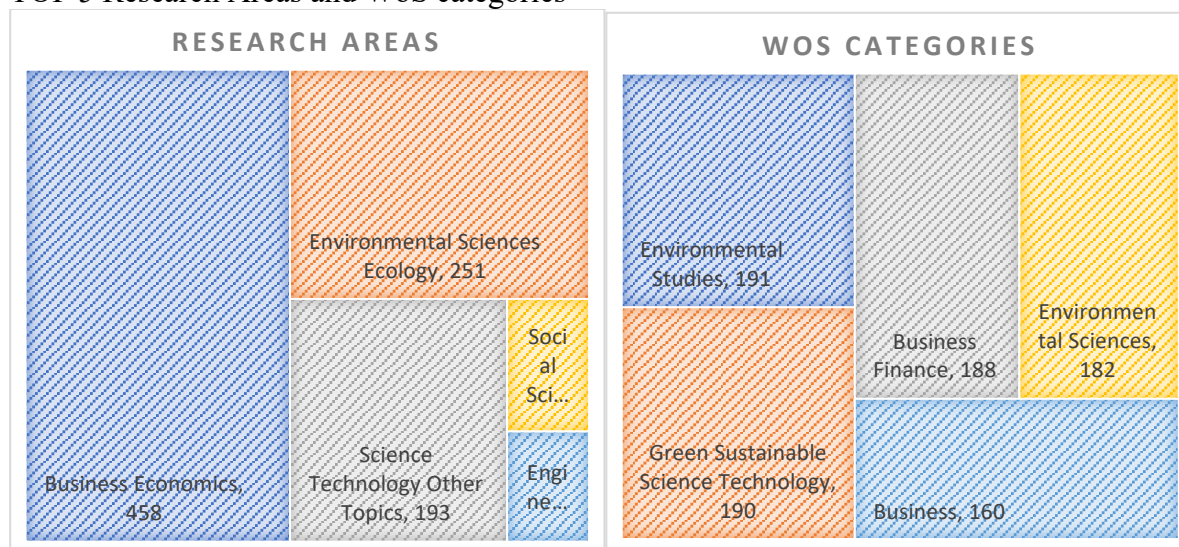


Source: own source, 2023.

Figure 2 shows the number of publications according to research areas and WoS category. With a clear predominance of 64.5% (458), papers appear in the research area of Business Economics; the second category is Environmental Sciences Ecology (251; 35.4%); and the third is Science Technology Other Topics (193; 27.2%). The fourth category is Social Sciences Other Topics (40; 5.6%) and the fifth is Engineering (33; 4.6%).

Figure 2

TOP 5 Research Areas and WoS categories



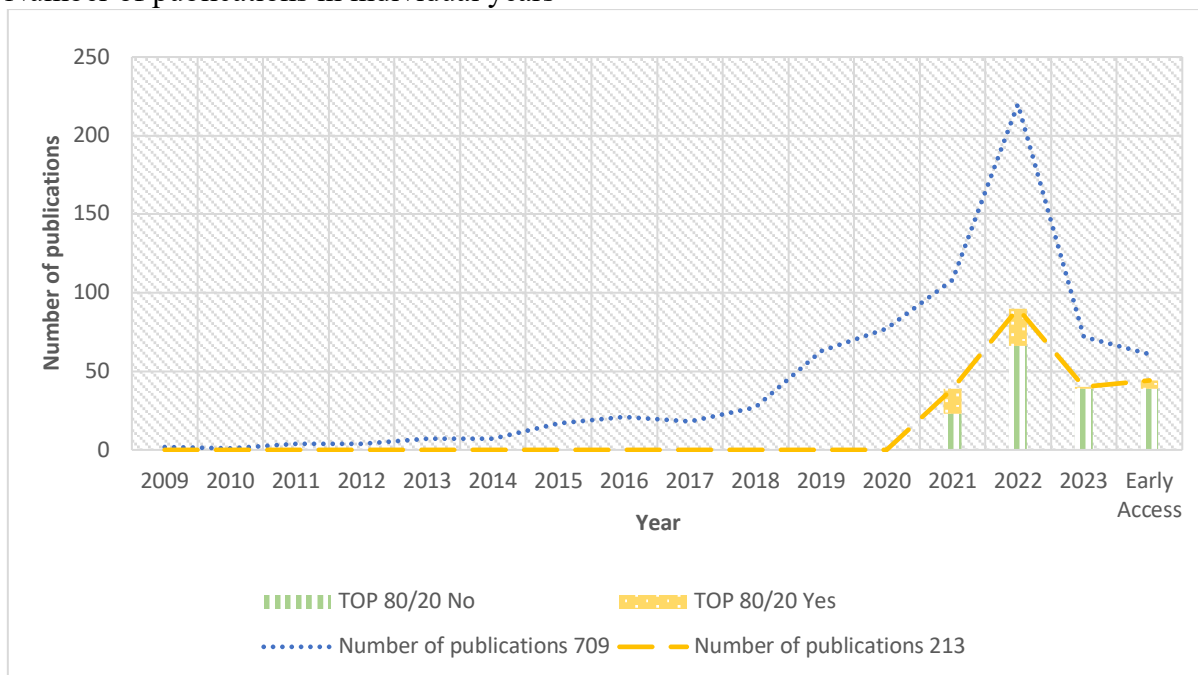
Source: own source, 2023.

When divided up according to WoS categories, it is evident that this topic dominates in the areas of environment and sustainability, specifically Environmental Studies (191; 26.9%) and Green Sustainable Science Technology (190; 26.8%) in first and second place respectively, and Environmental Sciences (182; 25.6%) in fourth place. Third and fifth place is held by economic specializations, specifically Business Finance (188; 26.5%) and Business (160; 22.6%). The Management category (154; 21.7%) is in sixth place. In terms of country of origin, most entries come from the USA (97; 13.7%), followed by the People's Republic of China (78; 11%) and the United Kingdom (65; 9.2%). Four entries come from the Czech Republic (0.56%).

The search was refined using inclusion criteria, which were: article document type; WoS categories of Business Finance, Business, Management; Business Economics area of interest; and year of publication as 2021 and later, making it possible to observe a trend in the number of publications that to some degree copies the trend from the previous part of the research (see Figure 3).

Figure 3

Number of publications in individual years

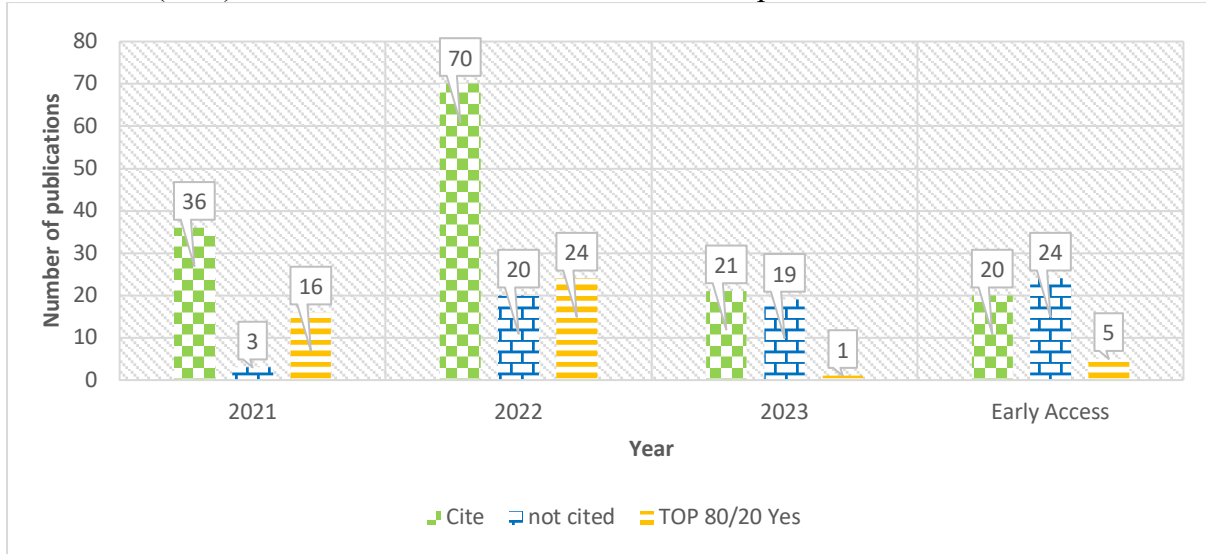


Source: own source, 2023.

At the same time, Figure 3 shows the output from the Pareto principle applied to the indicator of the significance of the paper or the published topic, and therefore times cited, WoS score was chosen. Upon closer examination, it is clear that the 80% of citations are formed by papers counted into the first 46 most-cited papers according to the WoS score out of a total of 213 papers, i.e. 21.6% of the papers, confirming the Pareto principle. Out of the total of 213 papers, 147 were cited at least once; the remaining 66 have not yet been cited. The specific distribution of (non-)cited articles and articles belonging to the TOP80/20, i.e. the next steps of research, in each year is shown in Figure 4. It is interesting to note the number of papers that are in early access mode but have already become a source for further scientific and research activity; out of a total of 44 articles, 20 have already been cited at least once and 5 belong to the 21.6% of most-cited articles; an increase in the number of citations can naturally be expected for all published papers.

Figure 4

Number of (non-)cited and TOP80/20 contributions in the period under review



Source: own source, 2023.

The abstract analysis focuses on evaluating whether the paper concerns the relationship between ESG and business performance; whether it is original data-driven research; whether the abstract provides information on the performance indicator, period of study, dataset and research design; and whether the paper examines performance during the crisis. If the abstract fulfilled all the criteria, the article was labelled “yes”, i.e. relevant; if it did not fulfill the first two criteria, it was labelled “no”, i.e. not relevant for the next step of the research; if it fulfilled the first two criteria but did not meet any of the others, it was labelled “probably yes” or “probably no” (depending on the number of criteria that were fulfilled). Papers that were rated as relevant based on the abstract analysis (yes category) were the subject of the content analysis.

4 Findings

Findings from the content analysis of the 14 most relevant articles listed in Table 2 are summarized below. The goal of the content analysis was to use the papers to find answers to the research questions concerning methods of measuring ESG activity, the relationship between ESG activities and business performance and confirming/refuting this relationship.

Table 2

Most relevant papers for content analysis

Article Title, Authors	Source Title
The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China (Broadstock et al., 2021)	FINANCE RESEARCH LETTERS
Corporate controversies and company's financial performance: Exploring the moderating role of ESG practices (Nirino et al., 2021)	TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE
Sustainable development, ESG performance and company market value: Mediating effect of financial performance (Zhou et al., 2022)	BUSINESS STRATEGY AND THE ENVIRONMENT
Does responsible investing pay during economic downturns: Evidence from the COVID-19 pandemic (Omura et al., 2021)	FINANCE RESEARCH LETTERS
ESG disclosure and financial performance: the moderating role of ESG investors (Chen & Xie, 2022)	INTERNATIONAL REVIEW OF FINANCIAL ANALYSIS
Environmental, social, and governance factors in emerging markets: The impact on business performance (Bahadori et al., 2021)	BUSINESS STRATEGY AND DEVELOPMENT
Banks and environmental, social and governance drivers: Follow the market or the authorities? (La Torre et al., 2021)	CORPORATE SOCIAL RESPONSIBILITY AND

	ENVIRONMENTAL MANAGEMENT
Does a Board Characteristic Moderate the Relationship between CSR Practices and Financial Performance? Evidence from European ESG Firms (Rossi et al., 2021)	JOURNAL OF RISK AND FINANCIAL MANAGEMENT
Do sustainability practices influence financial performance? Evidence from the Nordic financial industry (Rahi et al., 2022)	ACCOUNTING RESEARCH JOURNAL
How do Stock Market Participants Value ESG Performance? Evidence from Middle Eastern and North African Countries (Al-Hiyari & Kolsi, 2021)	GLOBAL BUSINESS REVIEW
Investigating the marginal impact of ESG results on corporate financial performance (Bruna et al., 2022)	FINANCE RESEARCH LETTERS
Changes in Corporate Social Responsibility and Stock Performance (Tsai & Wu, 2022)	JOURNAL OF BUSINESS ETHICS
When ESG meets AAA: The effect of ESG rating changes on stock returns (Shanaev & Ghimire, 2022)	FINANCE RESEARCH LETTERS
Are firms with better sustainability performance more resilient during crises? (Lu et al., 2022)	BUSINESS STRATEGY AND THE ENVIRONMENT

Source: own source, 2023.

Methods of measuring ESG activities

This question was aimed at finding out how ESG is measured; whether any ratings, scores or indexes are used; or whether the level of ESG is measured e.g. by using an evaluation questionnaire developed by the researchers themselves. All the papers reviewed were found to have used data provided by third parties.

In China, data can be obtained from SynTao Green Finance, which has created its own ESG rating that synthesizes information on companies' ESG from public sources including annual reports, sustainability reports, corporate social responsibility reports, environmental reports, announcements and official websites. The rating framework has three layers. The primary layer covers the dimensions of Environmental (E), Social (S) and Governance (G). The secondary layer covers 12 criteria supporting ESG, including environmental management, environmental disclosure and environmental controversies (under E), employees, supply chain, community, products, philanthropy and social controversy (under S) and business ethics, corporate governance and disputes in governance and management (under G). The final layer reflects 300+ tertiary criteria created from roughly 1,000 data points. Each score is made up of a combination of core indicators shared by all companies and sector-specific indicators that relate only to companies in a given sector. The ESG score is adjusted downward based on company-specific controversies stemming from company communication, announcements from regulators concerning penalties, media articles/news reports and research by non-governmental organizations. These revisions and downward adjustments distinguish the SynTao's ESG score as a measure of ESG performance, not just ESG disclosure scores. The data were used in papers by authors Broadstock et al. (2021) and Zhou et al. (2022). These data are available in the WIND database, which was also utilized by authors Chen & Xie (2022).

Another source not only for ESG but also for economic and financial indicators is Thomson Reuter's Datastream database. Here, ESG controversy data is based on a controversy score, which is measured based on the number of controversies relating to environmental, social and governance issues as well as other negative events that companies faced during the year. According to Thomson Reuters, the ESG controversy score is calculated based on 23 ESG controversy topics. If a scandal occurs over the course of the year, the company involved is penalized, affecting its overall score. Data on sustainable practices are based on the ESG score. The overall ESG score takes three types of elements into account: environmental, social and governance. The environmental score includes factors such as water waste, pollution, use of

green energy, impact on biodiversity, etc. The social score is based on concerns regarding community and human rights that are both internal and external to the company. Finally, the governance score takes into account variables related to management, composition of the board of directors and remuneration. Authors Bruna et al. (2022), Nirino et al. (2021) and Rossi et al. (2021) drew from this database.

Another database from Thomson Reuters that offers not only financial data but also ESG scores is the Thomson Reuters Eikon database, also known as Refinitiv Eikon. Each company's annual ESG score ranges from 0 to 100 and is calculated by weighing up more than 400 company-level ESG measures, from which they have carefully selected a subset of the 178 most relevant and comparable data points determining overall company performance. The ESG scores in the Thomson Reuters Eikon database are designed to be an objective and transparent measure of a company's ESG performance, which shows how engaged and competent the company is in three components and 10 fundamental themes (emissions, green product innovation, human rights, shareholder rights, etc.) based on information that the company itself reports. Data from this database was extracted for papers by Al-Hiyari & Kolsi (2021), Bahadori et al. (2021), La Torre et al. (2021) and Lu et al. (2022).

Refinitiv DataScope is another database used by authors Omura et al. (2021) to examine performance from a different perspective, i.e. according to annualized returns, the Sharpe ratio, and abnormal revenue from responsible investing before and during the COVID-19 pandemic. They also analyze the performance of ESG ETFs traded on the US market and the MSCI SRI net return indexes for the world, US, Japan and Europe. MSCI indexes were also used by authors Shanaev & Ghimire (2022). Authors Tsai & Wu (2022) gained US data from the MSCI ESG database (formally known as KLD Research & Analytics). Economic and accounting data were often drawn from the Bloomberg database (e.g. Broadstock et al., 2021; Chen & Xie, 2022; La Torre et al., 2021). The ESG data gained from all databases are, in most papers, data from stock-market listed companies or came directly from stock market indicators.

The method of examining the relationship between ESG activities and business performance

Due to the nature of the gathered data, i.e. information on the value of ESG scores obtained from third parties from the databases mentioned above, the hypotheses that were created for all the analyzed papers were tested using statistical tools. Authors Broadstock et al. (2021) test the internal validity of their assumption that ESG factors have a relatively greater significance in the times of crisis caused by Covid within a multi-factor empirical model of asset pricing.

Furthermore, the hypotheses were tested using panel regression analysis (Bahadori et al., 2021; Omura et al., 2021); via the ordinary least square (OLS) model (Nirino et al., 2021; Rossi et al., 2021); and also using the Pearson correlation test (Al-Hiyari & Kolsi, 2021; Bahadori et al., 2021; Rahi et al., 2022; Zhou et al., 2022) and the variance inflation coefficient (VIF) test (Zhou et al., 2022). As well the Hausmann test was used to test the regression model (La Torre et al., 2021; Zhou et al., 2022). Chen & Xie (2022) used benchmark regression using a two-way DID technique with fixed effects (TWFE).

Confirmation/refutation of the relationship

The positive and significant effect of ESG performance on financial performance was proven by most papers. Some papers used stock market indicators to examine the relationship (Broadstock et al., 2021; Omura et al., 2021; Shanaev & Ghimire, 2022), while the remaining papers measured financial performance using standard financial indicators such as ROA, market value, etc. Broadstock et al. (2021) show that ESG performance is positively associated with the short-term cumulative returns of CSI300 stock during the COVID-19 crisis. Their results are consistent with the view that investors may interpret ESG performance as a signal

of future stock performance and/or risk mitigation in times of crises. They call it a weak form of the corporate immunity hypothesis, but not total immunity, as the results document relative resilience to financial risk during times of financial crisis thanks to high-performing ESG stocks. The findings of Omura et al. (2021) support the hypothesized outcome of the ESG effect that SRI investments outperformed conventional investments during the downturn of the COVID-19 period. They confirmed that the outperformance of SRI indices increased during the pandemic period. Shanaev & Ghimire (2022) documented the importance of ESG rating changes rather than ESG rating levels for stock performance. While ESG rating upgrades are associated with relatively small and sometimes insignificant positive abnormal returns, downgrades are consistently detrimental for stock performance, leading to statistically and economically significant negative abnormal returns at -1.0% to -1.4% per month. The effects are much more prominent among ESG leaders than in companies that lag behind in terms of ESG, suggesting that performance differences are associated with institutional investors using best-in-class positive screening. However, ESG rating upgrades demonstrate a very pronounced positive effect during the COVID-19 period, which can potentially be explained by resilience signaling or increased use of ESG ratings by individual rather than institutional investors.

Bahadori et al. (2021) proved that the presence of ESG activities is contributing to the ROA-measured financial performance of companies operating in emerging markets. Tsai & Wu (2022) also published findings that improvement in overall corporate social responsibility activities is generally value-enhancing.

Lu et al. (2022) found a positive bidirectional relationship that companies with better sustainability performance are more profitable in the future and those with better financial performance have higher subsequent sustainability performance. Their findings also proved that companies with strong sustainability performance were more resilient during the COVID-19 crisis and their financial performance dropped less than in companies with poor sustainability performance.

Rossi et al. (2021) indicated a positive effect between CSR practice and business performance. Higher financial performance is experienced by companies that are more involved in CSR operations.

The topic of corporate controversies is highlighted by Nirino et al. (2021), who proved the negative and significant relationship between corporate controversies and financial performance. They proved that even if a company invests in ESG practices, its performance is negatively affected by corporate controversies.

Bruna et al. (2022) analyze the impact of companies' high and low ESG performance on their financial performance with special consideration for the role of company size as a moderator in the relationship between ESG performance and business performance. The overall positive and significant impact of total ESG on market value is indicated. High ESG companies perform better than ones with low ESG. Firm size also moderates the relationship between ESG and business performance.

Zhou et al. (2022) prove that an improvement in the ESG performance of listed companies is conducive to enhancing the company's market value. Their results show the complete mediation effect for listed companies whose actual controller is not state-funded and no mediation effect for listed companies that are state-funded. The issue of funding seems to play an important role. Al-Hiyari & Kolsi (EA) proved a significant positive association between companies' market value and their ESG performance scores. This result suggests that ESG performance scores convey value-relevant information for market participants in the stock markets. The results of Chen & Xie (2022) show that ESG disclosure improves corporate

financial performance. ESG disclosure has heterogeneous effects on financial performance, and the effect of ESG disclosure is greater in companies with ESG investors and companies with longer history, high media attention and high agency costs. An examination of the moderating effect of heterogeneous ESG investors proved that the greater the shareholding of ESG investors, the more pronounced the effect of ESG disclosure on financial performance. ESG investors play a positive moderating role.

Negative findings are found in two papers from the banking and financial sectors: (La Torre et al., 2021; Rahi et al.). La Torre et al. (2021) tested the motivation of banks to undertake voluntary ESG practices and investigated the presence of sufficient stimuli for the management in the market to be spontaneously ESG-oriented with the assumption that the presence of a positive and verifiable relationship between ESG performance and corporate financial performance would mean that bank management finds strong incentives to adopt such conduct, including selecting sustainable projects. Thus, a virtuous circle would be set in motion to drive banks (as companies themselves) to see their sustainability-driven projects funded. The results do not seem to provide a strong indication of incentives in terms of profitability to direct bank management towards ESG practices when adopting a short-term vision. According to the authors, regulatory impulses can help to trigger the virtuous circle that leads bank managers to a long-term vision consistent with sustainable growth. Another finding from the financial sector by Rahi et al. (2022) indicates a negative relationship between total ESG performance and financial performance measured by ROIC, ROE and EPS. Based on the rational financial perspective, there is a risk that firms in financial sector would choose not to adopt sustainability practices, as this follows a logic that contradicts purely economic rationale.

5 Discussion and Conclusion

The aim of this paper was to map the area of ESG and its impact on business performance and to answer the research questions using a systematic literature review of papers contained in the Web of Science database.

The specific research questions were established in two areas, the first of which was to map the topic in general regardless of other SLR filtering criteria in order to gain comprehensive insight into the chosen topic. The results showed that Article type publications dominate throughout the whole period, with 641 out of a total of 709 papers. The oldest papers date back to 2009; since then, an increasing trend can be observed with a peak in 2022, when 220 papers were published. For 2023, 72 papers were published (given the date that the SLR was carried out, i.e. April 17, 2023), with another 61 papers available in Early Access mode. Papers appear in the research area of Business Economics with a clear majority of 64.5% (458); the second category is Environmental Sciences Ecology (251; 35.4%), and the third is Science Technology Other Topics (193; 27.2%). When divided up by WoS category, it is evident that this topic dominates in the areas of Environment and Sustainability, specifically Environmental Studies (191; 26.9%) and Green Sustainable Science Technology (190; 26.8%) in first and second place respectively and Environmental Sciences (182; 25.6%) in fourth place. Third, fifth and sixth places are economics-oriented, specifically Business Finance (188; 26.5%), Business (160; 22.6%) and Management (154; 21.7%). The majority of papers come from the USA (97; 13.7%), followed by the People's Republic of China (78; 11%) and the United Kingdom (65; 9.2%).

The second set of specific research questions included refined inclusion criteria specifying the requirements for final SLR outputs. These criteria include the Article document type; WoS categories of Business Finance, Business and Management; and the Business Economics area of interest. Furthermore, the publication year is set as 2021 and later due to interest in post-Covid outputs so that data from the Covid period is more likely to be included in published

outputs. From the original 709 papers, 213 are relevant to the second area. In order to make research work more effective, the Pareto 80/20 rule was applied according to the frequency of each paper's citations, and 47 papers were subject to abstract analysis, which focuses on assessing whether the paper contains criteria that are relevant to research, i.e. whether it deals with the relationship between ESG and business performance; whether it is original data-driven research; whether the abstract provides information on the performance indicator, the period under study, dataset and research design; and whether the paper examines performance during the crisis. Papers with all of this information were subjected to a content analysis (11 papers). The content analysis sought out answers to the established research questions, the method of measuring ESG activities, how the relationship between ESG activities and business performance was examined, and whether this relationship was confirmed or refuted. The results show that there is a growing interest in the area of ESG performance and the relationship between ESG performance and business performance.

The findings illustrate that the data for researching the relationship between ESG and financial performance come from third parties that have created their own methodologies for determining ESG scores or ratings. In China, data can be obtained from SynTao Green Finance via the WIND database, while the Thomson Reuter's Datastream and Thomson Reuters Eikon are available in Europe. The Refinitiv DataScope database provides investment indexes. In most papers, ESG data extracted from all databases are those of stock-market listed companies or directly from stock market indexes. Due to the nature of the gathered data, i.e. information on the value of ESG scores gained from third parties, the hypotheses of individual papers were tested using statistical tools, the most common of which was testing the created models using panel regression analysis, the OLS model, Pearson's correlation test or the Hausmann test. Most papers proved the positive and significant effect of ESG performance on financial performance, with the exception of the banking and financial markets (La Torre et al., 2021; Rahi et al., 2022).

The practical impacts of the research findings for the direction of future research activities in the Czech Republic are limited, primarily because there is no available database that contains information on the ESG scores of Czech companies. One possibility for future research is the development of a unique rating model that would allow for the evaluation of companies in the area of ESG regardless of their size and legal obligation to publish ESG reports. Another possibility would be to develop an ESG report that could be used to automatically evaluate a company's ESG score (e.g. using artificial intelligence). Without information on the ESG score, it is impossible to effectively conduct empirical testing on the relationship between ESG and business performance. One of the most relevant options for empirical testing that can currently be performed in the Czech Republic is utilizing the Czech Association of Social Responsibility, which has long been dealing with the fields of CSR and ESG. The Association brings together a representative sample of companies across the business spectrum in the Czech Republic, from small and medium-sized enterprises to large companies or enterprises in the non-profit sector and, to date, the Association has 514 members. Therefore, for the purposes of future research, it should be assumed that if an enterprise is a member of the Association of Social Responsibility, it is because it is led to do so by socially responsible behavior and a commitment to fulfilling ESG principles, and this fulfillment should result in a higher ESG score than an enterprise that is not a member of the Association. Based on the findings of this paper, the presumption that ESG positively affects financial performance and helps to mitigate the impacts of the crisis was confirmed. Thus, Association members should experience less fluctuation in financial performance during the Covid crisis than other companies. The research question would then be as follows: Are Association members more financially resilient during crises than other companies? Answering this question will be the subject of further empirical research.

The suggested research overcomes the limitations of the research carried out so far, especially the limitation of listed companies, company size and forms of governance.

Acknowledgements

This paper was created within the project “2021-1-CZ01-KA220-HED-000031187 ESGs! Sustainable Development Goals in education and in action!”.

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Spotrebiteľské správanie na Slovensku v kontexte udržateľnosti Consumer Behavior in Slovakia in the Context of Sustainability

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Abstract

Sustainability, which is defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs, is essential across the entire spectrum of society. A crucial part of this is sustainable/responsible consumer behavior. In line with this, the aim of this article is to present the current state and development of the attitudes of Slovak consumers towards issues of sustainable consumption and production (eco-consciousness of Slovak consumers) based on a conducted survey, and to outline possible directions for improving developments in the studied area based on the findings. The survey findings indicate a positive but insufficient development in the studied area, which creates room for proposals directed at various entities and into various areas, particularly towards increasing awareness and interest in the studied issue and involving as many entities as possible in addressing sustainable production and consumption.

JEL classification: D11, M31, M14

Keywords: sustainable consumption, consumer purchasing behavior, Slovak consumer

1 Úvod

Súčasný závažný zmeny v oblasti životného prostredia a existujúce environmentálne problémy si vyžadujú, aby aj podnikové aktivity boli zamerané na trvalo udržateľný rozvoj. Je preto potrebné pri plánovaní a realizácii podnikovej činnosti klásť veľký dôraz na snahu minimalizovať vplyvy svojej činnosti na životné prostredie - znížiť materiálovú aj energetickú náročnosť podnikových procesov, riešiť problematiku odpadového hospodárstva, úspory zdrojov, zavádzanie environmentálnych manažérskych systémov a pod. Významnú úlohu v tejto problematike do značnej miery zohráva aj spotrebiteľ a súčasný vzorec jeho správania. Tie je potrebné meniť a usmerňovať práve v kontexte udržateľnej výroby a spotreby. Z uvedených dôvodov sa táto problematika stala základnou témou výskumu, ktorého časť je prezentovaná v uvádzanom článku. Predmetom prezentovanej časti výskumu je predovšetkým pohľad na problematiku spotrebiteľského správania v kontexte udržateľnosti, na tzv. eko-cítene spotrebiteľa a v nadväznosti na to zisťovanie úrovne znalosti a záujmu slovenského spotrebiteľa v otázkach udržateľnej spotreby a výroby.

2 Súčasný stav riešenej problematiky doma a v zahraničí

Udržateľná spotreba predstavuje spotrebu produktov takým spôsobom, ktorý zabezpečí uspokojovanie potrieb spotrebiteľov bez ohrozenia uspokojovania potrieb ostatných spotrebiteľov, súčasných, aj budúcich. Takáto spotreba sa nepodieľa na degradácii životného prostredia a nespôsobuje problémy s nižšou mierou uspokojenia ďalších zákazníkov.

Zabezpečenie udržateľnej spotreby patrí v súčasnosti k celosvetovým cieľom a tiež k základným prioritám Európskej Únie (EÚ) a vlád jej jednotlivých členských štátov. V záujme realizácie výzvy „dosiahnuť viac s menej zdrojmi“ EÚ zaviedla celý rad politík a iniciatív so zameraním sa na udržateľnú výrobu a spotrebu. Opatrenia EÚ sa v tejto oblasti zameriavajú na 4 hlavné ciele: kvalitnejšie produkty, rozumnejšiu spotrebu, hospodárnejšiu a čistejšiu výrobu a podporu celosvetového úsilia. Spotrebiteľské nákupné správanie je teda jeden zo spôsobov ako meniť trh k vyššej udržateľnosti. (Sustainable Consumption and Production Policies, 2017)

2.1 Spotrebiteľské správanie v kontexte udržateľnosti

Spotrebiteľské správanie predstavuje určitý spôsob resp. určité činnosti, pomocou ktorých sú produkty získavané a následne spotrebúvané konečným spotrebiteľom, vrátane rozhodovacích procesov, ktoré týmito činnosťami predchádzajú. (Engel, 1995) Pre súčasné tzv. „západné“ spotrebiteľské správanie je príznačné, že narastá celkový objem výdavkov domácností, pričom percentuálny podiel výdavkov na uspokojovanie základných potrieb mierne klesá a výrazne vzrastá objem výdavkov vďaka stále väčšej túžbe uspokojiť potreby väčším výberom produktov, pohodlnejšie, s vyšším stupňom komfortu. Uvedený vzorec spotrebiteľského správania stále viac prechádza aj na spotrebiteľov v krajinách tretieho sveta a je z dlhodobého hľadiska neudržateľný. (Pajtinková, 2012) Tieto prevládajúce vzorce spotrebiteľského správania preto postupne viedli k formulovaniu konceptu udržateľnej spotreby, ktorý sa transformuje do tzv. zelených nákupov a udržateľnej/zodpovednej spotreby.

Kým udržateľná výroba sa sústreďuje na zníženie vplyvu výrobných procesov na životné prostredie a na navrhovanie kvalitnejších produktov, udržateľná spotreba sa týka životného štýlu, nákupných návykov a spôsobu, akým využívame a likvidujeme produkty. Udržateľná spotreba zahŕňa vedomé rozhodnutia s cieľom znížiť množstvo odpadu, šetriť zdroje a podporovať environmentálne a sociálne zodpovedné postupy počas celého životného cyklu produktu. Jej cieľom je uspokojiť potreby, zlepšiť kvalitu života a to tak, aby mali aj budúce generácie k dispozícii dostatok zdrojov a nebolo ohrozené uspokojovanie ich potrieb. (Chen, 2010)

Z hľadiska spotrebiteľského správania je dôležité poznať a porozumieť faktorom, ktoré vedú k nákupným rozhodnutiam spotrebiteľa. Poznanie týchto motívov môže viesť k úspechu aj v oblasti zodpovednej/udržateľnej spotreby. Všeobecné faktory determinujúce spotrebiteľské správanie zahŕňajú faktory: kultúrne, spoločenské, osobné, psychologické a situačné. (Novotný, 2014). S rastom naliehavosti problematiky udržateľnosti sú však už dlhobojšie predmetom výskumných štúdií aj faktory ovplyvňujúce udržateľnú spotrebu a zodpovedné nákupné správanie spotrebiteľov. Na základe viacerých štúdií sa ako motivátory zodpovedného nákupného správania označujú: záujem spotrebiteľa o problematiku životného prostredia, referenčná skupina (skupina, ktorej hodnoty a postoje jednotlivec používa ako základ pre svoje správanie), environmentálne zákony a predpisy, propagačné nástroje, znalosti spotrebiteľa o produkte a problematike životného prostredia, ale aj vnímaná spotrebiteľská efektivita (sebahodnotenie spotrebiteľa v kontexte problému, t. j. presvedčenie spotrebiteľa, že jeho správanie povedie k pozitívnemu výsledku). (Kianpour, 2014) Podľa výskumnej štúdie Kianpoura (2014) k tým najdôležitejším z vyššie uvedených patria predovšetkým propagačné nástroje, znalosti spotrebiteľa vrátane vnímanej efektivity a environmentálne zákony a predpisy. Poznanie a pochopenie práve týchto kľúčových faktorov môže napomôcť ovplyvniť nákupné rozhodnutie spotrebiteľa, motivovať k nákupu zelených produktov, k zodpovednej spotrebe a tak v konečnom dôsledku prispieť k riešeniu environmentálnych problémov a k udržateľnosti. Uvedené je výzvou a úlohou aj pre jednotlivé podniky, ktoré môžu tak aktívne prispieť svojou činnosťou k zmenám v spotrebiteľskom správaní a eliminovaní bariér udržateľnej spotreby.

Uvádzané kľúčové faktory ovplyvňujúce zodpovedné spotrebiteľské správanie sa stali základom predovšetkým pre formulovanie odporúčaní a záverov v diskusii, v nadväznosti na zistenia z prieskumu eko-cítienia slovenského spotrebiteľa, do istej miery ich však zahŕňa aj realizovaný dotazníkový prieskum.

2.2 Postoj Európanov k otázkam udržateľnej spotreby a výroby

Cieľom trvalo udržateľného rozvoja je neustále zlepšovanie kvality a blahobytu súčasných aj budúcich generácií. Z uvedeného dôvodu trvalo udržateľný rozvoj patrí k jedným z kľúčových cieľov EÚ. Dôležitým nástrojom v tejto oblasti je aj Akčný plán pre trvalo udržateľnú spotrebu a výrobu, ktorý komisia predložila ešte v júli 2008. V tejto súvislosti bol v apríli 2009 zrealizovaný prieskum Eurobarometer, pod názvom „Postoj Európanov k otázke udržateľnej spotreby a výroby“, ktorého cieľom bolo preskúmať znalosti občanov EÚ a úroveň ich záujmu o udržateľnú spotrebu a výrobu. V prieskume sa skúmali otázky týkajúce sa troch základných oblastí:

1. Vplyv ochrany životného prostredia na spotrebiteľské správanie občanov EÚ.
2. Problematika environmentálneho označovania produktov.
3. Propagácia produktov šetrných k životnému prostrediu.

Zisťovanie sa uskutočnilo na vzorke 26 500 náhodne vybraných občanov vo veku 15 a starších, v 27 členských krajinách a Chorvátsku. Hlavné zistenia vyplývajúce z prieskumu Eurobarometer realizované Európskou Komisiou v roku 2009, ktoré umožňujú hodnotiť nie len celkovo postoj Európanov k otázkam udržateľnej spotreby a výroby, ale aj podľa jednotlivých členských krajín sú uvedené v tabuľkovom prehľade (Tabuľka 1) celkovo za EÚ a samostatne za SR.¹

Tabuľka 1

Prehľad profilu eko-cítienia európskeho a slovenského spotrebiteľa (2009)

Oblasť hodnotenia	Európsky spotrebiteľ	Slovenský spotrebiteľ
Aktivity s významným vplyvom na ochranu životného prostredia	Minimalizácia odpadu a jeho recyklácia 30%, nákup produktov vyrábaných ekologicky 21%.	Nákup energeticky úsporných domácich spotrebičov 27%, nákup produktov vyrábaných ekologicky 22% .
Povedomie o vplyve nákupných produktov na životné prostredie	55% spotrebiteľov EÚ je si plne vedomých a vie o vplyve nakupovaných produktov na životné prostredie.	Nízke povedomie o týchto dopadoch. 44% vie o problematike málo a 10% nič.
Vplyv produktov na životné prostredie ako nákupné kritérium	83% spotrebiteľov EÚ toto kritérium považujú za veľmi dôležité-dôležité, rozhodujúcejšie sú však kvalita (97%) a cena (89%).	Kvalita (95%) a cena (91%) produktov sú významnejšie nákupné kritériá ako vplyv nakupovaných produktov na životné prostredie (23% veľmi dôležité, 47% skôr dôležité).
Zohľadňovanie energetickej účinnosti nakupovaných zariadení/produktov	Väčšina (77%) vždy resp. väčšinou zohľadňuje toto kritérium pri nákupe.	Väčšina vždy zohľadňuje toto kritérium pri nákupe (81%).
Význam environmentálneho označovania produktov pri nákupe	Najväčší podiel (45%) považuje toto kritérium za dôležité.	Najväčší podiel (39%) nikdy nečíta žiadne environmentálne štítky.
Obsah environmentálneho štítku	Prevažuje informácia o možnosti produktu recyklovať (38%).	30% požaduje predovšetkým informácie o možnosti recyklácie produktu.

¹ Podľa výsledkov zo zdroja: https://ec.europa.eu/environment/eussd/pdf/FL256_analytical%20report_final.pdf

Povinnosť označovať produkty informáciou o uhlíkovej stope produktu	Podpora tejto myšlienky u spotrebiteľa EÚ až 72%.	Podpora zavedenia povinného označovania produktov z hľadiska ich uhlíkovej stopy (60%).
Povedomie o značke Ecolabel	61% spotrebiteľov EÚ nikdy nepočulo a nevideli značku Ecolabel.	Viac ako polovica (55%) značku Ecolabel nepozná.
Dôvera k podnikovým informáciám o environmentálnych vlastnostiach ich produktov	Najväčšie zastúpenie v kategóriách skôr dôverujem (45%) a skôr nedôverujem (35%).	Skôr dôveruje týmto informáciám (52%).
Dôvera k podnikovým informáciám o ich o environmentálnych aktivitách	Najväčšie zastúpenie 47% nedôveruje správam spoločností o ich environmentálnej a sociálnej výkonnosti.	Najväčšie zastúpenie skôr dôveruje (36%) týmto informáciám. 25% tieto informácie nezaujímajú, rovnaké % im nedôveruje.
Aktivity maloobchodu v oblasti podpory predaja ekologických produktov	Najväčšie zastúpenie 31% poskytovať lepšie informácie, 25% zvýšenie viditeľnosti ekologických produktov v regáloch resp. 24% vytvoriť zelený kútik.	27% zvýšiť viditeľnosť ekologických produktov v regáloch, 26% poskytovať spotrebiteľom lepšie informácie.
Zdaňovanie ekologických produktov	46% kombinácia zavedenia zníženia daní na produkty šetrné k životnému prostrediu a zvýšenia daní produktov poškodzujúcich životné prostredie.	36% zavedenie zníženia dane na produkty šetrné k životnému prostrediu, 35% kombinácia

Zdroj: vlastné spracovanie

Uvedený prieskum sa stal východiskom pre realizáciu prieskumu na Slovensku s cieľom zistiť aké je súčasné eko-cítenie slovenského spotrebiteľa a tiež zmeny v tejto oblasti za uplynulých 12 rokov (výsledky sú prezentované v časti 4 tejto práce).

3 Výskumný dizajn

Trvalo udržateľný rozvoj a s tým spojená problematika udržateľnej spotreby a výroby v kontexte spotrebiteľského správania je dnes jednou z rozhodujúcich otázok, na ktoré sa upriamuje pozornosť celej vyspelej spoločnosti, vrátane podnikov a ich manažmentu. Uvedené bolo základom pre uskutočnenie prezentovaného výskumu a formulovanie jeho cieľov. **Hlavným cieľom** prezentovaného výskumu bolo zistiť a charakterizovať súčasný postoj slovenského spotrebiteľa k otázkam udržateľnej spotreby a výroby (eko cítenie slovenského spotrebiteľa) a na základe zistení vymedziť možné smerovanie na zlepšenie vývoja v skúmanej oblasti. Vychádzajúc zo základného zámeru výskumu bolo formulovaných viacero čiastkových cieľov:

- spracovať teoretické východiská v rámci skúmanej problematiky – udržateľná spotreba a výroba; spotrebiteľské správanie v kontexte udržateľnej spotreby;
- charakterizovať postoj Európanov k otázkam udržateľnej spotreby a výroby, vychádzajúc z prieskumu Eurobarometra (2009), ktorý sa stal jedným zo základných východísk realizovaného výskumu;
- charakterizovať a vyhodnotiť súčasný postoj slovenských spotrebiteľov k otázkam udržateľnej spotreby a výroby („profil“ eko cítenia slovenského spotrebiteľa), na základe realizovaného dotazníkového prieskumu,
- vyhodnotiť zmeny v eko-cítení slovenského spotrebiteľa, v porovnaní s rokom 2009;
- navrhnúť odporúčania na pre rozvoj a zlepšenie úrovne eko-cítenia slovenského spotrebiteľa.

V rámci prehľadu použitých výskumných metód možno uviesť predovšetkým: všeobecné metódy – analýza, syntéza, indukcia, dedukcia, abstrakcia, pozorovanie, komparácia, analógia, generalizácia; špecifické metódy – dotazníková metóda, matematicko-štatistické metódy, grafické metódy. Zvolené metódy boli prispôsobené skúmanej problematike a splneniu cieľov výskumu. Ako rozhodujúcu z použitých metód možno označiť **dotazníkový prieskum**, ktorého hlavným cieľom bolo charakterizovať aktuálny stav v oblasti eko-cítienia slovenského spotrebiteľa a následne identifikovať vývoj resp. zmeny v tejto oblasti. Filozofia, štruktúra ako aj zameranie otázok dotazníka sa opierali o prieskum Eurobarometra realizovaného v roku 2009 (charakterizovaný v časti 2.2) tak, aby umožnil riešiť hlavný cieľ prieskumu. Dotazník pozostával z dvoch častí. Prvá časť dotazníka slúžila na charakteristiku respondenta podľa identifikačných znakov ako je: pohlavie, vek, vzdelanie, kraj a veľkosť obce; je predpokladom na zabezpečenie reprezentatívnej vzorky respondentov a súčasne vytvára priestor pre hľadanie súvislostí medzi skúmanou problematikou a jednotlivými zvolenými charakteristikami. Druhú časť dotazníka tvorili otázky, ktoré umožňujú skúmať eko cítenie slovenského spotrebiteľa. V súvislosti so spotrebiteľským správaním v kontexte udržateľnej spotreby a výroby na Slovensku sa táto časť prieskumu zamerala na:

- aktivity s najväčším dopadom na ochranu životného prostredia,
- nákupné správanie s ohľadom na dopad na životné prostredie,
- environmentálne označovanie produktov,
- dôvera k informáciám podnikov – výrobcov/predajcov,
- možnosti podpory predaja produktov šetrných k životnému prostrediu,
- odpad a jeho recyklácia.

Tieto oblasti sa stali základom pre formulovanie **výskumných otázok**, ktorých prehľad je uvedený v tabuľke 2:

Tabuľka 3.1 Prehľad výskumných otázok zisťovaných v rámci dotazníkového prieskumu

VO 1	<i>Aké aktivity majú podľa slovenských spotrebiteľov najväčší dopad na riešenie problémov životného prostredia ?</i>
VO 2	<i>Ako slovenskí spotrebiteľia hodnotia svoj prehľad o dopade/vplyve produktov, ktoré nakupujú a používajú na životné prostredie ?</i>
VO 3	<i>Aká je pozícia „vplyvu nakupovaného produktu na životné prostredie“ v rámci nákupných kritérií slovenského spotrebiteľa ?</i>
VO 4	<i>Aký dôraz kladú pri nákupe produktov na ich energetickú účinnosť ?</i>
VO 5	<i>Aký význam zohráva environmentálne označovanie produktov pri nákupnom rozhodovaní slovenského spotrebiteľa ?</i>
VO 6	<i>Aké informácie by podľa slovenských spotrebiteľov mali environmentálne etikety obsahovať ?</i>
VO 7	<i>Aký je postoj slovenských spotrebiteľov k povinnému zavedeniu etikety označujúcej uhlíkovú stopu produktov ?</i>
VO 8	<i>Aké je povedomie slovenských spotrebiteľov o symbole environmentálnej značky EÚ ?</i>
VO 9	<i>Aká je úroveň dôvery k tvrdeniam podnikov/výrobcov, predajcov o environmentálnych vlastnostiach ich vlastných výrobkov ?</i>
VO 10	<i>Aká je úroveň dôvery k informáciám podnikov o ich vlastných environmentálnych aktivitách ?</i>
VO 11	<i>Ako podľa slovenských spotrebiteľov môže výrobca resp. predajca prispieť k propagácii produktov šetrných k životnému prostrediu ?</i>
VO 12	<i>Aký spôsob zdaňovania na účely podpory predaja produktov šetrných k životnému prostrediu by slovenskí spotrebiteľia akceptovali ?</i>
VO 13	<i>Aký podiel z odpadu, ktorý produkuje slovenský spotrebiteľ vo svojej domácnosti predstavujú potraviny ?</i>
VO 14	<i>Aká je úroveň separácie odpadu slovenských spotrebiteľov ?</i>
VO 15	<i>Aké faktory by motivovali slovenských spotrebiteľov k vyššiemu zapojeniu do procesu separácie?</i>

Zdroj: vlastné spracovanie

Samotný zber a vyhodnotenie údajov bolo realizované profesionálnou výskumnou Agentúrou AKO, s.r.o. (Agentúra pre marketingový výskum trhu, reklamy a médií). Parametre prieskumu sú uvedené v tabuľke 3.

Tabuľka 3

Parametre dotazníkového prieskumu

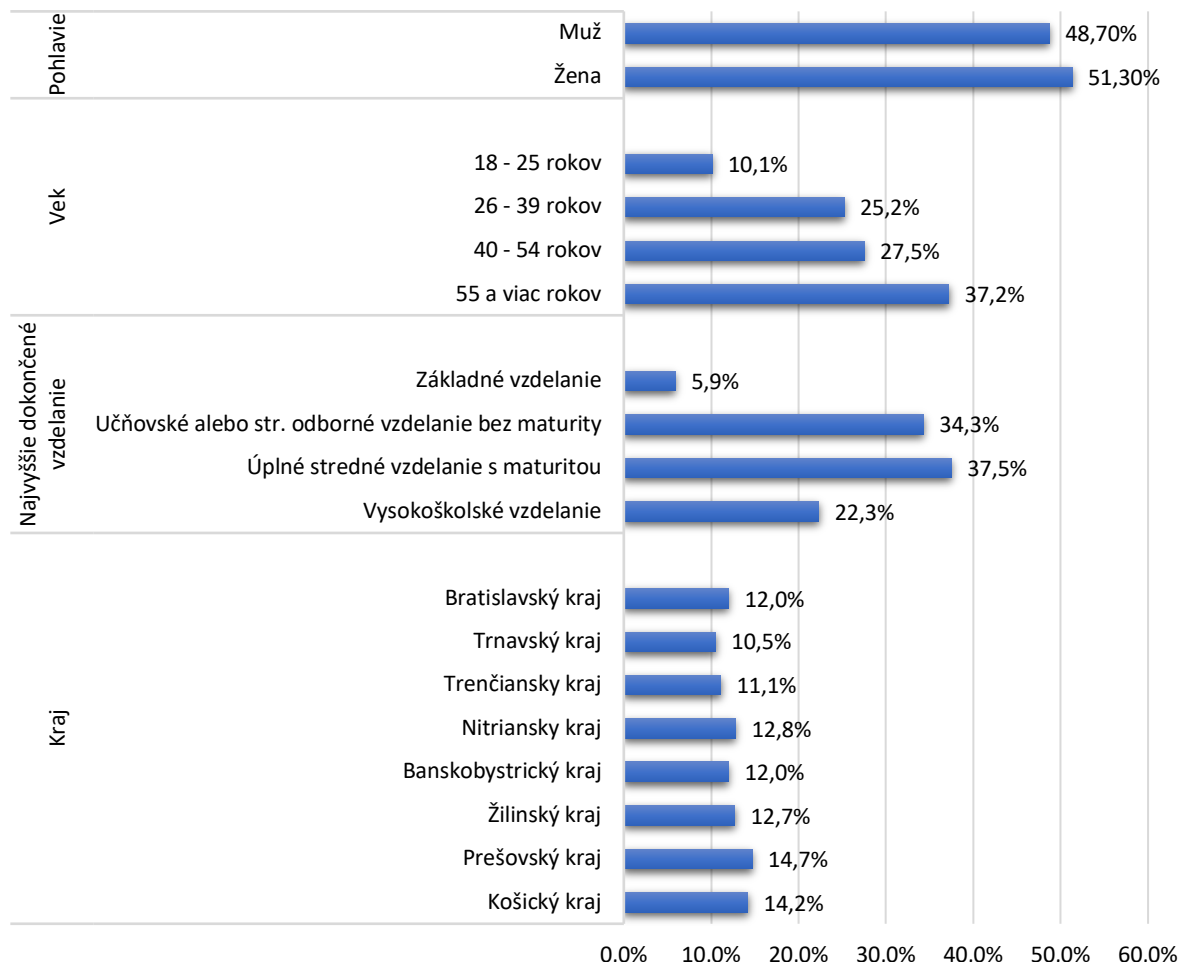
Metóda zberu dát	kvantitatívna, CAWI (online panel)
Veľkosť vzorky	N = 1000 (respondenti neboli oboznámení s tým, kto je zadávateľom prieskumu)
Počet otázok	15 meritórnych + 5 sociodemografických
Termín zberu dát	12.7. – 19. 7. 2021
Štatistické spracovanie	SPSS, Excel
Zloženie výskumnej vzorky	reprezentatívna voči dospelaj populácii Slovenskej republiky
Metóda výberu vzorky	náhodný (randomizovaný) + následne kvótny výber kvótny znaky: vek, pohlavie, vzdelanie, kraj výskumná vzorka je reprezentatívna voči populácii SR vo všetkých kvótnych znakoch, takže výsledky je možné zovšeobecniť na celú dospelú populáciu Slovenskej republiky
Báza pre výber	www.statistics.sk
Anketovanie	profesionálny online panel
Kontrola	script, spätná náhodná kontrola
Upozornenie	Pri druhostupňových triedeniach boli výsledky zaokrúhľované na celé čísla, a preto sa v ich súčte môže prejaviť odchýlka spôsobená zaokrúhľovaním.

Zdroj: vlastné spracovanie z informácií poskytnutých agentúrou AKO o prieskume

Zloženie výskumnej vzorky z hľadiska pohlavia, veku, vzdelania a kraja charakterizuje obrázok 1.

Obrázok 1

Zloženie výskumnej vzorky z hľadiska pohlavia, veku, vzdelania a kraja



Zdroj: vlastné spracovanie podľa výsledkov z dotazníkového prieskumu

Početnosť respondentov podľa veľkosti sídla – obce/mesta nie je zachytená na obrázku 3.1. Z tohto hľadiska prevládali respondenti z vidieka 34,6% a menšieho mesta 30,0%. 26,7% bolo respondentov z väčšieho mesta a 8,7% z hlavného mesta (z Bratislavy). Význam dotazníkového prieskumu možno vidieť najmä v tom, že umožnil uskutočniť primárny výskum a jeho výsledky možno považovať za originálny výstup riešeného výskumu.

4 Výsledky práce

Prieskum realizovaný s cieľom posúdiť **súčasný „profil eko cítenia“ slovenského spotrebiteľa** umožnil vymedziť nasledovné zistenia:

- za najvýznamnejšiu aktivitu, ktorá má dopad na ochranu životného prostredia, slovenskí spotrebitelia považujú „minimalizáciu odpadu a recykláciu“. (VO1) Túto odpoveď uviedlo 73,9% opýtaných. Za touto aktivitou nasledovalo: „nákup ekologických produktov 27,7%) a „menej cestovania a zavádzania udržateľných druhov dopravy“ (22,4%).
- plné uvedomenie si dopadu kupovaných produktov na životné prostredie deklarovalo 27,2% opýtaných, vedomosť o najvýznamnejších dopadoch kupovaných produktov na životné prostredie (VO2) uviedlo 41,9% respondentov. Malú znalosť dopadov uviedlo 25,3% opýtaných a 2,4% respondentov uviedlo, že nemajú žiadne vedomosti o dopadoch produktov na životné prostredie. Zvyšní buď nevedeli (2,7%) alebo nechceli

na túto otázku odpovedať (0,5%). Svoj prehľad o tom, aký majú kupované a používané produkty dopad na životné prostredie, hodnotili najmä najstarší, vzdelanejší a obyvatelia väčších sídiel.

- z hľadiska dôležitosti aspektov produktu, ktorý nakupujú, respondenti najväčší význam prikladajú kvalite produktu, za tým nasledovala cena a až potom vplyv produktu na životné prostredie, či značka produktu. (VO3) Toto poradie bolo zachované vo všetkých skúmaných socio-demografických kategóriách.
- až 4 z 10 (40,5%) opýtaných deklarovali, že pri nákupe spotrebičov na elektrinu alebo palivo vždy berú do úvahy energetickú náročnosť. Ďalších 42,6% uviedlo, že energetickú náročnosť berú do úvahy väčšinou alebo často. (VO4) Len 11,4% opýtaných berie do úvahy energetickú náročnosť zriedkavo a len 2,9% nikdy. Zvyšní na otázku nevedeli (2,2%) alebo nechceli odpovedať (0,4%). Energetickú účinnosť zariadení, berú do úvahy vo väčšej miere starší a vzdelanejší.
- až 43,7% opýtaných deklarovalo, že environmentálne označenie na etikete pre nich pri nákupe hrá dôležitú rolu. (VO5) Naopak, 32,1% uviedlo, že environmentálne označenie pri nákupných rozhodnutiach u nich nehrá dôležitú rolu. Zvyšní sa k otázke nevedeli (5,3%) alebo nechceli (0,8%) vyjadriť. Zohľadňovanie environmentálneho označovania produktov pri nákupe deklarovali najmä mladší a najstarší opýtaní, skôr vzdelanejší, obyvatelia Bratislavského a Trnavského kraja a obyvatelia hlavného mesta Bratislava.
- z hľadiska postoja slovenských spotrebiteľov k tomu, čo by mala obsahovať environmentálna etiketa (VO6) sa najčastejšie vyskytovala odpoveď – „či je možné produkt recyklovať“ (58,2%), za tým nasledovala odpoveď „potvrdenie, že produkt pochádza z ekologických zdrojov“ (34,9%) a „potvrdenie, že obal je ekologický“ (28,8%). Muži by na environmentálnych etiketách mierne viac ako ženy ocenili uvádzanie celkového množstva emisií skleníkových plynov vytvorených daným produktom, rovnako to platí aj o mladých.
- povinnosť pre výrobcov na etikete uvádzať označenie o uhlíkovej stope produktu (VO7) by privítalo až 53,3% opýtaných. Naopak, 24,3% respondentov ja za to, aby takéto označenie výrobkov bolo dobrovoľné. Zvyšných táto téma buď nezaujíma (6,9%), prípadne nevedia (14,9%) alebo sa nechcú (0,6%) k nej vyjadriť. Za zavedenie takejto povinnosti sú častejšie najmladší alebo najstarší, skôr vzdelanejší, obyvatelia prevažne väčších sídiel, obyvatelia Bratislavského kraja.
- celkovo 31,2% opýtaných deklarovalo, že zaznamenali Environmentálnu značku Európskej Únie. (VO8) 10,5% uviedlo, že si aj kúpilo produkty s týmto označením. 20,7% túto značku videlo, ale produkty s týmto označením si nekúpili. Takmer 6 z 10 opýtaných (58,6%) nikdy o takejto značke nepočuli, ani ju nikde nevideli. Zvyšní sa k otázke nevedeli (9,8%) alebo nechceli vyjadriť (0,4%). Znalosť symbolu environmentálnej značky EÚ častejšie deklarovali ženy, mladší opýtaní.
- tvrdeniam výrobcov o environmentálnych vlastnostiach nimi vyrábaných produktov (VO9) úplne dôveruje 6,2% opýtaných. Skôr im dôveruje 52,7% respondentov, skôr nedôveruje 27,2% a úplne nedôveruje 6,3% opýtaných. Dôvera (58,9 %) teda prevažuje nad nedôverou (33,5%). Dôvera týmto tvrdeniam je častejšia u mladších, menej vzdelaných, obyvateľov hlavného mesta.
- informáciám podnikov o ich environmentálnych aktivitách dôveruje len 3 z 10 opýtaných (30,8%). Nedôveru vyjadrilo 44,1% respondentov. V tomto prípade nedôvera prevažuje nad dôverou. (VO10) Zvyšných táto téma nezaujíma (12,3%), nevedeli sa k otázke vyjadriť (11,9%) alebo nechceli odpovedať (0,9%). Dôvera je vyššia skôr u mladých, menej vzdelaných, obyvateľov Bratislavského a Nitrianskeho kraja, obyvateľov hlavného mesta.

- za najlepšie riešenie, ktorým by obchod prispel k propagácii produktov šetrných k životnému prostrediu (VO11), opýtaní považujú „zvýšiť viditeľnosť ekologicky šetrných produktov v regáloch“ (46,9%), za tým nasledovalo riešenie „poskytovať spotrebiteľom lepšie informácie“ (38, 4%) a „mať v predajni vyhradený priestor iba s ekologickými produktami, tzv. zelený kútik“ (36%). Takýto priestor by vo väčšej miere uvítali ženy, najmladší, či obyvatelia skôr väčších sídiel. Poskytovanie lepších informácií pre spotrebiteľov by si želali hlavne starší, respondenti so základným vzdelaním alebo naopak s najvyšším - vysokoškolským vzdelaním.
- zníženie zdanenia produktov šetrných k životnému prostrediu (VO12) by privítalo 42,1% opýtaných. Naopak, zvýšenie zdanenia produktov, ktoré poškodzujú životné prostredie, by prijalo len 10,1% respondentov. Kombináciu oboch týchto prístupov zvolilo 28,3% opýtaných. 9,8% respondentov si naopak myslí, že zaviesť daňový systém podporujúci produkty šetrné k životnému prostrediu nie je dobrý nápad. Zvyšní sa k tejto téme nevedeli (8,6%) alebo nechceli vyjadriť (1,1%). So znižovaním daní na produkty šetrné k životnému prostrediu súhlasia vo väčšej miere muži, skôr mladší, obyvatelia hlavného mesta alebo obyvatelia menších miest.
- takmer štvrtina opýtaných deklaruje, že do odpadu nevyhadzujú žiadne potraviny (24,8%), ďalších 51,7% opýtaných uvádza, že vyhodí menej ako 15% potravín. (VO13) 15% opýtaných uvádza, že v odpade končí 16 - 30% z ich potravín. 3,2% vyhodí potraviny, ktoré predstavujú podiel 31 - 50% z celkového objemu ich potravín a 1,8% vyhodí viac ako polovicu ich potravín. Väčšie plytvanie priznali skôr ženy, mladší opýtaní, skôr s nižším vzdelaním, obyvatelia Bratislavského a Košického kraja.
- až 42,5% opýtaných deklarovalo, že separujú viac ako 50% odpadu. (VO14) Ďalších 15,4% uviedlo, že z nimi vyprodukovaného odpadu vyseparujú 31 - 50%. 12,9% separuje podiel odpadu zodpovedajúci 16 - 30%. 17% opýtaných uviedlo, že vyseparujú menej ako 15% podiel z nimi vyprodukovaného odpadu a 8% opýtaných neseparuje vôbec. Zvyšní opýtaní sa k otázke nechceli (0,8%) alebo nevedeli (3,4%) vyjadriť. Väčšiu mieru separovania odpadu deklarovali najmä najstarší, skôr so stredoškolským vzdelaním s maturitou a vysokoškolským vzdelaním.
- na záver si respondenti mali vybrať, ktoré opatrenia by ich presvedčili k tomu, aby separovali viac odpadu. (VO15) Najčastejšie označili možnosť „viac a lepšie miesta odovzdávania recyklovateľného a kompostovateľného odpadu“ (43,6%), za tým nasledoval „vylepšený separovaný zber odpadu u vás doma“ (31,9%) a „dane za triedenie odpadu“ (23,7%). Viac a lepšie miesta na odovzdávanie recyklovateľného a kompostovateľného odpadu by vo zvýšenej miere presvedčili separovať odpad najmä mladých, vysokoškolsky vzdelaných, obyvateľov Bratislavského kraja, obyvateľov hlavného mesta Bratislava.

Z hľadiska identifikácie možných **socio-demografických faktorov**, ktoré výraznejšie ovplyvňujú úroveň eko cítenia slovenského spotrebiteľa, vychádzajú predovšetkým **vzdelanie a vek**.

Zo zistení možno formulovať určité sumárne hodnotenia. **Pozitívne** možno hodnotiť najmä:

- zohľadňovanie energetickej účinnosti produktov pri nákupnom rozhodovaní;
- prejavovaný záujem o environmentálne označovanie produktov a jeho veľký význam pri nákupnom rozhodovaní;
- akceptácia povinného zavedenia označovania produktov informáciou o ich uhlíkovej stope;

- podpora zavedenia určitej formy zdaňovania produktov šetrných k životnému prostrediu, predovšetkým zníženie dane takýchto produktov, prípadne kombinácia so zvýšením dane produktov, ktoré majú negatívny dopad na životné prostredie;
- záujem o aktivity maloobchodu v oblasti podpory predaja produktov šetrných k životnému prostrediu, najmä zabezpečenie väčšej viditeľnosti ekologických produktov v regáloch, ale aj iné;
- pomerne nízka produkcia potravinového odpadu a tiež pomerne vysoká úroveň separácie domáceho odpadu.

Naopak ako **negatívne** sa javí:

- slabšie povedomie slovenského spotrebiteľa o dopadoch svojich nákupných rozhodnutí, resp. dopadoch produktov, ktoré nakupujú na životné prostredie;
- kritériu „vplyv produktu na životné prostredie“ nie je venovaná dostatočná pozornosť v rámci nákupného rozhodovania, je menej významné; stále sú oveľa významnejšie kritériá - cena a kvalita;
- vzhľadom na časový horizont zavedenia environmentálnej značky (národnej aj európskej) je povedomie o tejto forme označovania produktov nízke.

Z hľadiska **vývoja a zmien v oblasti eko-cítienia slovenského spotrebiteľa** základom ktorého boli zistenia realizované prostredníctvom prieskumu Eurobarometer v roku 2009 EK (časť 2.2) možno konštatovať, že za posledných 12 rokov sa **úroveň eko- cítenia slovenského spotrebiteľa celkovo zvýšila, t. j. posunula sa smerom ku konceptu udržateľnej výroby a spotreby**. Konkrétnejšie sa zvyšuje predovšetkým povedomie slovenského spotrebiteľa v tejto oblasti; stále väčší počet spotrebiteľov si uvedomuje význam aktivít s najväčším dopadom na ochranu životného prostredia a tiež si vo väčšej miere uvedomuje aspoň najvýznamnejšie dopady svojich nákupných rozhodnutí na životné prostredie. Vplyv nakupovaných produktov na životné prostredie sa stáva významnejším kritériom procesu nákupného rozhodovania slovenského spotrebiteľa, rastie tiež uvedomovanie si environmentálneho označovania produktov a záujem o informácie, ktoré mu takéto označenie ponúka o produkte. Na druhej strane však klesá povedomie o už dlhodobo zavedenom environmentálnom označovaní produktov Ecolabel. Slovenskí spotrebiteľia by v skúmanej oblasti privítali aj zavedenie zákonných opatrení – či už povinné označovanie produktov výrobcom o uhlíkovej stope produktu, ale aj opatrenia v oblasti zdaňovania, najmä zníženia dane produktov šetrných k životnému prostrediu. Celkovo však stagnuje dôvera slovenského spotrebiteľa k informáciám poskytovaným podnikmi o environmentálnych vlastnostiach svojich produktov a dokonca klesá dôvera k informáciám, ktoré poskytujú o svojich environmentálnych aktivitách. Napriek tomu, že dôvera k týmto informáciám klesá, rastie podiel spotrebiteľov, ktorí majú záujem resp. sledujú tieto informácie, čo v konečnom dôsledku predstavuje výzvu predovšetkým smerom k podnikom.

5 Diskusia

Zistenia vyplývajúce z realizovaného prieskumu dávajú predpoklad pre pochopenie problematiky eko-cítienia slovenského spotrebiteľa a umožňujú ho celkovo hodnotiť pomerne priaznivo. Zároveň však treba konštatovať, že je tu aj obrovský priestor pre posun v myslení slovenského spotrebiteľa a v jeho spotrebiteľskom správaní. Čo je v tejto súvislosti dôležité si uvedomiť, že spotrebiteľské správanie je výsledkom pôsobenia komplexného súboru faktorov, ktoré zahŕňajú napríklad verejné politiky, kultúrna identita, pokrytie tém o udržateľnosti médiami, marketingové faktory využívané podnikmi, tiež spoločenské skupiny bezprostredne ovplyvňujúce spotrebiteľa. Odporúčania budú preto smerovať a sú formulované tak pre podnikovú prax – výroba, obchod, ako aj pre teóriu a oblasť vzdelávania, inštitúcie/organizácie

verejnej a štátnej správy, či neziskovej oblasti, tlač, médiá, či k širšej verejnosti. Z najdôležitejších odporúčaní, ktoré vyplývajú zo zistení možno uviesť:

- Celkovo pred teóriou (hlavne ekonomickou), ale aj hospodárskou praxou a tiež inými subjektami, v ktorých možnostiach je ovplyvniť spotrebiteľské správanie, stojí úloha neustále a intenzívne vysvetľovať a zdôrazňovať dôležitosť konceptu udržateľnej spotreby a tak zvyšovať povedomie v tejto oblasti. Znalosti, ktoré má spotrebiteľ o udržateľnosti a environmentálnych problémoch a záujmoch sú považované za základné stimulatory pri nákupe ekologických produktov.
- Apelovať na potrebu implementovania udržateľnosti do podnikov, prostredníctvom zavádzania inovatívnych podnikateľských modelov cirkulárnej ekonomiky. Dôvodom je nielen naliehavosť riešenia tejto problematiky, ale aj postupné zmeny v spotrebiteľskom správaní smerom k udržateľnej spotrebe. Neustále zdôrazňovanie environmentálneho aspektu a rastúca snaha o zodpovednejší prístup k životnému prostrediu, bude nadobúdať u ľudí narastajúci záujem. Z tohto dôvodu je potrebné, aby podniky proaktívne reagovali, prinesie im to nie len príležitosť získať konkurencieschopné postavenie na trhu, ale aj významnú možnosť podporiť udržateľný vývoj produktov a prispieť k podpore udržateľnej spotreby. (Tokárová, 2012)
- Vzhľadom na zistenia ohľadom poklesu dôvery slovenských spotrebiteľov k informáciám, ktoré podniky komunikujú predovšetkým ohľadom svojich environmentálnych aktivít, je potrebné budovať a zvyšovať dôveryhodnosť podnikov. Základom jej budovania je nielen samotné implementovanie udržateľnosti v podniku, ale aj následné komunikovanie o týchto aktivitách s dôrazom na to, aby to, čo podniky navonok deklarujú zároveň zodpovedalo skutočnosti a bolo pre spotrebiteľa transparentné. Viaceré štúdie v tejto oblasti potvrdzujú (napr. štúdia spoločnosti Miller a Merrilees, 2013), že existuje väzba medzi vnímaním praktík podniku v oblasti udržateľnosti spotrebiteľom a jeho postojom k značke podniku. Vnímanie podniku spotrebiteľom vychádza z poznatkov a informácií, ktoré má spotrebiteľ o činnostiach podniku a to následne môže ovplyvniť jeho postoj a presvedčenie o produktoch podniku a tak podporiť nákup udržateľných produktov. Preto realizácia udržateľnosti v podniku, následná komunikácia a budovanie povedomia spotrebiteľov o environmentálnych aktivitách podniku sa považuje za dôležitý faktor ovplyvňujúci koncept udržateľnej spotreby. Dôležitou súčasťou resp. základom tejto problematiky, je budovanie environmentálnej reputácie podniku. V tejto súvislosti možno naznačiť základné faktory, ktoré ovplyvňujú jej formovanie. Ide najmä o hodnotový systém podniku v súlade s udržateľnosťou, t. j. podnik musí mať a vyznávať udržateľné hodnoty; vnímanie podniku spotrebiteľmi ako udržateľného; vnímanie podniku ostatnými záujmovými skupinami ako udržateľného a green branding. (Brown, 1997; Millers, 2013; Kianpour, 2014; Young, 2010)
- Z rastúceho záujmu spotrebiteľov o informácie o dopadoch produktov na životné prostredie vyplýva potreba zvýšiť informovanosť o atribútoch udržateľnosti produktov zo strany podnikov. Znalosti o produktoch – jeho vlastnostiach sú rozhodujúcim faktorom v procese nákupného rozhodovania, teda aj v rámci konceptu udržateľného spotrebiteľského správania. Ak sa má realizovať „udržateľný nákup“ relevantným znakom produktu je, že musí byť udržateľný. Za znaky produktu, ktoré majú silný vzťah k udržateľnosti sa považujú: recyklácia alebo opakovateľná použiteľnosť, biologická odbúrateľnosť a pozitívne účinky na zdravie spotrebiteľa. Tieto atribúty produktu by sa mali zohľadniť a zdôrazniť v marketingovej stratégii a komunikácii. (Lu, 2013) Dôležitou podmienkou súčasne je, že produkt musí mať zároveň aj požadovanú kvalitu a primeranú cenu aj keď je udržateľný, inak ho spotrebiteľia

nekúpia, lebo nebude zodpovedať všetkým ich očakávaniam. Tiež dostupnosť hrá svoj význam pri nákupe udržateľného produktu. A nakoniec asociácia značky, spotrebiteľia musia dôverovať podniku a jeho produktom, inak nebudú udržateľne nakupovať.

- Jedným z atribútov produktu je aj jeho označovanie. „Zelený“ resp. environmentálny štítok/etiketa môže upozorniť spotrebiteľa na ekologický produkt, upozorní na eko atribúty, ktoré produkt má. Pre oblasť environmentálneho označovania produktov možno odporúčať predovšetkým: Zvýšiť povedomie o environmentálnej značke – európskej aj národnej. Súčasne riešiť a prispôbiť obsah environmentálnej etikety resp. štítku informáciám požadovaných spotrebiteľom, t. j. predovšetkým o možnostiach recyklovať kúpený produkt a tiež, z akých zdrojov pochádza, resp. či pochádza z ekologických zdrojov. Uvedené opatrenia smerujú predovšetkým do oblasti verejnej či štátnej správy, prípadne neziskovej.
- Zvýšiť aktivitu maloobchodu v rámci budovania konceptu udržateľnej spotreby opatreniami na podporu predaja produktov šetrných k životnému prostrediu. Budovaním tzv. zeleného dizajnu obchodu môžu sprostredkovatelia ovplyvniť/prinútiť spotrebiteľa, aby si všimol ekologický produkt a realizoval nákup udržateľného produktu. Sprostredkovateľov preto možno rovnako považovať za faktor ovplyvňujúci nákup udržateľných produktov. Okrem „zeleného“ dizajnu, k environmentálnym stimulom obchodu patrí napr.: používanie environmentálneho označenia, tzv. „zelené štítky; poskytovanie odborných informácií a poradenstva pri predaji environmentálnych produktov; zabezpečenie dostupnosti udržateľných produktov v maloobchodnej sieti; etické praktiky predaja a pod. Tieto aktivity môžu nielen upriamiť pozornosť spotrebiteľa na, ale aj zvýšiť pôžitok z nákupu. Z realizovaného prieskumu vyplýva pre obchod úloha predovšetkým zvýšiť viditeľnosť ekologických produktov v regáloch.
- Výsledky prieskumu naznačili, že v pozitívnom ovplyvňovaní eko cítenia slovenského spotrebiteľa sa otvára priestor aj pre zavedenie opatrení v oblasti environmentálnej legislatívy. Environmentálne zákony a nariadenia patria k ďalším motivátorom na dosiahnutie udržateľného spotrebiteľského správania, môžu teda ovplyvňovať spotrebiteľov nakupovať a používať environmentálne a spoločensky prijateľné produkty a podporovať tak podniky poskytujúce takéto výrobky a služby. Slovenskí (ale aj európski) spotrebiteľia by v tejto oblasti privítali zavedenie povinného označovania produktov informáciou o uhlíkovej stope produktu, tiež zavedenie určitej formy zdaňovania na podporu predaja produktov šetrných k životnému prostrediu - možnosť zníženia dane pre produkty šetrné k životnému prostrediu, prípadne kombinácia so súčasným zvýšením dane pre produkty, ktoré naopak zaťažujú životné prostredie.
- Oblasť odpadu a jeho recyklácie súvisí z množstvom problémov a ponúka tiež rozsiahly záber opatrení. Vychádzajúc zo zistení realizovaného prieskumu, možno pre túto oblasť navrhnúť opatrenia, ktoré by mali slovenského spotrebiteľa motivovať k znižovaniu odpadu a zlepšovaniu úrovne jeho recyklácie. Ako rozhodujúce sa javia: zlepšiť organizáciu a zabezpečenie separovania odpadu, t. j. „viac a lepšie miesta na odovzdávanie recyklovateľného a kompostovateľného odpadu“, ale aj iné opatrenia, napr. zvýšiť informovanosť o tom, ako a kde triediť odpad, ale aj zákonné opatrenia: dane za odpad, či zavedenie zákonnej povinnosti separovať.
- Ako dôležitý faktor ovplyvňujúci udržateľné spotrebiteľské správanie sa javí predovšetkým vzdelanie - zvyšovanie všeobecnej vzdelanostnej úrovne a tiež v oblasti environmentálnej výchovy by mali byť oblasti, ktorým sa bude venovať zvýšená pozornosť. Pre zvyšovanie tzv. ekogramotnosti je potrebné vytvárať priestor v rámci učebných osnov naprieč celým vzdelávacím systémom, vrátane predškolských zariadení a s dôrazom na základné a stredné školy, a to nielen v záujme nadobúdania a

zvyšovania znalostí v environmentálnej oblasti a v otázkach udržateľnej spotreby, ale aj v záujme formovania a budovania hodnôt (individualizmus, kolektivismus, bezpečnosť a pôžitok), postojov (napr. závažnosť problémov životného prostredia) a správania (recyklácia, separovanie, zohľadňovanie environmentálnych problémov pri nákupe a skutočný nákup) v súlade s udržateľnosťou. Hodnoty, postoje a správanie spotrebiteľov v súlade s udržateľnosťou sú jedným z faktorov, ktoré ovplyvňujú spotrebiteľské správanie a nákupné rozhodnutie v prospech udržateľných produktov.

6 Záver

V závere možno konštatovať, že z hľadiska zmien v postoji slovenského spotrebiteľa v kontexte udržateľnosti dochádza celkovo k pozitívnym zmenám, aj keď nie k veľmi výrazným. Nedostatočnú úroveň zmien možno konštatovať jednak vzhľadom na pomerne dlhý časový horizont hodnotenia vývoja, ako aj vzhľadom na naliehavosť riešenia problematiky udržateľnosti. V dôsledku toho sa tu otvára pomerne veľký priestor na zlepšenia a pre návrh viacerých opatrení, ktoré možno smerovať k rôznym subjektom a do rôznych oblastí, keďže na formovaní spotrebiteľského správania sa podieľa veľké množstvo faktorov. Priestor na zlepšovanie je hlavne v praktickej rovine, a to: v zapojení čo najväčšieho počtu subjektov do riešenia a dosahovania konceptu udržateľnej spotreby; v zvyšovaní povedomia a záujmu o túto problematiku a jej riešenie; v neustálej a intenzívnejšej popularizácii tejto témy v rámci širokej verejnosti.

Acknowledgement

Tento príspevok je čiastkovým výstupom riešenia projektu VEGA MŠ SR č. 1/0462/23 „Cirkulárna ekonomiky v kontexte spoločenských požiadaviek a obmedzení trhu“ v rozsahu 100%.

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PRÍSPEVKY DO DISKUSIE

CONTRIBUTIONS TO THE DISCUSSION

The Hirsch Index: A Metric of Success or a Source of Controversy in Academic Evaluation?

Zuzana Skorková

Abstract

The Hirsch index (h-index) is an established metric used to evaluate scientific productivity and impact by integrating the number of publications with their citations. This article analyzes the h-index in terms of its strengths and limitations within academic evaluation. Among the primary advantages of the h-index is its ability to combine quantitative and qualitative aspects of scientific output, contributing to its broad acceptance across various scientific disciplines. However, the h-index faces criticism for its inability to differentiate between the quality of individual publications, its disregard for the context of a researcher's career development, and its dependence on specific citation databases, which may yield varying values for this metric. The article also introduces alternative bibliometric indicators that can serve as supplements or alternatives to the h-index. Using a specific example of 1,168 documents from the Web of Science database, authored by individuals from the University of Economics in Bratislava, we evaluated the authors using the h-index as well as its alternatives—m-index, g-index, and the total number of citations. We processed the data using Biblioshiny. The aim of this paper is to provide a comprehensive analysis of the h-index and its relevance in the current academic environment, which can be beneficial for researchers, institutions, and evaluators within the scientific community.

JEL classification: A10, Z10

Keywords: Hirsch index, Academic evaluation, Bibliometric indicators, Scientific productivity

1 Introduction

Bibliometrics, informetrics, scientometrics, and webometrics examine the quantitative aspects of information in the processes of its creation, dissemination, and utilization, with a particular focus on scientific information. These disciplines provide tools for evaluating researchers and institutions, which is crucial in the context of supporting and allocating financial resources to various organizations. While these methods are valuable, they require contextual knowledge, which is often lacking. Bibliometrics also has broader applications, such as in exploring the historical development of science or identifying current scientific trends. The significance of bibliometrics is growing alongside the advancement of information technologies, which enable the processing of large datasets and the attractive visualization of results. Knowledge of bibliometrics is beneficial not only for the evaluation of science but also for the scientists themselves.

Bibliometrics utilizes a variety of bibliometric indices to measure the outcomes and impact of individual researchers. The measurement of the quality of scientific research becomes even more crucial in times when scientists increasingly compete for limited financial resources (Bornmann & Marx, 2011). Since 2005, bibliometrics has employed the so-called Hirsch Index, commonly referred to as the h-index. It was introduced by Jorge Eduardo Hirsch, a professor of physics at the University of California. Hirsch (2005) defined the h-index as follows: a scientist has an h-index of h if h of their total number of publications (N_p) have received at least h citations each, while the remaining ($N_p - h$) publications have no more than h citations (Ondrišová, 2011). Simply put, we are looking for the value of h where it can be stated that h of an author's works has received at least h citations. The h-index can be calculated not only

for authors but also for institutions, departments, journals, and even countries (Csajbók et al., 2007). Braun et al. (2006) proposed using the h-index as a suitable alternative to the impact factor, which is published by Thomson Reuters for its journals.

Despite its relatively short history, the h-index has already had a significant impact. For example, a study by Bornmann & Daniel (2005) found that more successful applicants for postdoctoral scholarships had higher h-indexes than those who were unsuccessful. The results suggest that the h-index is an important measure of the quality of work by scientists, institutions, and journals across all scientific disciplines, and therefore it is becoming a critical decision-making criterion. The h-index has brought a significant breakthrough in evaluating the scientific impact of individuals, journals, countries, and research institutions within the scientific community (Bihari et al., 2018).

The aim of this paper is to provide a comprehensive view of the h-index as an indicator of the quality and impact of scientists, scientific institutions, and journals, which should be considered in the evaluation and rewarding of their work. The paper critically assesses the positives and negatives of the h-index, while also introducing alternative metrics that can serve as supplements or even replacements for the h-index. Based on this goal, we have formulated the following research questions:

- What is the Hirsch index (h-index), and what is its significance in academic evaluation?
- What are the main advantages of the h-index compared to other bibliometric indicators?

We believe that a systematic examination of the Hirsch index will provide a deeper understanding of its strengths and weaknesses in academic evaluation. The article also offers a critical analysis and comparison of the h-index with alternative metrics, thereby assisting academic institutions in the responsible use of bibliometric indicators.

2 Current state of the Topic domestically and internationally

Despite its relatively short history, the h-index has gained considerable popularity. One reason for this is the growing importance of evaluating researchers' outcomes, which is crucial for hiring, academic promotion, or securing research grants (Harzing, 2016). The h-index is also easy to calculate and understand, which certainly contributes to its widespread use (Franceschini & Maisano, 2010). The h-index reflects the situation at a given point in time (Fassin, 2024).

The h-index is based on a researcher's lifetime citations (Seglen, 1992), encompassing both productivity (the number of published works) and impact (the number of citations), making it one of the so-called "all-in-one" metrics. Table 1 illustrates the calculation of the h-index. We present a model example where a researcher has published 8 research papers, ordered by the number of citations. The first paper was cited 17 times, the second 11 times, the third 6 times, the fourth 4 times, the fifth 2 times, the sixth only once, and the last two works have not yet been cited. From this number of citations and published works, the h-index is at the level of 4. We conclude that 4 works have 4 or more citations. If the researcher wished to increase their h-index, the number of citations for the fourth and fifth works would need to rise to 5 for both cases. In other words, the author would need to have 5 works cited at least 5 times. Additionally, the higher the h-index, the more citations are required to increase it (Franceschini & Maisano, 2010). It is easier to raise the h-index from 2 to 4 than from 24 to 26. The h-index essentially aims to identify the most productive core of an author's output in terms of the highest number of citations (Burrell, 2007).

Table 1

Calculation of h-index

Document order	Number of citations
1.	17
2.	11
3.	6
4.	4
5.	2
6.	1
7.	0
8.	0

Source: own processing.

This metric also raises the topic of the impact of individual scientists. Naturally, we expect that a scientist with a higher impact will have a higher h-index. Several commonly available databases, such as Web of Science, Google Scholar, ResearchGate, and Scopus, automatically calculate the h-index for their authors (Costas & Bordons, 2007). However, this leads to the first issue with the h-index – it varies across different databases because each database covers only its specific group of journals and different years of indexing. This means that the same author can have different h-index values in different databases. Therefore, it makes sense to track publication outputs in a single comprehensive database, such as a university database, which would then provide a consolidated h-index for each author.

The h-index evaluates the scientific impact of an author's work. It considers two aspects – productivity (the number of published works) and quality (the number of citations these works receive). This means that a scientist who has achieved a high number of citations from a small number of works, or who has published many works with a low number of citations, will not achieve a high h-index (Costas & Bordons, 2007).

We can also ask what the optimal h-index should be. Hirsch himself argued that an h-index of 20 is respectable, 40 is excellent, and 60 is exceptional, but only after 20 years of research. He also pointed out an interesting fact that 84% of physicists who won the Nobel Prize had an h-index of 30. Of course, h-index values also differ across scientific disciplines.

According to Franceschini & Maisano (2010), the h-index, compared to other competing indicators, is effective in quickly and easily approximating a researcher's profile. Some studies suggest that the h-index is indeed a promising (albeit rough) measure of quality; in fact, a relatively high statistical correlation has been found between the h-index and standard bibliometric indicators as well as expert assessments (Schreiber, 2007). However, as Hirsch himself recommends, many other factors should be considered when evaluating the multifaceted profile of an individual (Hirsch, 2005), because, as Martin (1996) states, research performance is a complex and multifaceted issue that cannot be adequately assessed using a single indicator.

2.1 Advantages of h-index

The Hirsch index has sparked a deep discussion among scientists, not only regarding the validity and applicability of this indicator but also about its advantages and disadvantages in research evaluation, as it is one of the most widely used metrics for assessing scientific performance. Among the most significant positives that have contributed to its popularity in the academic community are:

1. **Combination of Quantity and Quality** (Hirsch, 2005; Mingers, 2009): The h-index integrates quantitative aspects (number of publications) with qualitative aspects (number of citations), thus providing a more comprehensive picture of a scientist's productivity and impact. This implies that a researcher must have a sufficient number of publications that are also widely cited to achieve a high h-index.
2. **Simplicity and Usability** (Hirsch, 2005): The h-index is relatively straightforward to compute and interpret. Consequently, it has become a popular tool not only among researchers but also among institutions and grant agencies for evaluating scholars. This metric is readily accessible through bibliometric databases such as Scopus, Web of Science, or Google Scholar.
3. **Resistance to Extremes** (Mingers, 2009): Unlike other metrics, such as the total number of citations, the h-index is not unduly influenced by one or two highly cited papers. Conversely, it is also not affected by papers with zero citations. It accounts for overall performance, meaning that a researcher with a balanced output of publications and citations will achieve a better score than one with only a single highly successful publication.
4. **Wide Applicability**: The h-index is applicable across various scientific disciplines and provides a uniform criterion for comparing researchers from different fields. Although some disciplines naturally have higher or lower citation rates, the h-index facilitates comparisons within specific fields.
5. **Support for Long-Term Productivity**: Since the h-index increases over time with the accumulation of cited publications, it supports sustained scientific activity and continuous research. Researchers are encouraged to produce not only a large volume of publications but also to maintain the quality of their work to ensure enduring citation.
6. **Low Sensitivity to Self-Citations** (Hirsch, 2005): Although the h-index may be slightly influenced by self-citations, this effect is less pronounced compared to other metrics. For self-citations to significantly impact the h-index, a researcher would need to cite their own work repeatedly and extensively, which would be apparent and often subject to criticism.

These advantages make the h-index a valuable tool for assessing scientific output, although it is crucial to acknowledge its limitations and complement it with additional metrics.

2.1 Disadvantages of the h-index

Current Literature Discusses the Following Limitations of the h-Index:

1. **Bias Towards Older Researchers** (Kelly & Jennions, 2006; Opthof & Wilde, 2009): The h-index increases over time, leading to naturally higher h-index values for researchers with longer careers, even if their current productivity and impact have diminished. This results in an undervaluation of younger researchers who may not have had sufficient time to accumulate citations, despite potentially high-quality research. Consequently, the h-index is not suitable for comparing researchers with differing lengths of scientific careers (Meyer, 2009; Sangwal, 2012). To address this, alternative indices have been proposed to be independent of career length, such as the age-independent publication index. For example, Abt (2012) found that dividing an author's h-index by the number of decades since their first publication yields a statistically constant index independent of the author's age. The m-index, which represents the h-index divided by the number of years since the first publication, is used in practice.

2. **Inappropriate Cross-Disciplinary Comparisons (Hirsch, 2005):** Different scientific disciplines have varying citation practices. For instance, citations are more common in the natural sciences than in the humanities. Using the h-index to compare researchers across different fields can therefore be misleading, as it does not account for differences in citation dynamics between disciplines.
3. **Neglect of Citation Context:** The h-index does not consider the context in which publications are cited. Citations can be either positive or critical, and not all citations carry the same weight. A publication with a high number of citations might be cited due to its controversy rather than its quality and positive contribution.
4. **Focus on Productivity and Impact (Hirsch, 2005; Martin, 1996):** The h-index is only one of many metrics and does not reflect all aspects of a scientific career, such as teaching activities, leadership in research teams, science communication, or other forms of societal impact. Therefore, evaluating a researcher's quality should not be limited to a single number.
5. **Sensitivity to Self-Citations (Meyer, 2009):** Although the h-index is less susceptible to self-citations compared to other metrics, it can still be influenced by them to some extent. Researchers who frequently cite their own work may artificially inflate their h-index, leading to a skewed assessment of their impact.
6. **Failure to Account for Collaborative Work (van der Wall, 2011):** The h-index does not differentiate between solo-authored papers and those produced within large teams. Researchers who frequently collaborate on major international projects may have a higher h-index, even if their individual contribution to these publications is relatively small. Some authors suggest adjusting for the number of authors per paper (Castillo et al., 2007) or considering author order, as the h-index does not account for variations in author roles.
7. **Static Nature (Bornmann & Marx, 2011):** The h-index is a static metric that does not reflect the dynamic nature of a scientific career. Simply put, the h-index cannot decrease. It does not provide information on recent productivity or how scientific performance has evolved over time. A researcher who was highly active years ago but has since reduced their activity may still have a high h-index, despite reduced current research activity.
8. **Exclusion of Diverse Outputs:** The h-index exclusively focuses on articles published in academic journals and their citations. It does not consider other significant scientific outputs, such as books, book chapters, technical reports, patents, software, or popular science articles (Meyer, 2009).
9. **Lack of Comprehensive Overview:** Each database (e.g., Scopus, Web of Science, Google Scholar) has its own collection of scientific publications and citations, leading to different h-index values for the same researcher depending on the database used. A researcher may have different h-index values across Scopus, Web of Science, and Google Scholar, with Google Scholar often yielding higher values due to its broader coverage. The absence of a unified, comprehensive h-index overview for researchers poses challenges for obtaining reliable and consistent assessments. Without a central system aggregating citation from all databases, obtaining an accurate picture of an individual's true scientific impact is difficult. This results in potential inaccuracies and discrepancies that complicate objective comparisons of researchers or evaluations of their contributions. Meyer (2009) also notes that minor inaccuracies in author names or changes due to marital status can lead to an incomplete representation of a researcher's actual h-index.
10. **Limitation in Reflecting the Impact of Highly Cited Papers:** Highly cited works are important for determining the h-index, but when selected as part of the top h works, the

number of citations they receive is not as critical. This is a limitation of the h-index that Egghe sought to address with the g-index (Egghe, 2006). For instance, if an author has one paper with 250 citations but an h-index of 7, it indicates that the other papers are not as highly cited. However, the h-index does not reflect the quality and impact of a single highly cited paper. The g-index, considered a similar synthetic metric, is defined as the largest number g for which the g most-cited papers together have at least g^2 citations (Egghe, 2006). The g-index aims to improve upon the h-index by better accounting for the citations of the most successful papers. Like the h-index, the g-index compares the number of papers and the citation rates of these papers and reflects the size of a particular subset of the most-cited papers. In Table 2, the calculation of the g-index for the situation described in Table 1 is provided.

Table 2
Calculation of the g-index

Document order	Number of citations	Cumulative number of citations	Document order ²
1.	17	17	1
2.	11	28	4
3.	6	34	9
h-index 4.	4	38	16
5.	2	40	25
6.	1	41	36
7.	0	41	49
8.	0	41	64

Source: own processing.

G-index = 6, which means that the 6 most-cited papers together have at least 6^2 citations, it means, at least 36 citations. As noted by Mingers (2009), it is questionable whether the g-index should be preferred over the h-index. The g-index is advantageous for those with a single "major impact," which the h-index avoids.

According to Koltun & Hafner (2021), despite the examination of many variants of the h-index and the proposal of sophisticated alternatives, none have supplanted the h-index as the dominant measure of scientific output. The persistence of the h-index can be attributed to the numerous positive characteristics mentioned above.

3 Objective of the Work, Methodology, and Research Methods

The objective of this work is to provide a comprehensive overview of the Hirsch index (h-index), including its definition, calculation method, and to analyze its advantages and disadvantages in the context of academic evaluation. The work focuses on a critical analysis of the h-index and its role in contemporary bibliometrics. Using 1,168 articles published by authors from the University of Economics in Bratislava in the Web of Science database, we demonstrate the assessment of the most influential authors according to selected indices. Our study employs bibliometric analysis to illustrate the evaluation of the most influential authors from the University of Economics in Bratislava through selected and commonly used bibliometric indices.

Data Collection and Data Cleaning Process: We utilized the Web of Science (WOS) database. WOS is commonly used in bibliometric analyses due to its reputation as a reliable bibliographic indexing tool that effectively captures scientific knowledge (Azam et al., 2021). Articles were searched using the keyword "University of Economics Bratislava" in the "Affiliation" field, meaning that the system retrieved all registered outputs in the WOS database where at least one of the authors was employed at the University of Economics in Bratislava at the time of publication. This search yielded 4,254 results. However, we focused only on outputs that received more than one citation, totaling 1,168 contributions.

Data Sources and Analytical Tools: For bibliometric analysis, we obtained datasets from the WOS database and processed them using the Biblioshiny application, which utilizes the R package tailored for bibliometric research (Ab Rashid, 2023). WOS was chosen for its extensive coverage of academic literature across various disciplines, including business, finance, and sustainability, encompassing journals, conference proceedings, and books. Biblioshiny offers an intuitive interface with advanced bibliometric tools that enhance user accessibility. It integrates data from multiple databases, including WOS, Scopus, Dimensions, Lens.org, PubMed, and Cochrane Library. Biblioshiny features organized menus for statistical and graphical analysis across various metrics and knowledge structures (Aria & Cuccurullo, 2017). Our methodology primarily involved bibliometric analysis focused on the impact of individual authors based on the number of registered works, citations, and indices such as the h-index, g-index, and m-index.

4 Results and Discussion

Our sample includes documents published in the Web of Science (WOS) database where at least one author is affiliated with the University of Economics in Bratislava, covering the period from 1974 to 2024. A total of 1,168 documents are available, originating from 474 different sources, including journals and books. The annual growth rate of documents is 0.81%, with an average document age of 8.45 years. The average number of citations per document is 8.86, and the total number of sources is 31,122.

The documents consist of various types, including 869 articles, 271 conference papers, 8 review studies, 6 book articles, 6 articles as conference contributions, 5 book reviews, 1 discussion, and 1 editorial material. The average number of authors per document is 2.96, with 28.17% of documents featuring international co-authorship. Of the total 1,649 authors, 244 documents are the result of the work of a single author. These and other descriptive statistics are detailed in Table 3.

Table 3
Descriptive Statistics of the Research Sample

DESCRIPTION	RESULTS
Timespan	1974:2024
Sources (Journals, Books, Etc)	474
Documents	1,168
Annual Growth Rate %	0.81
Document Average Age	8.45
Average Citations Per Doc	8.86
References	31,122
DOCUMENT CONTENTS	
Keywords Plus (ID)	1,371
Author's Keywords (DE)	3,953
AUTHORS	

Authors	1,649
Authors Of Single-Authored Docs	166
AUTHORS COLLABORATION	
Single-Authored Docs	244
Co-Authors Per Doc	2.96
International Co-Authorships %	28.17
DOCUMENT TYPES	
Article	869
Article; Book Chapter	6
Article; Early Access	1
Article; Proceedings Paper	6
Book Review	5
Discussion	1
Editorial Material	1
Proceedings Paper	271
Review	8

Source: own processing by Biblioshiny.

Table 4 presents the ranking (P) of individual authors based on their best results in the categories of h-index, g-index, m-index, and total number of citations (TC). According to the h-index results, the author E. Baumohl is in first place, with an overall h-index of 16, which can be interpreted as follows: each of the 16 works by this author published in WOS has received at least 16 citations. The second place is held by author Lyocsa, followed by Hajduová, Privara, and Jankelová. Winning in this category indicates that this author is considered a prominent researcher with a high number of citations in their publications. A high h-index suggests that the author has numerous publications that have garnered a significant number of citations, thus being well-known for his/her impact and influence in his/her research field. Shah & Jawaidd (2023) state that an h-index of three to five can be considered a standard for an assistant professor, eight to twelve for associate professors, and an h-index of fifteen to twenty is a good standard for promotion to a professor position. However, it is questionable whether the h-index can be scaled so simply and generally, as it should be noted that comparing researchers from different fields using the h-index is not only unrealistic but also unfair (Ayaz & Masood, 2020). We know that fields such as medicine or biology are cited disproportionately more than, for example, management. Nevertheless, for comparing impact within the same research field, this metric has high validity.

It is important to mention the previously discussed limitation of the h-index, particularly when relying solely on the WOS database, which is that it is not a comprehensive indicator. Even in this case, it can be assumed that the overall h-index for all authors would be higher if we considered all their outputs, not just those from WOS.

Table 4
Results of Author Evaluation Based on Selected Indicators

P	Author's name	h-ind	P	Author's name	g-ind	P	Author's name	m-ind	P	Author's name	Tc
1	Baumohl E	16	1	Lyocsa S	27	1	Privara A	1.333	1	Lyocsa S	817
2	Lyocsa S	15	2	Baumohl E	24	2	Baumohl E	1.067	2	Baumohl E	811
3	Hajduova Z	13	3	Vyrost T	21	3	Lyocsa S	1	3	Vyrost T	510
4	Privara A	12	4	Hajduova Z	19	4	Dimelis S	1	4	Hajduova Z	423
5	Jankelova N	11	5	Privara A	17	5	Jasurek I	1	5	Privara A	324
6	Vyrost T	11	6	Caplanova A	15	6	Malevris N	1	6	Molnar P	323
7	Joniakova Z	9	7	Jankelova N	14	7	Sioughe E	1	7	Jankelova N	292
8	Blstakova J	8	8	Joniakova Z	13	8	Hajduova Z	0.929	8	Tkac M	243
9	Pollak F	8	9	Blstakova J	11	9	Joniakova Z	0.9	9	Caplanova A	236
10	Caplanova A	7	10	Mihalcova B	11	10	Pollak F	0.889	10	Bucek M	232

11	Gavurova B	7	11	Miklosik A	11	11	Bakalar T	0.833	11	Smith A	226
12	Markovic P	7	12	Labaj M	11	12	Blstakova J	0.8	12	Sopkova G	220
13	Mihalcova B	7	13	Tumpach M	11	13	Cvirik M	0.8	13	Joniakova Z	206
14	Miklosik A	7	14	Siranova M	11	14	Prochazkova K	0.8	14	Pickles J	204
15	Molnar P	7	15	Pollak F	10	15	Molnar P	0.778	15	Puskarova P	196
16	Paksiova R	7	16	Markovic P	10	16	Fessler P	0.75	16	Verner R	191
17	Zak S	7	17	Paksiova R	10	17	Vyrost T	0.733	17	Luptacik M	173
18	Brezina I	6	18	Brezina I	10	18	Remenova K	0.714	18	Hudson J	173
19	Bucek M	6	19	Lacko R	10	19	Jankelova N	0.688	19	Miklosik A	161
20	Daneshjo N	6	20	Rievajova E	10	20	Daneshjo N	0.667	20	Valaskova K	159
21	Dorcak P	6	21	Bosakova L	10	21	Gallo P	0.667	21	Tumpach M	158
22	Furkova A	6	22	Hudec M	10	22	Skorkova Z	0.667	22	Kacaniova M	156
23	Gallo P	6	23	Servatka M	10	23	Cupak A	0.667	23	Mihalcova B	154
24	Kita P	6	24	Gavurova B	9	24	Demkova M	0.667	24	Krsak B	153
25	Labaj M	6	25	Daneshjo N	9	25	Matlovic R	0.667	25	Mura L	152
							...	...	...	...	...
							Caplanova A	0.33		Blstakova J	140
										Pollak F	124

Source: own processing by Biblioshiny.

If we were to evaluate authors based on the g-index, we would observe only a slight change in the ranking. At the top is author Lyocsa S., with a g-index of 27. This author has a high g-index, indicating that he has several highly cited publications. The g-index reflects the author's ability to produce work with significant impact and is often considered an indicator of substantial influence within a specific (very particular) field or topic. Upon closer examination of this author's work, we see that his most cited works have 123, 81, 65, 58, and 52 citations (source: WOS), which significantly enhances his g-index. Among the top ten authors according to the h-index, Pollak F. lags slightly behind in the g-index category, with a g-index of 10. This result suggests that the author's works are cited more evenly, meaning there is no single work cited significantly more than the others. Looking at his most cited works, the citation counts are quite uniform at 20, 19, 17, 15, 14, etc.

The m-index was developed as a modification of the h-index to create an age-independent metric. It is calculated as the ratio of the h-index to the number of years of publication. In this category, we observe a notably altered ranking compared to the results based on the h-index. There are several reasons for this. For instance, we have new authors who published only in the past year and their work has already been cited. On the other hand, there are authors who have been publishing for a relatively long time. A good example from the top list according to the h-index is author Čaplánová A., whose m-index is 0.333 because her first work was published in WOS in 2004, while her h-index is 7. We can thus conclude that this author achieved her relatively high h-index over a longer period compared to e.g. author Blštáková J., who has a comparable h-index but an m-index of 0.8. The drawback of the m-index is that it considers the first recorded work in the database, which does not necessarily mean that the author has been active only from that year. Conversely, it could mean that despite a long scientific career, the author's first work was registered in WOS relatively late. The m-index also does not account for the author's career trajectory (e.g., maternity leave) and similar factors, so it should be used as a supplementary measure in combination with other factors.

According to the TC column – the total number of citations for an author – the ranking changes again. Among the top ten authors by h-index, there is a significant change in the ranking of authors Blštáková J. and Pollak F., who have a lower total number of citations compared to others in the top ten. This fact can be interpreted as an advantage of the h-index, which reflects the balance between the number of publications and the number of citations. A higher h-index means that the author has more publications with a high number of citations that are evenly distributed, as is the case with these two authors who managed to achieve a higher h-index with a relatively lower total number of citations. The total number of citations simply shows how many citations all of an author's publications have received together. An author

with a higher total number of citations may have several highly cited publications, but not necessarily a large number of publications with high citation counts. Therefore, an author with a very high total number of citations might have a low h-index.

The significance of supplementary indexes is crucial when evaluating the performance of scientists, especially in cases like the one observed in our sample, where 8 authors achieved the same h-index of 7. For more details, see Table 5. To gain further insights into their work, it would be interesting to compare, for instance, the m-index, which is highest for author Molnar P. among the selected authors. His first registered work dates to 2016, and he has accumulated 323 citations – significantly more than anyone else on the list. These data suggest that he may be a highly successful and talented scientist who has gained exceptional scientific recognition in a very short time. This example illustrates the need to consider other supplementary indexes as well.

Table 5

Authors with the same h-index of 7.

Author's name	h-ind	g-ind	m-ind	TC	NP	Year of first publication
Caplanova A	7	15	0.333	236	17	2004
Gavurova B	7	9	0.538	137	9	2012
Markovic P	7	10	0.636	126	15	2014
Mihalcova B	7	11	0.636	154	22	2014
Miklosik A	7	11	0.538	161	19	2012
Molnar P	7	8	0.778	323	8	2016
Paksiova R	7	10	0.636	134	18	2014
Zak S	7	8	0.538	123	8	2012

Source: own processing by Biblioshiny.

6 Conclusion

The aim of this paper was to provide a comprehensive overview of the Hirsch index (h-index), its definition, calculation method, and to analyze its advantages and disadvantages in the context of academic evaluation. Our contribution presented a systematic review of the Hirsch index and provided an overview of its strengths and weaknesses in academic assessment. Our critical analysis compared the h-index with alternative metrics. Using a specific example of 1,168 documents from the Web of Science database authored by researchers from the University of Economics in Bratislava, we evaluated authors using the h-index as well as its alternatives – the m-index, g-index, and total citation count. We believe that the h-index is an important metric that could significantly enrich the evaluation tools at the University of Economics in Bratislava, and other institutions assessing the quality of scientific work, thereby improving decision-making regarding the evaluation of academic and research institution performance. University libraries have access to publication information from multiple databases, enabling them to offer true value for the h-index or other alternative indexes. Unfortunately, the University of Economics library currently does not provide this data in its reports.

Currently, there is no single comprehensive bibliometric index that can accurately describe the quality and impact of the published work of a specific researcher, journal, or research institution. Therefore, a combination of two or more metrics is generally recommended, including the h-index. It is debatable whether a researcher with an h-index of 10, where exactly 10 of their works have been cited 10 times each, is better than a researcher with an h-index of 5 who has published only 5 works, but each has been cited 200 times. It is also necessary to

acknowledge that a researcher's work is not solely about publication activity but often involves teamwork, collegial support, mentoring young researchers, or other forms of support that do not fit into any index. Thus, we do not support the view that indexes (of any kind) should be the sole criterion for evaluating a researcher's work. As Albert Einstein said (Schreiber, 2007), "Not everything that can be counted counts, and not everything that counts can be counted."

Acknowledgment

This paper is a partial output of the VEGA MŠ SR project 1/0010/23.

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Rozvoj ľudského kapitálu prostredníctvom online platforiem v pandemickej ére

The Development of Human Capital through Online Platforms in the Pandemic era

Zuzana Dzilská

Abstract

Today's world is greatly impacted by advances in technology and artificial intelligence (AI). From the company's point of view, there is a high demand for qualified labor, and on the other hand, employees are exposed to an intense pressure to adapt to new technology or a new way of doing business. The aim of this study is to identify whether there has been a shift from the traditional "in class" training to online training and on the possibility to use LinkedIn Learning platform as a suitable tool for online training. The paper is based on a study conducted by the Boston Consulting Group and The Network, and on the information available in the LinkedIn Learning Report. Due to the pandemic, employees tend to feel insecure and are therefore more open to the possibility of retraining to expand their professional qualifications. According to the findings, online training noted a much more significant increase year-on-year percentage increase between 2018 and 2020 in comparison to the traditional learning such as conferences, seminars etc. Due to that, LinkedIn Learning is a suitable platform to satisfy the increased demand for the development of human capital. LinkedIn Learning can simultaneously satisfy not only the needs of employees, but also the needs of the company. On one hand, employees can improve their skills and knowledge, while the company is driving this activity using existing platform. Therefore, there is no need to devote additional resources to cover these needs which ultimately leads to the development of the company.

JEL classification: L-81, O32, M21

Keywords: employee development, online platform, human capital

1 Úvod

Globálna pandémia COVID-19 mala enormný vplyv na fungovanie ekonomiky, kde dôsledkom ochorenia sa spomalila, až zastavila podnikateľská aktivita subjektov vo väčšine odvetví. Následne museli podnikateľské subjekty čeliť rýchlemu nárastu nákladov, a to hlavne v oblasti ľudských zdrojov (Bečka, 2020). Pandémia zmenila spôsob podnikania a ekonomický trend sa vyvíja smerom k rozvoju digitalizácie procesov pričom podnikanie sa postupne presunulo do online priestoru (Pollák et al., 2022). Online podnikanie (online predaj a nákup) zahŕňa stratégie a procesy, ale aj aktuálne riešenia, umožňujúce vzájomné prepojenie podniku a zákazníka. Toto prepojenie ponúka široké spektrum výhod nielen pre zákazníkov v podobe zvýšeného komfortu, ale aj pre podniky v podobe cenných informácií, ktoré sú vhodné pre následnú analýzu (Saruç, N., Dorčák, P., Pollak, F., 2013). Avšak, postupný presun podnikania do online priestoru má za následok zmenu v trende v oblasti ľudského kapitálu. Vplyvom pandémie dochádza k zmene v skladbe povolání, mnohé pracovné pozície zanikajú alebo vznikajú nové. Rastie tak tlak na podniky, ktoré čelia zásadným problémom v manažmente ľudského kapitálu ale aj na zamestnancov, ktorí sa musia rekvalifikovať a neustále vzdelávať, aby si udržali svoje pracovné miesto (Šuteková, 2020).

Krátko po vypuknutí pandémie mnoho významných podnikov umožnilo svojim zamestnancom pracovať z domova za účelom ochrany zdravia. Práca na diaľku podnietila

situáciu, v ktorej sa podniky a zamestnanci museli spoliehať na technológie. Práve preto podniky potrebovali zvýšiť investície do technologických komunikačných nástrojov (Çolak, M. & Tanyildizi, E., 2023). Rozvoj ľudských zdrojov sa zkrátka stal záujmom a stratégiou rozvoja mnohých podnikov. Je to hlavne kvôli tomu, že ľudské zdroje predstavujú zdroje schopné vytvárať konkurenčné výhody pre podniky. Orientácia na rozvoj kariéry pre zamestnancov je vnímaná ako základ pre zlepšenie efektívnosti riadenia pracovného výkonu (Nhung, H. 2023).

Štúdia Boston Consulting Group a spoločnosti The Network, ktorá bola publikovaná autorským kolektívom Strack et al. v roku 2021, uvádza, že vplyvom pandémie COVID-19 bolo viac ako tretina pracovníkov na celom svete prepustená alebo musela prijať skrátený pracovný čas. V zamestnancoch to vyvolávalo neistotu zamestnania a aj finančného príjmu. Trh práce je vysoko konkurenčné miesto kde je čoraz ťažšie odlišiť sa od ostatných uchádzačov o zamestnanie. Online platformy ako napríklad LinkedIn môžu byť kľúčovou súčasťou pri budovaní profesionálnej kariéry (Cooper, B. & Naatus, M., 2014). Podľa niektorých výskumov sa preukázalo, že vnímanie využívania sociálnych sietí je u jednotlivých ekonomických skupín pomerne rozdielne. Predpokladá sa, že táto situácia môže byť spôsobená rozdielnym vnímaním rizika a príležitostí naprieč ekonomickými skupinami zákazníkov (Pollák, F., Markovič, P., 2021).

Nakoľko v dôsledku pandémie COVID-19 pociťujú jednotlivci neistotu zamestnania, tento článok sa zameriava na analýzu možnosti rozšírenia odbornej kvalifikácie prostredníctvom online platformy. Táto problematika je vnímaná ako výskumný priestor, ktorý je možné dodatočne preskúmať. Následne je zámerom článku prebádať možnosť použitia sociálnej platformy LinkedIn za účelom rozšírenia kvalifikácie zamestnancov a vzdelávanie sa pomocou online kurzov.

Cieľom tejto štúdie je identifikovať či nastala zmena v možnostiach vzdelávania sa v období od vypuknutia pandémie COVID-19, a teda od roku 2019. V prípade, ak môžeme pozorovať zmenu, ďalej sa pokúsime vymedziť aká zmena nastala. Ako nástroj sme si stanovili publikované štúdie a články, ktoré dôkladne preskúmame hlavne v oblasti online vzdelávania prostredníctvom používania online platforiem. Na základe zistení, následne navrhujeme možnosť začlenenia LinkedIn Learning ako online platformy, ktorá môže byť využívaná na rozvoj profesionálnej kariéry ale aj online identity jedinca.

2 Súčasný stav riešenej problematiky doma a v zahraničí

Zatváranie podnikov v dôsledku pandémie COVID-19 negatívne ovplyvňovalo trhy práce na celom svete, čo malo za následok vyššiu stratu pracovného času, než sa očakávalo. Strata pracovného času následne vedie k zvýšeniu nezamestnanosti a nedostatku ekonomickej aktivity. Zníženie pracovného času ma za následok značné straty pracovného príjmu. Na druhej strane existujú dôkazy o zvýšení produktivity, najmä pokiaľ ide o prácu na diaľku respektíve z domu. Jedná sa teda o pracovníkov, ktorí sú schopní pokračovať v práci v podmienkach pandémie (Dahik et al., 2020).

Naopak, niektoré štúdie zaznamenali, že epidémia COVID-19 má negatívny vplyv na zamestnancov z hľadiska pracovných skúseností. Epidémia výrazne ovplyvnila zdravie zamestnancov, najmä na pracoviskách. Toto zdravie spôsobilo poškodenie nielen fyzické, ale aj psychické. Z psychologického hľadiska mala pandémia COVID-19 negatívne dôsledky na jednotlivcov, ako sú napríklad úzkosť a stres. Prieskum medzi 2 700 zamestnancami zistil, že 57 percent zamestnancov uviedlo vyššiu úroveň úzkosti, 75 percent sa cítilo sociálne izolovanejšie a 67 percent pociťovalo vyššiu úroveň stresu od začiatku pandémie (Çolak, M. & Tanyildizi, E., 2023).

Riadenie ľudských zdrojov sa od vypuknutia pandémie stalo ešte dôležitejším pre podniky, ktoré nechcú prísť o svojich zamestnancov a chcú ich využiť čo najefektívnejšie. Pandémia bola neuveriteľne náročná pre zamestnávateľov aj zamestnancov a jej následky pociťujeme v ekonomike dodnes. Existuje mnoho publikácií zameraných na kariérny úspech a spôsoby ako ho dosiahnuť. Avšak, to s čím sa nedá dopredu počítať je ekonomická situácia akú zapríčinila pandémia. Aj v prípade ak má jednotlivec naštudované rôzne štúdie alebo literatúru, väčšina z nás pravdepodobne pociťuje neistotu, prípadne miernu úzkosť ak začína konverzáciu s neznámymi ľuďmi na preplnených obchodných akciách. Profesionálne stránky sociálnych sietí ako napríklad LinkedIn, by mohli byť užitočnými nástrojmi, ktoré ľuďom pomôžu pri nadviazovaní kontaktov a vytváraní profesionálnych sietí (Baumann, L. & Utz, S., 2021). LinkedIn je profesionálna online sociálna platforma, ktorú vlastní spoločnosť Microsoft. V roku 2020 malo celosvetovo profil na online platforme LinkedIn viac ako 722 miliónov profesionálov (Dinath, W., 2021). Profesionálny budovanie siete kontaktov je definované ako pokus jednotlivca rozvíjať a udržiavať vzťahy s ostatnými, ktorí majú potenciál im pomáhať v ich práci alebo kariére a je považovaný za dôležitý nástroj kariérneho úspechu. Viaceré štúdie odhalili pozitívny vzťah medzi profesionálnymi sieťami a výsledkami kariéry (Baumann, L. & Utz, S., 2021). Profesionálne vytváranie sietí je kľúčovou zručnosťou v oblasti riadenia kariéry, ktorú jednotlivec potrebuje hlavne v období spomalenia ekonomiky. Niekoľko stratégií zameraných na zamestnateľnosť sa usiluje o vytváranie profesionálnych sietí vrátane mentoringu, pohovorov s informáciami o kariére, učenia integrovaného do práce, elektronických portfólií a výziev v oblasti inovácií v priemysle (Healy et al., 2023).

Podľa Çolak a Tanyildizi, sa takmer 90 percent manažérov pracujúcich na oddelení ľudských zdrojov obáva fluktuácie zamestnancov. To znamená zvýšenú konkurenciu pre kvalifikovaných a vzdelaných pracovníkov. Aby sme však mohli premýšľať o efektívnejšom riadení talentov, očakáva sa, že sa dôraz presunie predovšetkým na zlepšovanie zručností svojich zamestnancov prostredníctvom manažérskeho prístupu založeného na zručnostiach. Pre podnik je výhodné zamerať sa na talenty vlastných zamestnancov a na ich rozvoj zručností. Následne sú zamestnancom poskytnuté potrebné kvalifikačné programy zamerané na rozvoj, umožní to podniku udržať si kvalitnú pracovnú silu (Çolak, M. & Tanyildizi, E., 2023).

Výsledkom je, že ak podniky budú venovať väčšiu pozornosť rozvoju zamestnancov, poskytovať im možnosti vzdelávania sa, budú vedieť efektívnejšie čeliť ekonomickým situáciám ako napríklad pandémia COVID-19. Následne budú podniky vedieť nájsť flexibilnejšie riešenia pomocou talent manažmentu a rozvoju kvalifikovanej pracovnej sily. Podľa Linda Jingfang Cai (2023) poskytnutie nástrojov zamestnancom na podporu ich kariérneho rozvoja a ponúknutie ciest k internej mobilite zvyšuje angažovanosť zamestnancov a rozširuje zručnosti pracovnej sily. Zručnosti potrebné pre akúkoľvek danú prácu sa menia rýchlejšie ako kedykoľvek predtým. Údaje zozbierané spoločnosťou LinkedIn ukazujú, že od roku 2015 sa zručnosti pre pracovné miesta zmenili približne o 25 percent a očakáva sa, že do roku 2027 sa toto číslo zdvojnásobí. Približne 89 percent profesionálov súhlasí s tým, že proaktívne budovanie zručností pomôže ich organizáciám orientovať sa v budúcnosti práce (Jingfang Cai, 2023). Autori sa zhodujú, že existuje viacero dimenzií celoživotného vzdelávania v kontexte profesionálneho rozvoja ako napríklad úloha zamestnávateľov, potreba personalizovaného vzdelávania a vznikajúcej potreby celoživotného vzdelávania. Keďže svet práce a vzdelávania sa počas pandémie COVID-19 postupne presúval do online prostredia je možné očakávať, že tento trend vytlačí osobné učenie v triede skôr, ako sa očakávalo. Pokrok v technológii tiež urýchlil tento posun, čo mení očakávania týkajúce sa flexibility učenia sa v pohybe (Yusoff, A., 2022).

3 Výskumný dizajn

Analytická časť článku je zhotovená na základe prieskumu spoločností Boston Consulting Group a The Network (Strack et al., 2021), a zároveň na základe podkladov dostupných v LinkedIn Learning Report publikovaného v roku 2023. Spoločnosť Boston Consulting Group (ďalej BCG) a spoločnosť The Network (spolu so svojimi pridruženými organizáciami) uskutočnili štúdiu medzi októbrom a decembrom 2020. Celkovo sa jej zúčastnilo 208 807 ľudí v 190 krajinách. Vzorka zahŕňala približne rovnaký podiel mužov a žien, z ktorých väčšina pracuje v komerčných odvetviach, ale v prieskume je zastúpený aj verejný sektor a neziskové organizácie. Väčšina respondentov je vo veku medzi 20 a 40 rokov, avšak prieskumu sa zúčastnili aj respondenti vo vyššom veku ako 40 rokov. Z hľadiska vzdelanosti sa štúdie zúčastnili respondenti bez ukončeného vzdelania až po vzdelanie tretieho vysokoškolského stupňa, t.j. s doktorátom.

V krátkosti predstavíme dve spoločnosti, ktoré sa na štúdiu podieľali, a to Boston Consulting Group a The Network. Bostonská poradenská skupina (alebo Boston Consulting Group, ďalej BCG) je globálny konzultačný podnik, ktorá spolupracuje s lídrami v oblasti obchodu s cieľom riešiť ich najdôležitejšie výzvy a využiť ich najväčšie príležitosti. BCG bola založená v roku 1963 a dnes úzko spolupracuje s klientmi, pričom je zameraná na transformačný prístup orientovaný na prospech všetkých zainteresovaných strán, a teda z pohľadu spoločností je cieľom umožniť rast, vybudovať udržateľnú konkurenčnú výhodu a podporiť pozitívny spoločenský vplyv (Strack et al., 2021). Spoločnosť The Network je globálnou alianciou viac ako 60 popredných náborových webových stránok, pôsobiacich vo viac ako 130 krajinách. The Network bola založená v roku 2002 v Bruseli spoločnosťami StepStone and Totaljobs a postupne sa z nej stal globálny líder v online náboře, ktorý poskytuje služby viac ako 2000 globálnym korporáciám. V súčasnosti spoločnosť The Network združuje viac ako 60 popredných svetových pracovných portálov, ktoré spoločne pokrývajú viac ako 150 krajín (The Network, 2024).

Cieľom štúdie podniku BCG a podniku The Network bolo identifikovať zmeny na pracovisku, ktoré vyvolala kríza COVID-19, a ktoré pravdepodobne pretrvávajú aj po pandémie (Strack et al., 2021). Skúmané boli výzvy pre zamestnávateľov v oblasti rekvalifikácie svojich zamestnancov, a zároveň aj riziká pre rôzne skupiny pracovných pozícií zo strany zamestnancov. Nástrojom štúdie bol prieskum so 40 otázkami k rôznym témam. Ako príklad môžeme uviesť ochotu pracovať v zahraničí, vplyv pandémie na pracovné preferencie zo strany zamestnancov, ich ochotu rekvalifikovať sa alebo učiť sa nové zručnosti. Informácie zhromaždené v prieskume (vrátane národnosti ľudí a úroveň hierarchie v ich organizáciách) umožnili analyzovať postoje pracovníkov podľa rôznych parametrov. BCG tiež uskutočnila následné rozhovory s vybranými účastníkmi štúdie (Strack et al., 2021).

Výsledky štúdie BCG a The Network (Strack et al., 2021) sú následne v analytickej časti článku doplnené o poznatky publikované spoločnosťou LinkedIn prostredníctvom Workplace Learning Report (Workplace Learning Report, 2023). LinkedIn je jedna z najväčších platforiem sociálnych sietí pre profesionálov, ktorá poskytuje užívateľom viacero možností vzdelávania sa v rámci LinkedIn Learning (rozumej učenie sa prostredníctvom LinkedIn). Podľa najnovších údajov dostupných v "LinkedIn Learning Report" sa stále viac ľudí chce dozvedieť o tom, ako používať AI (umelú inteligenciu) vo svojej profesii na zlepšenie procesov, ktoré vedú k rozvoju zamestnancov pomocou učenia sa a kariérneho postupu, čo v konečnom dôsledku vedie k rozvoju spoločnosti. LinkedIn dokáže súčasne uspokojiť nielen potreby zamestnancov, ale aj potreby podniku, na jednej strane si zamestnanci môžu zdokonaľovať svoje zručnosti a znalosti, pričom spoločnosť je schopná túto činnosť vykonávať s využitím existujúcej platformy. Preto

nie je potrebné venovať dodatočné interné zdroje spoločnosti na pokrytie týchto potrieb. Prostredníctvom štúdií sme následne skúmali problematiku a vyvodili závery.

V kontexte zmien spôsobených vplyvom pandémie COVID-19 v rámci štúdie hľadáme odpovede na nasledujúce výskumné otázky:

1. Môžeme vplyvom pandémie COVID-19 pozorovať zvýšený záujem o vzdelávanie prostredníctvom online inštitúcií?
2. Je vhodné odporučiť LinkedIn Learning ako nástroj na uspokojenie zvýšeného dopytu po online vzdelávaní?

4 Výsledky práce a diskusia

Podľa štúdie BCGroup a The Network bola viac ako tretina pracovníkov na celom svete prepustená alebo musela prijať skrátený pracovný čas vplyvom pandémie COVID-19 a jeho následkov v ekonomike ako napríklad zatvorenie podnikov alebo spomalenie ekonomickej činnosti. Táto situácia spôsobila, že viacerým zamestnancom bol narušený profesionálny život a tým pádom vyvoláva aj otázku či práca, ktorú robili v minulosti, bude prácou, ktorú budú chcieť alebo môcť vykonávať aj v budúcnosti. Pocit, že sa treba pripraviť na profesionálnu neistotu, neprevláda len v skupine zamestnancov, ktorí boli najviac ovplyvnení pandemiou (napríklad poklesom príjmu) ale prevláda v spoločnosti celkovo.

V dôsledku pandémie COVID-19 môžu zamestnanci pociťovať neistotu zamestnania, a teda je pravdepodobné, že sa zamýšľajú nad možnosťou zmeny kariéry respektíve rozšírenia profesionálnej kvalifikácie. Ukazovateľom flexibility zamestnancov adaptovať sa na zmenu ekonomického prostredia a situácie na trhu je ochota rekvalifikovať sa. Podľa prieskumu BCG a The Network sa z celkovo zúčastnených respondentov vyjadrilo nasledovne:

- 68 % respondentov je ochotných sa rekvalifikovať,
- 28 % respondentov ochotných sa rekvalifikovať v prípade potreby,
- 4 % respondentov nie je ochotných sa rekvalifikovať.

Graf 1

Ochota rekvalifikovať sa - Celosvetovo



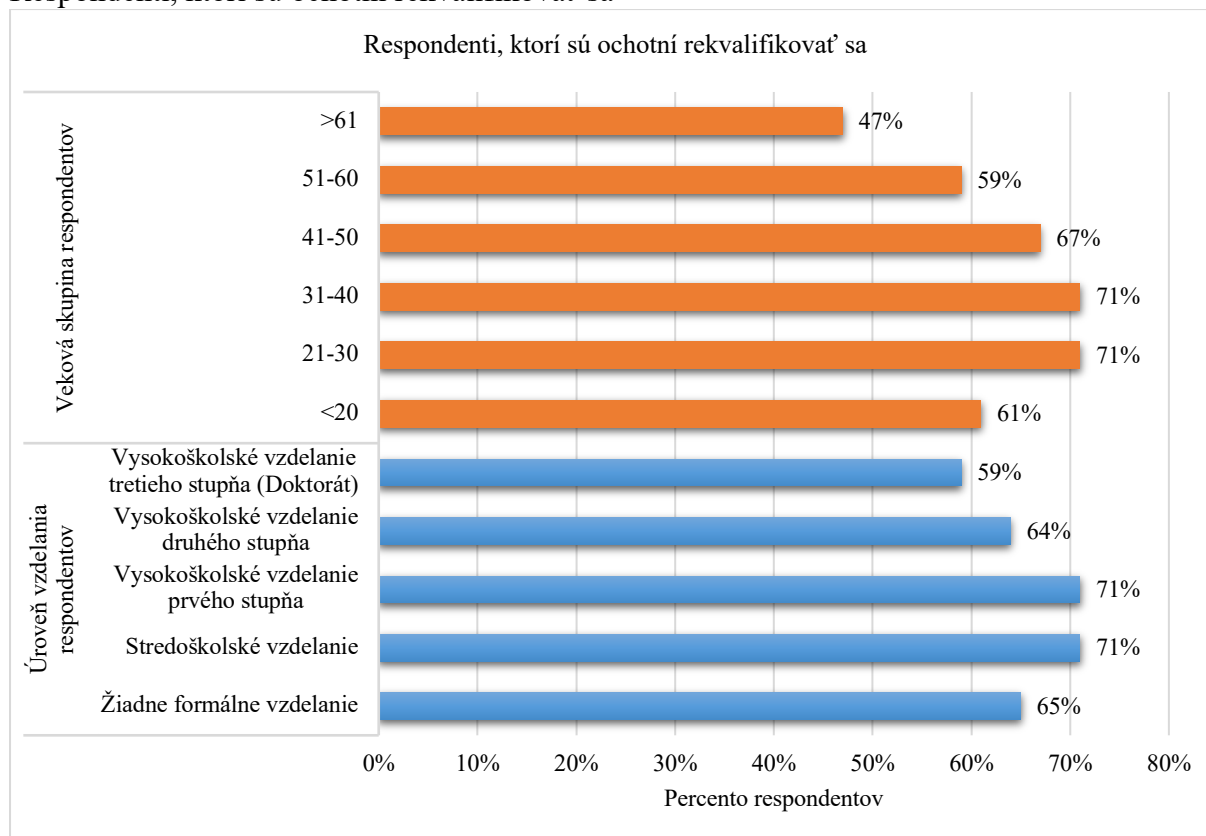
Zdroj: vlastné spracovanie, BCG/The Network štúdia

Ochota rekvalifikovať na základe prieskumu BCG a The Network je znázornená na grafe 1. Dalo by sa konštatovať, že takmer 7 z 10 opýtaných je ochotných sa rekvalifikovať. Následne sa štúdia zamerala na ochotu rekvalifikácie respondentov podľa úrovne ukončeného vzdelania a vekovej skupiny. Ochota je obzvlášť vysoká medzi ľuďmi v skoršej a strednej časti kariéry, a teda 71 percent respondentov vo veku 21 až 40 rokov je ochotných rekvalifikovať sa. Nižšia ochota je zaznamenaná vo vekovej skupine do 20 rokov, na úrovni 61 percent. Následne, 67 percent respondentov vo veku 41 až 50 rokov je ochotných rekvalifikovať sa, skupina

respondentov vo vyššej vekovej skupine s rozmedzím 51 až 60 rokov vykazuje v porovnaní s ostatnými vekovými skupinami nižšiu mieru ochoty rekvalifikovať sa, na úrovni 59 percent. Ako posledná ostala skupina respondentov starších ako 61 rokov, tá demonštruje ochotu rekvalifikácie na úrovni 47 percent. Ochota rekvalifikovať sa podľa vekovej skupiny je graficky znázornená na grafe 2.

Graf 2

Respondenti, ktorí sú ochotní rekvalifikovať sa



Zdroj: vlastné spracovanie, BCG/The Network štúdia

Okrem ochoty rekvalifikovať sa podľa vekovej skupiny sa štúdia zamerala aj na meniacu sa ochotu podľa úrovne vzdelania. Ako môžeme pozorovať na grafe 2, v prípade žiadneho formálneho vzdelania je ochota rekvalifikovať sa na úrovni 65 percent. S vyšším ukončeným vzdelaním, a teda respondenti so stredoškolským vzdelaním a s vysokoškolským vzdelaním prvého stupňa vykazujú ochotu rekvalifikovať sa na úrovni 71 percent. Ochota je následne mierne nižšia v skupine respondentov s ukončeným vysokoškolským vzdelaním druhého stupňa, a to v miere 64 percent. Respondenti s ukončeným vysokoškolským vzdelaním tretieho stupňa vyjadrili 59 percentnú ochotu rekvalifikovať sa. Dalo by sa konštatovať, že s vyššou úrovňou vzdelania ochota rekvalifikácie klesá, čo môže byť spôsobené tým, že kvôli vyššej úrovni vzdelania je aj miera špecifikácie zamerania na určitú tematickú oblasť vyššia. V prípade ak má respondent ukončené vysokoškolské vzdelanie tretieho stupňa alebo doktorát v oblasti medicíny so špecializáciou napríklad na oblasť chirurgie, pediatrie alebo iné, je úplne pochopiteľné, že ochota rekvalifikovať sa na iný odbor je nižšia nakoľko takáto rekvalifikácia by bola časovo a pravdepodobne aj finančne náročná. Na druhej strane, v prípade absolventa strednej obchodnej školy môže si nájsť uplatnenie vo viacerých odvetviach, napríklad v účtovníctve, administratíve, poisťovníctve alebo aj informatike, prípadne iné. Tým pádom, ochota rekvalifikácie je pravdepodobne vyššia ako v prípade jednotlivca s doktorátom. A potom sú tu ľudia, ktorých ochota rekvalifikovať sa nezávisí od ich zamestnania, veku alebo

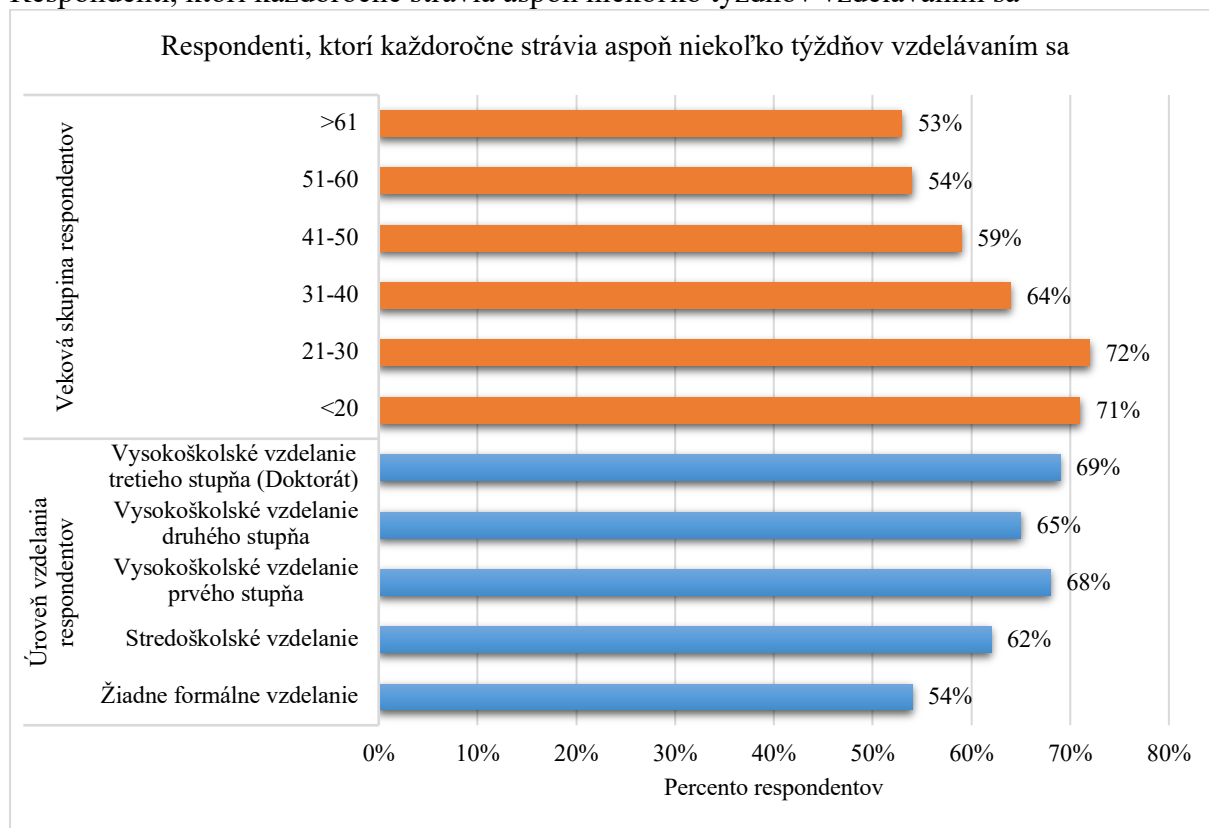
vzdelania, ale od individuálnych charakteristík, ako je chuť na osobnú alebo profesionálnu inováciu.

Vyššie uvedená analýza ochoty rekvalifikácie respondentov je úzko spätá s učebnými návykmi respondenta. Vzdelávanie a rozvoj schopností a zručností je prioritou globálnej pracovnej sily. Na základe prieskumu BCG a The Network (Strack et al., 2021), približne 65 percent respondentov venovalo značné množstvo času (niekoľko týždňov alebo viac) učeniu. Je to skôr ojedinelé, aby pracovník netrúfal čas s učením. Podľa prieskumu, čas strávený učením do značnej miery sleduje ochotu rekvalifikovať sa. Dodatočne, čas strávený učením sa je previazaný aj s geografickou metrikou, kde africké krajiny sú väčšinou na vrchole zoznamu a európske krajiny sú na konci. Môže to byť čiastočne spôsobené rozdielnymi vzdelávacími systémami, nakoľko jednotlivci v západných ekonomikách často prechádzajú zdĺhavými a vysoko štruktúrovanými vzdelávacími procesmi, ktoré im dávajú zručnosti a znalosti, ktoré môžu okamžite uplatniť v pracovnom svete. Naopak, pre menej rozvinuté ekonomiky nie je také bežné mať vysokokvalifikovaných absolventov na trhu práce čo môže byť dôvodom pre vyšší záujem o odbornú prípravu.

Učebné návyky ovplyvňujú okrem domovskej krajiny pracovníka aj iné faktory. Vek je jedným z nich. Zvyk učiť sa je najsilnejší u tých, ktorí sú na začiatku svojej kariéry a neskôr sa vytráca. Úroveň dosiahnutého vzdelania je tiež faktorom času stráveného učením, pričom tí najvzdelanejší s väčšou pravdepodobnosťou trávia každý rok určité množstvo času s obnovovaním svojich zručností. Vzdelaní ľudia majú tiež tendenciu byť zamestnaní v zamestnaniach založených na vedomostiach (príkladmi sú inžinierstvo, veda a právo), kde sa neustále neučiť znamená riskovať zastaranie. Výsledky výskumu sú súhrnne prezentované na grafe 3.

Graf 3

Respondenti, ktorí každoročne strávia aspoň niekoľko týždňov vzdelávaním sa



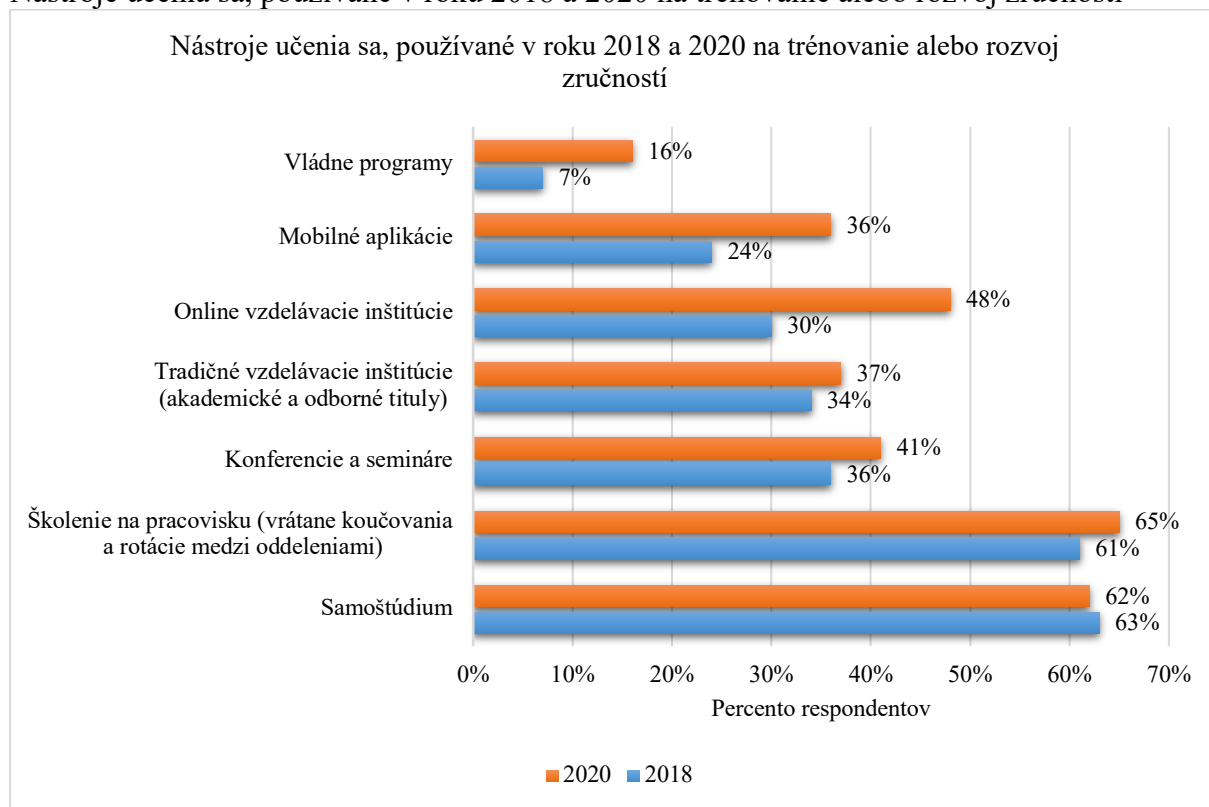
Zdroj: vlastné spracovanie, BCG/The Network štúdia

Podľa prieskumu BCG a The Network (Strack et al., 2021) v roku 2020 nastala jedna z najväčších zmien vo vzdelávaní, a to rýchly rast online nástrojov na učenia sa. Pandémia spôsobená ochorením COVID-19 je len posledným globálnym šokom, ktorý mal značné ekonomické následky. Nepredvídateľné situácie v ekonomike v spojitosti s rastúcou tendenciou smerom k automatizácii ohrozujú organizačnú stabilitu a vyžadujú si schopnosť adaptovať sa od pracovníkov na celom svete. Zamestnanci sú otvorenejší ako kedysi učeniu sa mimo fyzickej učebne. V skutočnosti to teraz niektorí ľudia uprednostňujú, čo spôsobuje, že aj ponuka online kurzov sa značne zvýšila.

Graf 4 znázorňuje nástroje učenia sa, ktoré boli použité na tréning alebo rozvoj zručností zamestnancov. Ako môžeme pozorovať, podiel ľudí, ktorí používajú na vzdelávanie buď online vzdelávaciu inštitúciu, alebo mobilnú aplikáciu výrazne vzrástol medzi rokmi 2018 a 2020. V oblasti online vzdelávacích inštitúcií vidíme, že nárast medzi rokmi 2018 a 2020 je na úrovni 18 percent. Čo sa týka mobilných aplikácií, taktiež môžeme pozorovať nárast z 24 na 36 percent a teda nárast na úrovni 12 percent. Ďalšou zmenou od roku 2018 je zvýšené využívanie vládnych vzdelávacích programov. Využívanie takýchto programov sa viac ako zdvojnásobilo, pravdepodobne kvôli snahám vlád zvýšiť kvalifikáciu a rekvalifikáciu pracovníkov počas pandémie. V ostatných oblastiach pozorujeme taktiež zvýšenie používania do rozmedzia 5 percent, okrem oblasti samoštúdia, ktoré zaznamenalo pokles o 1 percento.

Graf 4

Nástroje učenia sa, používané v roku 2018 a 2020 na tréning alebo rozvoj zručností



Zdroj: vlastné spracovanie, BCG/The Network štúdia

Aby bolo možné lepšie interpretovať zmenu, ktorá nastala medzi rokmi 2018 a 2020 vypočítala sa úroveň medziročnej percentuálnej zmeny. Keďže disponujeme údajmi o percente respondentov, ktorí používali určitý nástroj na tréning a rozvoj zručností v roku 2018 a v roku 2020, vieme vypočítať percentuálnu zmenu medzi danými rokmi. Výsledok by bol

vyjadrený v percentách a demonštruje množstvo zmien medzi dvoma vybranými rokmi a vypočíta sa takto:

$$[(\text{Číslo v neskoršom čase} / \text{číslo v skoršom čase}) - 1] * 100$$

Na základe vyššie uvedeného je možné vidieť výsledky výpočtu medziročnej percentuálnej zmeny v Tabulke 1 nižšie.

Tabuľka 1

Medziročná percentuálna zmena v nástrojoch použitých na tréningovanie a rozvoj zručností

Nástroj použitý na tréningovanie a rozvoj zručností	Percentuálna zmena
Samoštúdium	-2%
Školenie na pracovisku (vrátane koučovania a rotácie medzi oddeleniami)	7%
Tradičné vzdelávacie inštitúcie (akademické a odborné tituly)	9%
Konferencie a semináre	9%
Mobilné aplikácie	50%
Online vzdelávacie inštitúcie	60%
Vládne programy	129%

Zdroj: vlastné spracovanie, BCG/The Network štúdia

Vo vzťahu k predchádzajúcim údajom a na základe výpočtu medziročnej percentuálnej zmeny môžeme konštatovať, že najvýznamnejší nárast vo výške 129 percentuálnych bodov môžeme pozorovať vo využívaní vládnych vzdelávacích programov. Následne, najsignifikantnejší percentuálny nárast medzi rokmi 2018 a 2020 môžeme pozorovať v oblasti online vzdelávacích inštitúcií vo výške 60 percent a v oblasti mobilných aplikácií na úrovni 50 percent. Vplyvom pandémie COVID-19 sa na jednej strane snažili vlády reagovať na vzniknutú situáciu a podporiť rekvalifikáciu a vzdelávanie sa jednotlivcov. Na druhej strane, môžeme pozorovať, že záujem o online vzdelávanie či už prostredníctvom online vzdelávacích inštitúcií alebo mobilných aplikácií výrazne stúpol. Zvyšné nástroje konferencie, školenia, semináre zaznamenali nárast v rozmedzí do 10 percent, okrem samoštúdia, ktoré mierne kleslo.

V kontexte výskumnej otázky je na základe zistení možné zodpovedať výskumnú otázku:

Môžeme vplyvom pandémie COVID-19 pozorovať zvýšený záujem o vzdelávanie prostredníctvom online inštitúcií?

Na základe vyššie uvedenej štúdie a analýzy dát môžeme konštatovať, že vplyvom pandémie COVID-19 je zvýšený záujem o vzdelávanie prostredníctvom online vzdelávacích inštitúcií. Medziročný percentuálny nárast v oblasti online vzdelávacích inštitúcií je vo výške 60 percent. Dodatočne, mobilné aplikácie, ktoré sú použité ako nástroj na tréningovanie a rozvoj zručností zaznamenali taktiež medziročný percentuálny nárast vo výške 50 percent. V porovnaní s tým, nástroje na tréningovanie a rozvoj ako napríklad (a) konferencie a semináre, (b) tradičné vzdelávacie inštitúcie (akademické a odborné tituly) alebo (c) školenie na pracovisku (vrátane koučovania a rotácie medzi oddeleniami) nezaznamenali medziročný nárast vyšší ako 10 percentuálnych bodov. Na základe toho, je možné tvrdiť, že sa dopyt po online nástrojoch na vzdelávanie sa zvýšil, a na vyššej úrovni ako viac ako dopyt po tradičných vzdelávacích prostriedkoch ako napríklad fyzické hodiny.

Výzvy globálnej pandémie, nedostatku zručností a ekonomickej neistoty mali za následok zvýšený dopyt po online tréningoch, čo spôsobilo rozvoj viacerých online platforiem, ktoré tieto služby poskytujú. Ako príklad platformy, ktorá poskytuje online tréningy môžeme uviesť spoločnosť LinkedIn. Pandémia spôsobila šokové vlny vrátane narušenia talentov, inflácie,

nedostatku zručností a to spôsobilo globálne napätie. Keďže si však stále viac podnikov uvedomuje, že náročné výzvy si vyžadujú nové zručnosti zamestnancov, spoločnosť LinkedIn vie pokryť zvýšený dopyt po online tréningoch. Podľa Workplace Learning Report publikovaného spoločnosťou LinkedIn v roku 2023 (Jingfang Cai, 2023), až 89 % profesionálov súhlasí s tým, že proaktívne budovanie zručností zamestnancov pomôže orientovať sa v rozvíjajúcej sa budúcnosti práce. Mnoho organizácií sa po pandémie stretávalo s bezprecedentnou fluktuáciou zamestnancov. Odborníci na rozvoj talentov naďalej zápasia s nedostatkom zručností a rizikom fluktuácie kritických talentov.

Keďže podniky hľadajú spôsoby, ako sa orientovať v zmene priorít, rastúcich očakávaniach zamestnancov a ekonomickej neistote, vzdelávanie vždy pomôže vybudovať zručnosti a rozvíjať ľudí pre silnejšiu budúcnosť. Na základe LinkedIn Learning Report publikovaného v roku 2023 (Jingfang Cai, 2023), si profesionáli musia nájsť čas na budovanie vlastných zručností. Spoločnosť LinkedIn uskutočnila medzi Septembrom a Októbrovom roku 2022 prieskum na základe štatistických údajov o správaní sa, ktoré boli vygenerované z miliardy dátových bodov vytvorených viac ako 800 miliónmi členov LinkedIn platformy po celom svete. Na základe prieskumu boli identifikované nasledovné zručnosti ako najdôležitejšie pre rozvoj profesionálov:

- Prezentačné schopnosti,
- Analytické schopnosti,
- Zákaznícke zručnosti,
- Operačný manažment,
- Zlepšenie procesu.

V daných oblastiach následne spoločnosť LinkedIn odporučila kurzy, ktoré zodpovedajú dopytu po najrýchlejšie rastúcich zručnostiach. Prehľad online kurzov, ktoré sú k dispozícii na online elektronickej platforme LinkedIn v časti LinkedIn Learning (z anglického názvu vzdelávanie sa) sú zhrnuté v tabuľke 2 nižšie.

Tabuľka 2

Odporúčané kurzy, ktoré zodpovedajú najrýchlejšie rastúcim zručnostiam

Zručnosti	Názov online kurzu	Inštruktor
Prezentačné schopnosti	Vytváranie a poskytovanie prezentačných nano tipov	Jessica Chen
Analytické schopnosti	Úvod do obchodnej analýzy	John Ariansen and Madecraft
Zákaznícke zručnosti	Zákaznícka skúsenosť: Vytváranie zákazníckych osobností	Myra Golden
Operačný manažment	Základy riadenia prevádzky	Eduardo Davila
Zlepšenie procesu	Vytváranie kultúry neustáleho zlepšovania sa	Vincent Mirabelli

Zdroj: vlastné spracovanie, LinkedIn Learning Report 2023

Prehľad týchto kľúčových zručností je životne dôležitý pre každé podnikanie. Tvorcovia LinkedIn Learning (Jingfang Cai, 2023) poskytujú zaujímavé lekcie s užitočnými informáciami. Ako základnú zručnosť sa považuje schopnosť poskytovania efektívnych prezentácií v kombinácii s vystupovaním na verejnosti. Online kurz v oblasti prezentačných zručností sa adaptuje na novo vyniknutú situáciu vplyvom pandémie COVID-19 a poskytuje odporúčania ako vyťažiť maximum z digitálnych prezentačných platforiem, aby bol vždy dosiahnutý požadovaný výsledok, hlavne počas práce na diaľku alebo z domu. Nakoľko sú dáta

mimoriadne cenným zdrojom pre fungovanie podniku, je nevyhnutné disponovať zručnosťami potrebnými na to, aby jednotlivec mohol začať zbierať, sledovať a analyzovať rôzne údaje vrátane predajných či marketingových metrík, ktoré možno použiť na vytvorenie stratégie. Okrem toho, je na dnešnom konkurenčnom trhu nevyhnutné poznať svojho zákazníka a z pohľadu podniku je nutné optimalizovať zdroje tak, aby sa zacieleno na ľudí, ktorí s najväčšou pravdepodobnosťou podnikajú predaj. Na jednej strane zákazníci chcú hodnotu a na druhej strane podniky požadujú produktivitu. Práve preto, je nevyhnutné identifikovať operačné systémy a používať nástroje a koncepcie riadenia operácií za účelom zlepšenia výsledkov, efektívnosti a inovácií. V súvislosti s tým, je dôležité pokryť všetky aspekty riadenia prevádzky, vrátane prognózovania a riadenia zásob, nákupných rozhodnutí, riadenia čakacích radov, kontroly kvality a obchodných procesov. Na záver, aby sa podnik udržal v konkurenčnom prostredí s neustále rozvíjajúcimi sa technológiami je dôležité zamerať sa na vzdelávanie ľudského kapitálu vo podniku, vrátane tímového školenia, zmeny myslenia a modelovania správania, ktoré prispeje k neustálemu zlepšovaniu. Všetky spomenuté zručnosti sú zahrnuté vo vyššie uvedených online kurzoch.

V kontexte výskumnej otázky je na základe zistení možné zodpovedať výskumnú otázku:

Je vhodné odporučiť LinkedIn Learning ako nástroj na uspokojenie zvýšeného dopytu po online vzdelávaní?

Na základe vyššie uvedenej štúdie a analýzy dát je možné považovať LinkedIn Learning za vhodný nástroj na uspokojenie zvýšeného dopytu po online vzdelávaní. Okrem vyššie uvedených online kurzov zameraných na kľúčové zručnosti, online platforma LinkedIn Learning poskytuje online kurzy aj z iných oblastí. Na základe toho si podniky vedia prispôbiť a vybrať online seminár, ktorý zodpovedá potrebám zamestnancov a rozvoju špecifických zručností podľa pracovnej náplne.

5 Záver

Na základe zistení, môžeme konštatovať, že v období od vypuknutia pandémie COVID-19 nastal posun v možnostiach vzdelávania sa a to skôr smerom k online vzdelávacím kurzom. Ako môžeme pozorovať v štúdiu BCG a The Network, v dôsledku pandémie COVID-19 prevláda pocit neistoty zamestnania, a práve preto sa zamestnanci zamýšľajú nad možnosťou rozšírenia profesionálnej kvalifikácie. Ukazovateľom flexibility zamestnancov adaptovať sa na zmenu ekonomického prostredia a situácie na trhu je ochota rekvalifikovať sa. Na základe prieskumu, približne 7 z 10 opýtaných je ochotných sa rekvalifikovať. V nadväznosti na to, sa štúdia BCG a The Network ďalej zamerala na množstvo času stráveného učením sa. Väčšina respondentov (približne 65 percent) venovala niekoľko týždňov učeniu a je to skôr ojedinelé, aby jednotlivec netrúvil čas s učením. Do značnej miery je toto percento ovplyvnené geografickou lokalitou jedinec, vekom, ale aj ukončeným stupňom vzdelania. Následne sa prieskum zamerl na nástroje učenia sa, ktoré boli použité na tréning alebo rozvoj zručností zamestnancov. Nakoľko disponujeme údajmi za rok 2018 a 2020, bolo možné analyzovať vplyv pandémie COVID-19 na zmenu v učení sa. Môžeme konštatovať, že jednotlivci sú otvorenejší učeniu sa mimo fyzickej učebne v roku 2020 ako boli v roku 2018. Bolo preukázané, že medziročný nárast jednotlivcov, ktorí používajú online vzdelávaciu inštitúciu, alebo mobilnú aplikáciu za účelom vzdelávania výrazne vzrástol medzi rokmi 2018 a 2020. V oblasti online vzdelávacích inštitúcií vidíme, že medziročný percentuálny nárast medzi rokmi 2018 a 2020 je na úrovni 60 percent a čo sa týka mobilných aplikácií nárast je na úrovni 50 percent.

V súvislosti s uvedeným sme ďalej výskum orientovali na spoločnosť LinkedIn, jednu z najväčších online platforiem v oblasti vytvárania profesionálnych sietí. Podľa LinkedIn

Workplace Learning Report až 89 percent profesionálov súhlasí s tým, že proaktívne budovanie zručností zamestnancov pomôže orientovať sa v rozvíjajúcej sa budúcnosti práce. Spoločnosť LinkedIn Learning vie pokryť zvýšený dopyt po online tréningoch. Na základe LinkedIn Learning Report sú najžiadanejšie zručnosti v nasledujúcich oblastiach: prezentačné schopnosti, analytické schopnosti, zákaznícke zručnosti, operačný manažment, a zlepšenie procesu. Niet pochyb o tom, že LinkedIn je rýchlo rastúca globálna profesionálna sieť, ktorá môže byť cenným nástrojom pre podniky, ale aj pre jednotlivcov. Oblasť vzdelávania zamestnancov je kľúčová pre rozvoj podnikov nakoľko ľudský kapitál predstavuje dôležitú súčasť podniku. Práve preto považujeme za najväčší prínos pre podnikovú prax možnosť použitia platformy LinkedIn Learning za účelom rozvoja zamestnancov. Oboznámením jednotlivcov s možnosťou rozširovania si profesionálnej kvalifikácie prostredníctvom online kurzov dostupných na online platforme LinkedIn Learning môže zamestnancom pomôcť odlišiť sa, uplatniť sa na trhu a rozvíjať svoje siete, čo je v dnešnom konkurenčnom pracovnom prostredí nevyhnutnosťou.

Riešenie rôznych situácií si vyžaduje nové a lepšie zručnosti a učenie sa je cesta, s ktorou sa vedľa ľahšie prekonať rôzne situácie v ekonomike. Veľké programy na zvyšovanie kvalifikácie a rekvalifikácie si vyžadujú čas. Svižné organizácie môžu inšpirovať viac k budovaniu zručností na individuálnej úrovni tým, že ponúkajú príležitosti na kariérny rozvoj. Kultúra zameraná na ľudí uznáva, že úspech organizácie závisí od úspechu ľudí. A táto jednoduchá pravda vedie dizajn zamestnaneckých skúseností, od nástupu až po výstup, s ľudskými potrebami v centre.

Z hľadiska obmedzení výskumu možno za jeden z nich považovať zdroj dát použitých na analýzu a výskumnú časť článku, ktorá bola zhotovená na základe prieskumu spoločností Boston Consulting Group a The Network, a zároveň na základe podkladov dostupných v LinkedIn Learning Report publikovaného v roku 2023. Inými slovami, obmedzením tejto štúdie skutočnosť, že výsledky sú založené prevažne na údajoch dostupných v spomenutých reportoch a nezahŕňajú iné zdroje. V dôsledku toho sa interpretácie iných autorov môžu líšiť v závislosti od zdroja použitého na vykonanie výskumu štúdie.

Z hľadiska ďalšieho skúmania problematiky považujeme za potrebné preskúmať rôzne aspekty, ktoré môžu ovplyvniť výsledky štúdie ako napríklad užšie špecifikovaná geografická lokalita skúmanej vzorky jednotlivcov, užšie špecifikovaná veková skupina skúmanej vzorky jednotlivcov, prípadne použitie iného zdroja dát. Navyše je možné skúmať viacero online vzdelávacích kurzov, ktoré sú dostupné na online platforme LinkedIn, ich spätné väzby ako napríklad spokojnosť jednotlivcov, úspešnosť absolvovania kurzu, počet jednotlivcov, ktorí kurz absolvovali a pod. Okrem toho sa budúce smerovanie výskumu môže zamerať aj na iné online platformy, ktoré poskytujú služby v oblasti online vzdelávania sa.

Poznámka o riešenom projekte (Acknowledgement)

Tento článok je jedným z čiastkových výstupov aktuálne realizovaného výskumného grantu VEGA č. 1/0110/24.

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Printed Media – Newspaper and Magazines in a Digital World

Miroslav Tóth

Abstract

The topic of this article is newspaper and magazine publishing. The aim of the article is to examine current trends in newspaper and magazine publishing and to select risk factors that affect the future of newspaper and magazine publishing. The newspaper and magazine publishing industry is experiencing significant changes, influenced by technological advances, changing consumer behavior and evolving market dynamics. Together, these factors contribute to the continued decline in print copy sales of newspapers and magazines, pushing the industry towards digital transformation and exploration of new business models. The publishing industry's adaptive strategies in response to technological advances and changing consumer behavior aim to create a more sustainable, engaging and inclusive future for newspapers and magazines. Publishers must constantly innovate their product's path to the customer, diversify revenue streams, and adapt to changing consumer preferences and technological advances. As a result of the continued decline in print circulation of newspapers and magazines, the publishing industry is moving towards a predominantly digital future. These facts also support the reading habits of individual age groups and their digital skills.

JEL classification: Z10, Z18, F43, L82, O30, O33, O34.

Keywords: newspaper and magazines publishing industry, digitization, changes in publishing industry

1 Introduction

The newspaper and magazine publishing industry has been undergoing significant changes in recent years, primarily as a result of technological advancements, innovations, changing behavior of different age groups of consumers, and the resulting growing market dynamics. Newspapers and magazines are no longer just traditional print media, but have undergone a transformation that includes digital formats, multimedia content and interactive elements.

As digital platforms expand and evolve, questions about the relevance of traditional print formats are becoming more frequent. Rather than becoming obsolete, print newspapers and magazines are likely to transform and adapt to a changing environment shaped by technology, economics and consumer preferences.

In the current era dominated by smartphones, social media and instant digital updates, the meaning and role of printed newspapers and magazines is undergoing a significant transformation. For decades, print media has been the primary source of news and information, but the rapid rise of digital platforms has forced the industry to rethink its purpose and relevance. The decline of traditional print formats is undeniable, but this shift does not mean the complete demise of print media. Instead, he suggests an emerging field where print remains viable, albeit in a new form.

The explosion of online platforms has rapidly changed the way people consume news and entertainment, leading to a decline in print and advertising revenue. However, rather than signaling the complete demise of print, these changes indicate an evolving media environment in which print is adapting to new roles and markets. This article examines the future of print

newspapers and magazines, focusing on their challenges, opportunities, trends, risks and continued relevance in a digital world.

2 Current State of the Solved Problem at Home and Abroad

At the beginning, we want to explain the differences between newspapers and magazines, as well as between press coverage, news, and journalism. A newspaper is a printed matter that informs about current social events through news and publicism (resp. attitude or opinion texts) takes an attitude towards it, so that the public can find their way in it, or primarily entertain themselves through these components. Accordingly, we distinguish newspapers for the elite (Elite Press), or for the masses (Mass Press), also called tabloids in our country. They have a predominantly universal, exceptionally specialized character. They come out daily, several times a week, rarely even less often. In addition to journalistic texts (also visual, including color), non-journalistic texts (e.g. art) bring, in particular, advertising, thanks to which they can be sold at a lower price than their production costs. Newspapers are divided into thematic blocks, sections, often with their own pagination. They have a specific newspaper format: world (broadsheet), Central European (Berlin), tabloid, or "condensed", are folded into several columns, based on the so-called newsprint. They are exceptionally bound.

In contrast to them, a journalistic magazine is a press that either does not provide news, or to a negligible extent, but instead relies on journalism. It primarily has a specialized character, although universal periodicals of this kind were also published in the past. In addition to journalistic texts, it publishes even more non-journalistic texts than newspapers. Advertising of all kinds occupies an important place in the magazine as well. The content is also divided into thematic blocks, which, however, do not have their own pagination. The variety of formats makes it difficult to sort them from this point of view. It mainly wraps into a single column. And it is published on high-quality (usually chalk) paper, which allows equally good reproduction of visual designs (Vojtek, 2011).

Both newspaper coverage, reporting and journalism are journalistic activities that bring new news and information from the world around us. The news brings bare information or reports that are presented objectively. In addition, journalism evaluates news and information, it is interested in the opinion of experts and other interested people, it is subjective - journalistic reportage usually leans to one side or the other. Publicism (lat. publicus = public, general) is a designation of the type of journalistic work and the result of such work, which is aimed at the public and intended for publication. Unlike news, it contains, in addition to information, the authors' subjective opinion on some current topics (Osvaldová, Halada, 1999).

At the magazine, a digital magazine is distinguished by six key features: it has a beginning, middle and end; it is edited and curated (has an editorial alignment), is divided into sections previously established); it has an aesthetic treatment much more appealing than a newspaper; it's date-stamped (it has series of issues published in a specific date, usually weekly, monthly or quarterly); its contents are permanent, suffering only minimal corrections; it is periodic (created to have subsequent issues). Following this, we can conclude that many publishers use the expression "digital magazine" wrongly, just to characterize a site or the online presence of a print magazine, even if they don't have a beginning, a middle or an end or periodic issues (Silva Santos, 2011).

Gordon (2011, s. 9) lists three characteristics digital magazines: a) interactive digital magazines are designed to compete for the attention on online readers, not print readers, so pages are formatted to be viewed on a computer screen with larger type, contain "digital extras", such as flash animation, embedded video, etc.; b) interactive digital magazines are designed for easy interaction between readers and the magazine. For example, readers can share their

thoughts, comments, complete a survey, click to play content in the form of digital extras or click to download additional content, register for membership, share the magazine on social media, etc.; c) interactive digital magazines contain ads that readers can interact with.

In a world where misinformation spreads rapidly, print media is a symbol of trust and truth. Print media, with their tangible nature and enduring value, provide a reliable source of information about the past as well as the future. With print comes confidence. Once printed media is released, it cannot be changed – while its digital counterpart is ephemeral, available one minute and gone the next. Print media is specific. In an era dominated by the rapid spread of misinformation online, the importance of traditional print media cannot be overstated. An online study by Loughborough University's Center for Civic Culture reveals a worrying trend, with 42.8% of news sharers admitting to spreading inaccurate or fake news. The emergence of highly sophisticated "deepfakes" images only exacerbates this serious problem (UPM Communication Papers 2024).

According to Two Sides (2017), more consumers believe they understand a story better when they read it from print media (65%) than from online news sources (49%), but importantly, they trust stories read in print newspapers more (51%) than stories found on social networks (24%). Most consumers (76%) said they were concerned about the "fake news" trend. In an era where personal data protection is a primary concern, the tangible realm of paper eliminates concerns about receiving cookies, hacker threats, and provides tangible signature confirmation.

Waschková (2012; pp. 15-16) presents selected trends that have an impact on the transformation of traditional journalism and affect the work of journalists in print and online media:

- a key factor is the introduction of new technologies that have an impact on the functioning of the media organization, journalistic work, the form of media content and reading habits,
- a trend affecting the functioning of the media organization, or of the journalistic routine, is an acceleration that is concretely manifested by the transformation of the structure of the journalist's productive day; merging the functions of journalists with a potential decrease in the quality of content,
- technologies enable the emergence of a trend of interconnection, which manifests itself mainly at the level of content convergence; flipping content between traditional and online media; in the strict division of content type for traditional and online media; or in the pressure of the growing consumption of materials for both types of media,
- technologies, or the interactive form of online media affects the user habits of the recipient of media messages, which can be summed up in the trend of involvement, which is manifested mainly by the fact that the agenda is determined by the user; users are demanding and the distinction between producer and consumer, journalist and user is blurred.

Tušer (1997) characterizes newspapers and magazines as follows:

Newspapers:

- in terms of content, they deal with a wide range of events and phenomena of society's life, addressing every potential addressee, regardless of demographic characteristics; have universal content, including some specialized periodicals, such as business newspapers,
- in terms of the frequency of departures, they are characterized by a higher periodicity, most often daily or bi-daily, but in the case of the mentioned specialized ones (corporate, possibly also regional and local) often also with a lower periodicity, weekly or bi-weekly,

- from the point of view of the mutual share of journalistic genres, they publish more news and other topical informational journalism, or non-journalistic expressions rather than journalism; it results primarily from the higher periodicity and universality of the content,
- from the point of view of the form of processing, they apply a specific newspaper typographic arrangement, printing technique (e.g. offset printing), production technology and use of material, e.g. newsprint with a low pulp content, or well-glued and machine-smooth offset paper.

Magazines:

- in terms of content, they usually deal with a defined topic, higher specialization according to the focus, interests or demographic characteristics of the audience,
- in terms of departure frequency, they are characterized by lower periodicity, most often weekly, bi-weekly, but also monthly and lower,
- from the point of view of the mutual share of journalistic genres, there are more journalistic, or non-journalistic speech rather than news,
- from the point of view of the form of processing, they apply specific magazine typography, printing technique (e.g. gravure printing), production technology and material use (e.g. offset paper or low-glued and very well smoothed and supple gravure printing paper).

Newspapers are the oldest periodical printed matter, which usually has a universal character, daily periodicity and brings to the widest public information about current events in all areas of society's life, which it usually comments and analyzes. The four basic features of a newspaper are (Novinárska prvouka, p. 71): publicity, i.e. public, general availability; 2. actuality, relation to the present, everything new and current is important; 3. universality – variety of content, no topic is left out; 4. periodicity – occurrence at regular intervals, or cycles. Additional features: 5. availability, i.e. unlimited use regardless of time and place, or 6. rendering in writing and print, lost their importance with the advent of internet newspapers.

Magazines are periodically published printed media that are published at longer intervals than newspapers (Novinárska prvouka, p. 74). At most once a week and at least twice a year. Compared to newspapers, magazines are not closely related to topicality and their thematic scope is not as broad as that of newspapers.

3 Research Design

The topic of this article is newspaper and magazine publishing. In the post, we focus on current changes caused by technological progress, reader preferences regarding the choice of media in printed or digital form and other facts.

The aim of the article is to examine current trends in newspaper and magazine publishing and to select risk factors that affect the future of newspaper and magazine publishing.

The initial goals of the research are:

- explain the difference between the main features of newspapers and magazines,
- find and explain the main trends in publishing newspapers and magazines,
- research of literary sources from the academic field,
- research of the resources of specialized institutions in the field of publishing newspapers and magazines, to search for published opinions and experiences of the professional public.

The object of investigation is generally the industry of publishing newspapers and magazines. The form of publication can be physical and digital. For this reason, we examine selected issues:

- digital transformation, news and magazine digital publishing,
- personalization of newspaper and magazine content,
- multimedia content,
- adaptation through hybrid models,
- printing as a specialized and luxury product.

The source of information, research samples, are publicly available scientific and professional articles from the academic environment, research results of relevant institutions specialized in the field of publishing newspapers and magazines, published opinions of experts from practice. The results of the work are processed in the form of retrieval.

4 Result of the Paper and Discussion

a) Digital transformation, news and magazine digital publishing.

With the rapid development of information technology and the popularity of the Internet, traditional media are facing great challenges (Geng, 2024). The circulation and influence of paper newspapers and magazines is gradually declining, while the rise of digital media has brought a completely new competitive pattern and development opportunities to traditional media. Analyzing the process of digital transformation of specific newspapers, the author concluded that the newspaper effectively used digital technologies to expand multimedia content and improve social media interaction, and these measures significantly increased its impact and engagement of readers. It can be seen that digital transformation is of great importance in optimizing the spread of social information.

Publishers operating on both the print and digital markets are having problems with the massive decline in sales of printed newspapers and magazines in recent years, they have lost not only readers, but also many advertisers. Publishers are therefore struggling to make a profit (Heise, Dennstedt, 2018).

According to Lecner and Appelgren (2007), electronic distribution challenges the newspaper industry to find new ways of publishing; as a result, news content could be processed on and for different output platforms. Electronic paper (e-paper) could become the main channel for publishing newspapers due to its ability to display content in a paper way, with lighter weight, lower energy consumption and easier handling compared to a computer, but without large publishing. and distribution costs associated with printed newspapers.

Lewis (2022) highlights that digital content is very different from print on paper. Developing procedures that exploit the differences is an ongoing process that is still ongoing. Digital technologies have been used in publishing for over fifty years.

Cherian (2015) conducted a survey on readers' relationship with print and digital newspapers. He found that the vast majority of respondents, regardless of gender, nationality, age, education and income, prefer online media, especially the Internet. The only exception is a pensioner over the age of 50 who still prefers print media, specifically newspapers. It confirms that there is no statistically significant relationship between reasons and media type preference. This means that the reasons do not differ significantly by media type. It can be empirically concluded that online media influence print media. The impact of online media on print media is reflected in various aspects of print media such as demand, subscriptions, market share, print revenue, advertising revenue, and profitability.

b) Personalization of newspaper and magazine content.

With the advent of big data and advanced algorithms, publishers are trying to offer personalized content. By analyzing reader behavior, they can tailor content to their preferences,

increasing engagement and satisfaction. Readers receive recommendations for articles of interest based on their past behavior and preferences.

Delivering personalized news content depends on the ability to predict user interests. In their research, Sela et al (2014) found that satisfaction with all news releases was high, but participants preferred personalized releases. User interest was weakly correlated with reading length, article length, and reading order. They propose that personalized newspapers contain both general information and personalized items selected based on specific combinations of measurements for each of the different news topics. Content personalization—automatically modifying text and multimedia features within articles based on the reader's individual features—is evolving as a new form of journalism.

Traditional news providers, especially newspapers, continue to be responsible for the vast majority of original reporting, according to their survey by Thurman and Shifferes (2012). However, this important function (original and local news) is being eroded by declining advertising revenues and the reluctance of news consumers to pay for online content. Personalization can help slow, if not reverse, this trend because there is a correlation between the above-average adoption of personalization and the ability of sites to charge subscriptions, and secondly, if personalization allows traditional news providers to acquire and control a lot of data about their readers. Control over such data will be vital as online advertising continues to become more dynamic, targeted and data-driven.

According to a study by Monzer et al (2020), users cannot distinguish between message personalization and commercial targeting, which can negatively affect their perception. Because of this, there is a contradiction in how users see themselves as active participants in the process, but lack the tools to influence the publisher. User concerns extend beyond privacy to what information they receive and their right to personal autonomy. The solution is the ability to dynamically adjust the reader's profiles for interest in news. They found that participants recognize that message recommendation systems can be useful for filtering the amount of information online. News personalization can have a positive impact on news consumption by increasing the likelihood that users will read the news. News personalization further allows users to spend more time consuming news that is personally or professionally relevant to them.

The introduction of news recommendation technologies has changed the way online news is viewed today. News content can be tailored to each reader's interests, preferences, values, location, and other characteristics so that news organizations can tailor their content to meet individual consumer expectations (Thurman and Shifferes 2012). Sehl and Eder (2023) state that news recommendation can provide new opportunities to engage readers and promote news diversity. Personalization has become more relevant due to advances in digital technologies and intelligence algorithms.

According to Thurman and Schiffere (2012. p. 776), personalization of messages is "a form of interactivity between users of a system that uses a set of technological functions to adapt the content, delivery and arrangement of communication to the explicitly registered and/or implicitly determined preferences of individual users". They further state that it is necessary to distinguish between two main types of personalization: explicit (also referred to as custom or direct personalization, meaning that users set their preferred types of content, for example by selecting keywords or location) and implicit (also referred to as indirect personalization) which derives preferences from collected data using software that monitors the user's activity, while these types of personalization allow the user to receive news content tailored to their interests).

c) Multimedia content.

Modern newspapers and magazines focus on multimedia content. Videos, podcasts, infographics and interactive elements have become commonplace in digital publications. These formats enable a deeper and more engaged connection with readers who expect more than just static text.

Multimedia journalism is the practice of using different types of media, such as text, audio, video, graphics, and interactivity, to tell stories and engage audiences. Multimedia journalism can increase the quality, diversity and reach of journalistic content, as well as the skills and creativity of journalists. This type of journalism provides audiences with greater variety and choice of media formats and sources, creating more opportunities for interaction and engagement between journalists and audiences. In addition, multimedia journalism can generate more traffic, publicity and revenue for journalistic channels (Wilding et al., 2018, Soltau, 2019; Otuyemi, 2024; Keriazes, 2013).

Multimedia content mainly consists of: high-quality images and photos, video footage, audio existing alone or with video media, infographics with hover effects and clickable buttons, animations or small-scale animations such as GIFs, slideshows or image carousels, augmented reality (AR) and virtual reality (VR), interactive maps, charts, graphs, quizzes and polls, cross-references and hyperlinks. Multimedia content has a unique ability to grab and hold the attention of readers. Able to deliver a stronger and more engaging message than standard text, it's a great way to break up text and make content more engaging: Multimedia content tells a story, keeps people interested and encourages them to come back for more. And it encourages users to interact with interactive content instead of text alone.

Multimedia content increases the level of understanding because: images and videos can explain complex topics. It will be easier for the recipients to understand the presented content. Some concepts are best conveyed through dynamic storytelling. Multimedia enables the presentation of complex ideas, processes or products in a visually appealing way. And it makes complex information understandable and memorable for the audience (Kubala-Chuchnowska, 2024, similarly Cuenca, 1998 and Wilding et al., 2018).

d) Adaptation through hybrid models.

Hybrid models refer to innovative business frameworks that combine elements of traditional revenue models with new, often digital, strategies to create diverse revenue streams. These models allow media organizations to adapt to a rapidly changing environment by merging print and digital formats, subscriptions, advertising and even events to maximize profitability and reach. The flexibility of hybrid models helps companies manage challenges while taking advantage of opportunities in a competitive environment.

News web portals are expected to further strengthen their positions, reports Dolidze (2024). In recent years, digital media have taken over the place where Internet users spend a lot of time, e.g. social networks. Online journalism has also strengthened its place in the distribution of alternative news and so-called in the development of various dimensions of citizen journalism. The term - online journalism - refers to the publication of journalistic content and news in all forms on the Internet. It includes various types of messages distributed through websites, social media, email, newsletters and other channels or forms of online communication. Online journalism, in stark contrast to the more traditional print-related ways of disseminating journalistic information, allows journalists and producers to present news in a non-linear way, meaning that information recipients can choose when and how they want to know the news.

Norkom (2023) selected important digital trends in the newspaper and magazine publishing industry. It states the following interesting trends:

- a) Mobile-First Consumption. Today mobile-first consumption takes the lead position, as people prefer scrolling through content on their smartphones or tablets.
- b) Curated Content Experiences and Artificial Intelligence (AI). A significant global media trend is the rise of and machine learning. This technology can be used to create more personalized content, tailored to each individual's taste. Various internet platforms rely on AI-powered algorithms to tailor content to their users based on their browsing habits and personal preferences.
- c) Multi-Media and Gamification. A wave of technological innovation has completely redefined the way we consume media. It integrates with multimedia experiences such as videos, images and games to enhance the entire reading experience. Messages are only useful if they form a habit where consumers actually engage, but unless they form the habit early, it won't have an effect in the long run. Gamification is a key driver for such habit formation. By incorporating interesting and entertaining content, especially in a competitive digital environment, publishers can increase their appeal and secure a loyal audience.
- d) Older Average Subscriber Age. Across newspapers globally, one of the main observations is that the paying subscriber base is skewing older. The young generation is less inclined to financially commit to a news source, preferring to hunt down their information from free sources.
- e) Inflation Affects Subscriptions. The cost of living is hitting people hard, and many subscribers are giving their commitments a second thought.
- f) Data-Driven Commercial Deals and Subscription Growth. Gamification can be used by newsrooms to tap into the interests of their readers and gain more sponsors. Known or registered users, compared to anonymous users, are more likely to become paying subscribers.

Newspapers and magazines alike offer digital editions to complement their physical offerings. Available through apps or online platforms, digital newspapers and magazines give readers the convenience of accessing content on the go while maintaining the aesthetic quality of print. In addition, many newspapers and magazines have also developed multimedia content such as podcasts, video series and social media to reach a wider audience (Media Center, 2024).

Mobile news apps are a lure to attract new users to news publishers' websites. shopping experience based on mobile consumption. This can make shopping easier and give subscriptions a much-needed boost. Interactive reading experiences are a way to get information and increase the level of engagement. The best strategy to attract younger people is gamification. Example: young people are looking for more exciting ways to expand their financial knowledge. And that's where gamification comes in, making news content easier to digest and more engaging – especially in areas that are usually hit-or-miss like financial news. Live streaming platforms are taking the stage and enabling small teams to achieve big feats. As the media industry navigates the turbulent waters of cost-cutting, live blogs allow small teams to publish with maximum efficiency and deploy top-notch content without draining resources.

Some subject journals can be taken seriously even after print, and thus such a category will remain relevant because some, but not all, titles use specific strategies to jump to online or other digital delivery, with their status and influence intact, Dietzl (2014) argues.

In his study, Sriram (2018, p. 17) states that several studies have attempted to look at the question of reading news on screens versus print. They show, for example, that print newspapers and online newspapers are different carriers of information with which users have

specific experiences. First, while readers perceive the printed newspaper as an object that is complete in itself, in the case of online artifacts, they lose the sense of the wholeness of the object. Studies have also shown that people read news differently on smaller screens e.g. mobile phones, they pay less attention to them.

e) Printing as a specialized and luxury product.

Readership of some print magazines is growing, Media Makers Meet - MX3 (2024) reports. As the pandemic forced people to stay at home, retailers of home products and services, including magazines, benefited. Household and food magazines, including those read mainly at home in print, have proliferated. Consumers fully entrenched in home life, in-home and home-centered publications that reach them in this central environment and provide value are likely to continue to engage print audiences. Consumers are attracted to publications from trusted publishers that provide a wealth of information on a specific topic of interest, e.g. holiday shopping, life stages, fashion, finance and investing, luxury travel and vacations, information on digital news and more. This trend reflects a shift towards niche content in print media, reflecting a greater focus on specific reader interests.

One interesting future trend in print is its growing association with specialty and luxury goods. With the democratization of content through the Internet, some people now consider the physical form of newspapers and magazines to be a premium product. Print editions, once ubiquitous, are becoming more exclusive and focus on higher quality design, paper and photography. For some publications, print is becoming less about providing up-to-the-minute news and more about offering a collectible premium product. This is especially true for high-end lifestyle and fashion magazines, which are considered luxury items. Readers of these publications therefore appreciate the design, paper quality and exclusive content that print offers, turning them into keepsakes rather than disposable media (Woodcock, 2022, Ytre-Arne, 2013).

Luxury brands and publishers are leveraging the value of print to continue to reach and influence their audiences with great success, explains Watkins (2019). The luxury market is changing. A younger affluent consumer is entering the market with a greater desire for experience and an interest in sustainability and ethical issues.

While this changes the nature of what is considered a luxury product, it does not affect the levels to which print is used to convey the value and appeal of these products. The reason is that readers still want something ambitious, they want to see what to focus on. Magazines offer something physical, an experience, a 3D opportunity. Print publications are evolving their approaches to ensure they continue to appeal to a luxury audience, using better and higher quality paper, packaging treatments, special editions, gift bags, vouchers are now common features. At the same time, print is becoming increasingly sustainable in its production and resource use, removing further barriers to its continued success (Print Power, 2023).

For the lucrative luxury market, the idea that print is out of fashion has never seemed more outdated. There is much more authenticity with print design. With websites, no matter how amazing the photos or how smooth the transitions are, there is always a glass screen between the user and the service provider. This gives everything an element of sameness. There is simply no tangibility, which is essential for luxury brands (Billerud 2024, Swiderska, 2024).

Printing on paper, especially catalogs and direct mail, is a better way to showcase high-end images. It is easier and much more engaging to appreciate fashion in print than on a computer screen. For luxury brands that invest in the best artists, photographers and stylists, they prefer the controlled medium of print over digital devices. On such screens, factors such as brightness, tint and blue light can reduce the quality of the product's image.

Immersing yourself in the world of magazines seems like a good way to get deeper insight and quality than most digital products. Print magazines also offer more freedom and experimentation, escaping the standardized feel of much online communication. The aim of such magazines is to transport the reader beyond the flat digital world to something more tangible (Blandino, 2022).

A trend that could shape the future of printing is the specialization of newspapers and magazines. As mainstream publications struggle with shrinking audiences, many have realized the value of targeting niche interests. Smaller, independent niche publications thrive by focusing on specific industries, hobbies or communities. Niche magazines carve out their niche by providing deep dives into topics often ignored by the mainstream media. Such titles demonstrate that there is still a market for print as long as the content is highly niche, serving an avid reader or smaller, highly engaged audiences willing to pay a premium for content that aligns with their personal interests. Independent magazines are also flourishing, supported by loyal readers and crowdfunding platforms. These offer a more personal, community-focused experience, often with limited issues that appeal to collectors. This shift towards niche publishing suggests that the future of print lies not in mass distribution but in highly targeted markets (Abrahamson, 2009, Brown, 2014).

Some magazines have capitalized on this trend and offer beautifully produced issues that cater to readers who see print as a tangible collectible rather than a disposable product. These premium publications provide a tactile experience that digital cannot replicate and appeal to readers who desire a more immersive and thoughtful reading process. Limited edition magazines, collaborations with artists and special issues are examples of how print is evolving into a collector's commodity (Medium, 2024). Print In a fragmented media world where information flows rapidly across countless digital platforms, print media offers something rare: a slower, more deliberate pace. The value of long-form journalism, in-depth analysis and careful curation has never been higher in an era dominated by headlines and soundbites. As digital media continue to fragment attention and erode trust in news sources, print can carve out a role as a reliable and reflective counterpart.

This does not mean that print will return to its former dominance, but it does indicate that newspapers and magazines will continue to exist - just in a more specialized and refined form. Hybrid models, specialized publications and environmentally conscious practices are likely to define the future of the industry.

5 Conclusion

The above trends highlight the publishing industry's adaptive strategies in response to technological advances and changing consumer behavior to create a more sustainable, engaging and inclusive future for various forms of newspaper and magazine publishing. However, the newspaper and magazine publishing industry faces several significant risks as it undergoes developments in media consumption and technological change. The main risks are mainly the following:

a) Technological changes. The rapid pace of technological change, especially the integration of Artificial intelligence (AI), presents both opportunities and challenges. While AI can improve marketing and content creation, many publishers don't feel ready to take full advantage of these technologies. AI-based generative search could disrupt referral traffic from search engines, impacting digital readership and revenue. AI offers opportunities, but also risks. Publishers need to invest heavily to effectively harness the potential of AI, there are concerns in particular about data privacy and the potential devaluing of human authorship due to automated content creation.

b) Changing consumer behavior. Younger generations are more inclined towards digital consumption of information sharing, personal contact, news and magazines. The habits of accessing information through smartphones, tablets and computers have reduced the demand for printed versions. Convenience and accessibility are associated with digital publications, which offer a greater range of user features such as instant access, searchability, multimedia content and interactive elements, easy navigation, integrated dictionaries and translators, and other features not possible with print formats.

c) Quality of journalism. Ensuring high-quality journalism while combating misinformation remains a critical challenge. The rise of fake news and misinformation undermines trust in the media and thus can erode the trust of readers. Publishers must balance speed and accuracy in their reporting, especially in the highly competitive digital news environment.

d) Protection of personal data. Regulations on the protection of personal data, e.g. GDPR imposes strict requirements on how publishers collect, store and use personal data. Failure to comply can result in significant fines and reputational damage. The phasing out of third-party cookies affects targeted advertising and data analytics, forcing publishers to develop new first-party data strategies that can be complex and costly.

e) Economic results of publishing houses. Economic downturns and uncertainty can lead to lower advertising spending and consumer spending on subscriptions, impacting overall revenue. Inflation and rising costs also place an additional financial burden on publishers. The decline in print revenue, i.e. print advertising and circulation revenue, continues to decline as more and more readers switch to digital platforms. This trend has been exacerbated by the rise of digital alternatives and changes in consumer behavior, which has led to a decrease in demand for print products. Costs associated with printing, distribution and physical materials have increased, making it less economically viable for publishers to maintain large print costs, especially when digital distribution is cheaper and faster.

f) Digital subscription. While digital subscriptions are growing, there is a high attrition rate, especially among local, smaller and mid-sized publishers. The challenge is retaining subscribers, many of whom may unsubscribe after initial promotions or because of message fatigue.

g) Dependence on third-party platforms. Owners increasingly rely on third-party platforms such as Google and Facebook in terms of traffic and advertising revenue. Changes in platforms' algorithms, policies or business models can significantly affect publisher reach and revenue streams.

h) Decrease in income from advertising and sales. The decline from digital advertising in particular, while crucial, is not growing fast enough to offset the decline in print advertising revenue. In addition, tech giants like Google and Facebook are gaining a large share of the digital advertising market, leaving less for traditional publishers.

ch) Message avoidance and fatigue. Many readers experience news fatigue, which leads to reduced engagement with news content. This is especially challenging because it affects both ad revenue and subscription renewals. Providing content that overcomes this fatigue while remaining informative is a very delicate balance.

i) Economic cycle. An economic downturn can lead to reduced advertising budgets and lower consumer spending on subscriptions. The industry is sensitive to macroeconomic factors that can affect both consumer and advertiser behavior. The economic downturn and cost-saving measures have led both consumers and advertisers to reduce spending on print media. The

financial crisis and subsequent economic pressures accelerated the transition from print to digital media.

j) The regulatory and legal challenges. The publishing industry faces a variety of regulatory risks, including changes in copyright laws, data protection regulations and policies affecting media and advertising. Complying with these regulations can be costly and difficult.

k) Sustainability costs. Implementing sustainability practices, even if necessary, can be costly. The publishing industry must balance investment in green practices with the need to remain financially viable. Growing environmental awareness has led to a preference for digital formats over printed materials to reduce paper waste and the carbon footprint associated with printing and distribution.

l) Saturation of the market and competition. The market is highly competitive, with numerous digital news channels and alternative media sources vying for readers' attention. This competition makes it difficult for traditional publishers, as well as print newspapers and magazines, to maintain market share and expand their audience.

Finally, we present:

- the above factors are the risks that together contribute to the continued decline in the number of hard copies of newspapers and magazines in circulation. In this way, they are pushing the newspaper and magazine publishing industry towards digital transformation and exploring new business models.
- managing the above risks requires strategic adaptation, innovation and a focus on building sustainable and diversified revenue models while maintaining high journalistic standards. Addressing these risks further requires publishers to continuously innovate, diversify revenue streams and adapt to changing consumer preferences and technological advances.
- the digital transformation is undeniable (Media Center, 2024). Many newspapers and magazines have adapted to new technologies, adopting hybrid publishing models. They involve maintaining a print edition for a niche audience while offering an enhanced digital experience. The combination of traditional print with digital elements, i.e. multimedia content, podcasts and interactive features, suit the different preferences of readers. These hybrid strategies involve using the speed and accessibility of digital media for breaking news, while print is used for in-depth analysis and investigative journalism. The sustainability of print magazines depends on adaptive business models, creativity and a balanced balance between new challenges and evolving opportunities. Even in the magazine industry, business models are moving to combine print with digital offerings. Print magazines are adapting to the new challenges of the digital era, balancing tradition with progress. Technological innovations lead to changes in production. Consumer expectations shape content interactivity. Sustainability and adaptability are vital as the industry considers its environmental impact and future relevance.

Acknowledgement

The article is an partial output of research project funded by Scientific grant agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic and the Slovak Academy of Sciences (VEGA), grant number 1/0582/22 "Dimensions of cross-sectoral entrepreneurship of cultural and creative industry entities in the context of sustainable development". Author share 100%

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Príspevok časopis EaM FPM v SJ 2021 editovateľný vzor

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Pokyny štruktúra príspevku a formálna úprava príspevku pre časopis FPM Ekonomika a manažment (EaM)

Príspevok časopis EaM FPM v SJ 2021 editovateľný vzor

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Editorial Board



Project overview

Futurepreneurs and SMEs for a sustainable Central Europe | Certification Scheme

Futurepreneurs are professionals that are driven by purpose and impact. They take on societal challenges and climate change with an entrepreneurial mindset and want to improve our lives. The GREENPACT project sets up partnerships between companies and futurepreneurs. The aim is to develop a certification scheme for a new generation of impact-driven top executives. To this end, the project develops joint action plans, pilot actions and a self-assessment tool.



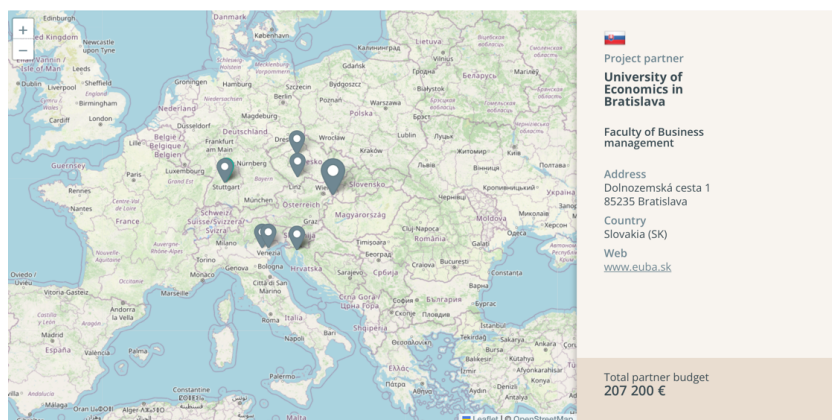
Duration

Start date **04.2023**
End date **03.2026**

Project progress

20%

Project partnership



Project partners

Lead partner
Stuttgart Media University

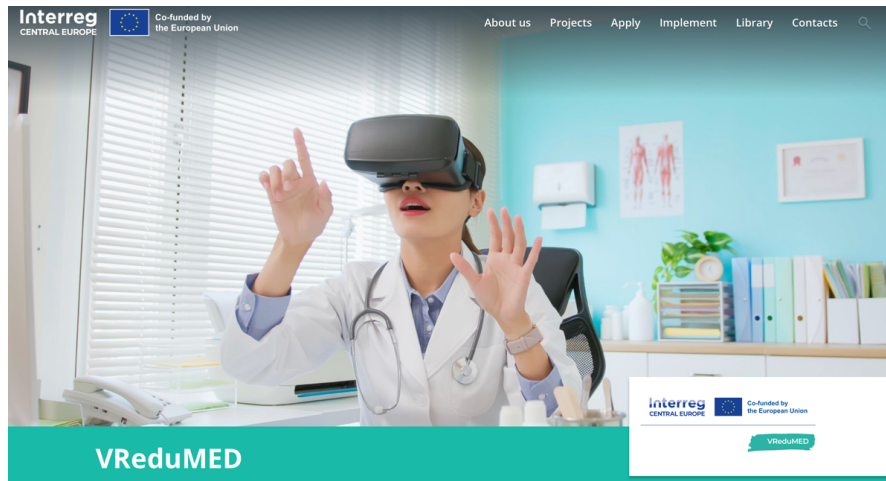
Startup Center

Address
Nobelstr. 10
740569 Stuttgart

Country
Germany (DE)

Web
<https://www.hdm-stuttgart.de/en>

Project partner	
	Stuttgart Region Economic Development Corporation
	ENAIIP Veneto Social Enterprise
	Region of Veneto - Department of Labour
	STEP RI Science and Technology Park of the University of Rijeka Ltd
	City of Rijeka
	Czech Chamber of Commerce
	Institute of Technology and Business in České Budějovice
	University of Economics in Bratislava



Project partners



Lead partner

South Bohemian Science and Technology Park, corp.

Address
Lipová 1789/9
37005 České Budějovice
Country
Czechia (CZ)
Web
www.jvtp.cz

Project partner

	University of South Bohemia in České Budějovice	▼
	Business Upper Austria	▼
	Education Group	▼
	University of Economics in Bratislava	▼
	National Institute of Children's Diseases	▼
	Strategic Partnership for Sensor Technologies	▼
	Ostbayerische Technische Hochschule Regensburg	▼
	Innoskarta Business Development Nonprofit Ltd.	▼
	Széchenyi István University	▼

Project overview

Virtual Reality Education and Training Solutions for Medicine Sector

Medical interventions are increasingly digitalised but training of health care staff is still lagging behind. The VReduMED project helps to untap the potential of virtual and augmented reality for their education. The partnership develops a roadmap for virtual reality training products and services and will publish a handbook on the integration of virtual reality into health care education. They also set up three regional virtual reality labs to test different virtual reality use cases.



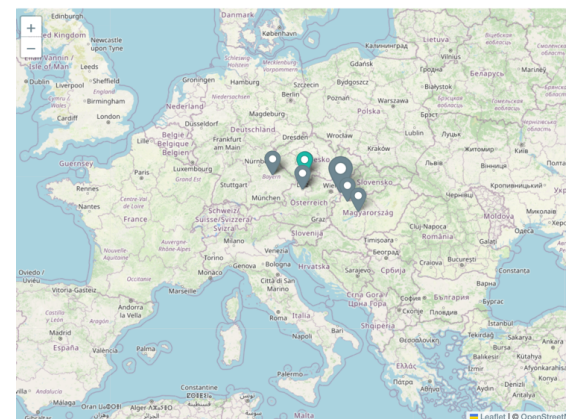
Duration

Start date **04.2023**
End date **03.2026**

Project progress

20%

Project partnership



Project partner
University of Economics in Bratislava

Faculty of Business Management

Address
Dolnozemska cesta 1/A
852 35 Bratislava
Country
Slovakia (SK)
Web
www.euba.sk

Total partner budget
220 900 €

Project overview

Start date:

01 January 2024

Status: ongoing

End date:

30 June 2026



€1,540,470 budget

80.00 % funded by
Interreg Funds

7 countries

10 partners

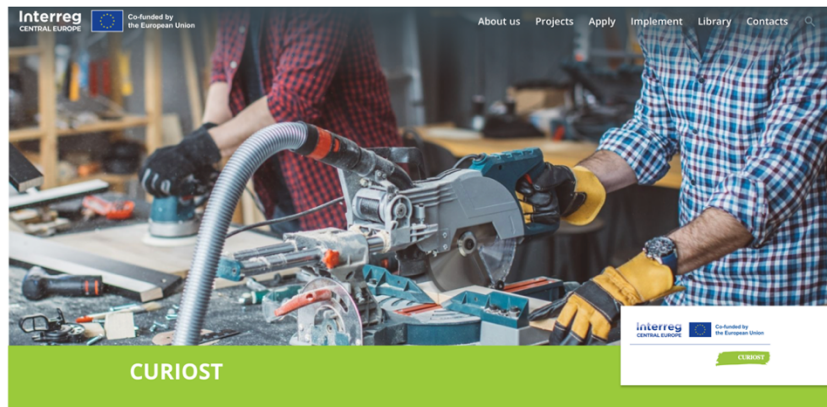


SOCIALLY RESPONSIBLE SLOW FOOD TOURISM IN THE DANUBE REGION

The main objective of the SReST project is to promote "slow food" tourism in the Danube region and enhance the employability of vulnerable groups by providing solutions that enable the valorisation of agrobiodiversity and gastronomic heritage and a fair distribution of generated benefits, including the well-being of the host communities.

By focusing on agro-biodiversity, food heritage and local identity, the goal is to broaden the socially responsible sustainable tourism offer and promote "slow food" tourism based on the exploration of gastronomic traditions and the local communities that preserve them. The project will help enhance local agricultural high-value chains while appreciating natural and cultural diversity of partner regions.

SReST will develop joint solutions to enhance socio-economic development and promote alternative models and competitive new tourism products of "slow food" itineraries grounded in agrobiodiversity and food heritage, tested in different territorial contexts of pilot regions. These solutions will not be limited to the local level, but will have a wider impact in the Danube area. Therefore, the success of the project will be based on close cooperation between partners from different countries and regions. You can learn more about the project partners [here](#).



Duration

Start date **06.2024**
End date **11.2026**

Project partners



Lead partner

Business Upper Austria

Mechatronics Cluster + Circular Economy
Team @ Plastics Cluster

Address
Hafenstraße 47-51
4020 Linz

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Web
<https://www.biz-up.at>

Project partner

ConPlusUltra Ltd



University of Economics in Bratislava



Chamber of Commerce and Industry of Pécs- Baranya



South Poland Cleantech Cluster Ltd.



STEP RI science and technology park of the University of Rijeka Ltd.



Development and Training Centre for the Metal Industry – Metal Centre Čakovec



MESAP Innovation Cluster



Science and Technology Park - Envipark



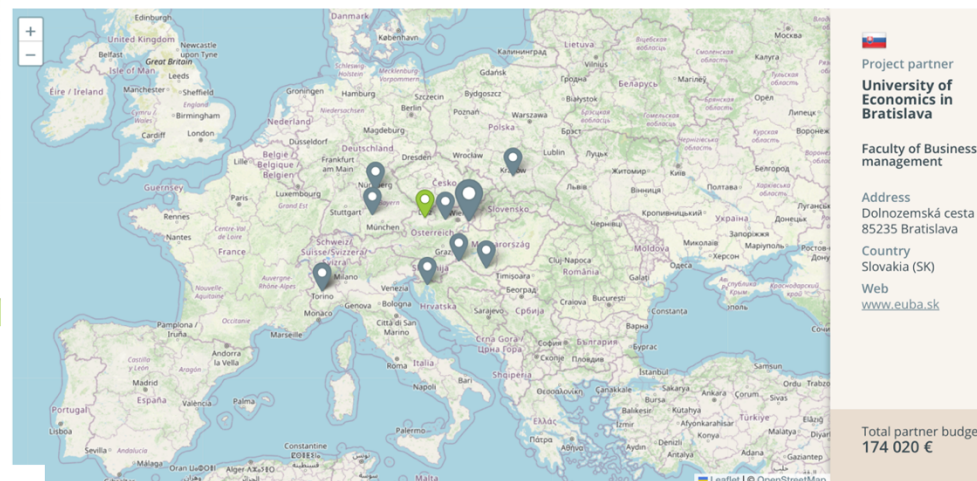
Bayern Innovativ



Cluster of Environmental Technologies Bavaria



Project partnership

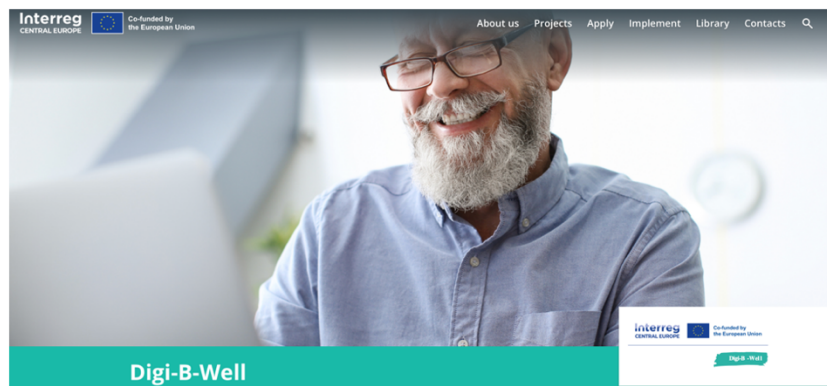


Project overview

Circular design and development of Sustainable products in 4 key sectors in Central Europe

The ongoing transition to a circular economy is not only a tedious obligation for the manufacturing industry. It also offers an opportunity to develop innovative sustainable products. The CURIOST project helps small- and medium-sized companies in sectors like mechanics, packaging, plastics, and construction to harvest the potential benefits. They help selected companies to co-develop tailor-made, innovative, sustainable and circular product prototypes. The learnings are then aggregated into a universal strategy and action plans to accelerate the green transition in the manufacturing industry.





Duration

Start date **06.2024**
End date **05.2027**

Project partners



Lead partner

Primorje-Gorski Kotar County

Administrative Department for Regional Development, Infrastructure and Project Management

Address
Adamićeva 10
51000 Rijeka

Country
Croatia (HR)

Web
www.pgz.hr

Project partner

Alma Mater Studiorum - University of Bologna

Technical University Ilmenau

bwcon

Chamber of Commerce and Industry of Slovenia

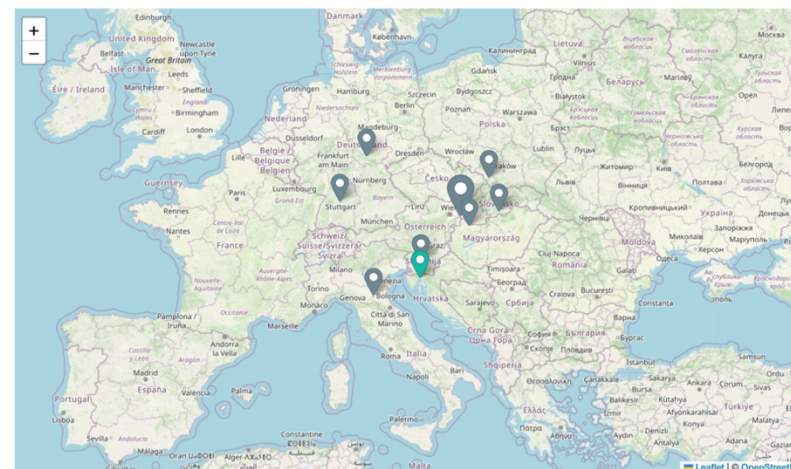
Pannon Business Network Association

University of Economics in Bratislava

Regional Development Agency in Bielsko-Biala

City Lucenec

Project partnership



Project partner
University of Economics in Bratislava

Faculty of Business Management

Address
Dolnozemska cesta 1/B
85235 Bratislava

Country
Slovakia (SK)

Web
fpm.euba.sk

Total partner budget
286 428,83 €

Project overview

Enhancement of capacities of SMEs, public authorities and academia for digitalisation, digital era-fit management and achievement of digital well-being.

The digital transformation offers new opportunities for companies but also increases complexity. Especially employees over 55 can suffer from digital stress or burnout at the workplace. The Digi-B-Well project helps companies to transform and make employees fit for the digital age. The partners upskill competences of managers, public authorities, and academia to better prevent digital stress and burnout. They develop and test new tools to self-assess digital maturity and digital transformation models in companies. In addition, a digitalisation strategy and action plans ensure the uptake of their innovative solutions into broader policy and business practices.



EKONOMIKA A MANAŽMENT

Vedecký časopis Fakulty podnikového manažmentu
Ekonomickej univerzity v Bratislave

ECONOMICS AND MANAGEMENT

Scientific Journal of the Faculty of Business Management
University of Economics in Bratislava

Ročník XXI.

Číslo 2

Rok 2024

ISSN 2454-1028