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8TH INTERNATIONAL SCIENTIFIC CONFERENCE
ERAZ 2022

**KNOWLEDGE BASED
SUSTAINABLE DEVELOPMENT**
Selected Papers

Online-Virtual (Prague, Czech Republic)
May 26, 2022

International Scientific Conference ERAZ – Knowledge Based Sustainable Development

ISSN 2683-5568

Selected Papers (part of ERAZ conference collection)

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Published by:

Association of Economists and Managers

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Ustanicka 179/2 St. 11000 Belgrade, Serbia

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Conference partners:

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Cover image by: Markéta Machová from Pixabay.

Print circulation: 100 copies

Printed by: SKRIPTA International, Belgrade, Serbia

Belgrade, 2023

ISBN 978-86-80194-61-5

ISSN 2683-5568

DOI: <https://doi.org/10.31410/ERAZ.S.P.2022>

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CIP - Katalogizacija u publikaciji

Narodna biblioteka Srbije, Beograd

330(082)

502.131.1(082)

INTERNATIONAL Scientific Conference Knowledge Based Sustainable Development ERAZ (8 ; 2022)

Selected Papers / The 8th International Scientific Conference ERAZ 2022, Knowledge Based Sustainable Development, Online-virtual (Prague, Czech Republic) May 26, 2022 ; [editor Vuk Bevanda]. - Belgrade : Association of Economists and Managers of the Balkans, 2023 (Belgrade : Skripta international). - XIV, 119 str. : ilustr. ; 29 cm. - (ERAZ Conference collection, ISSN 2683-5568)

Tiraž 100. - Bibliografija uz svaki rad.

ISBN 978-86-80194-61-5

a) Ekonomija -- Zbornici 6) Održivi razvoj -- Zbornici

COBISS.SR-ID 115394313

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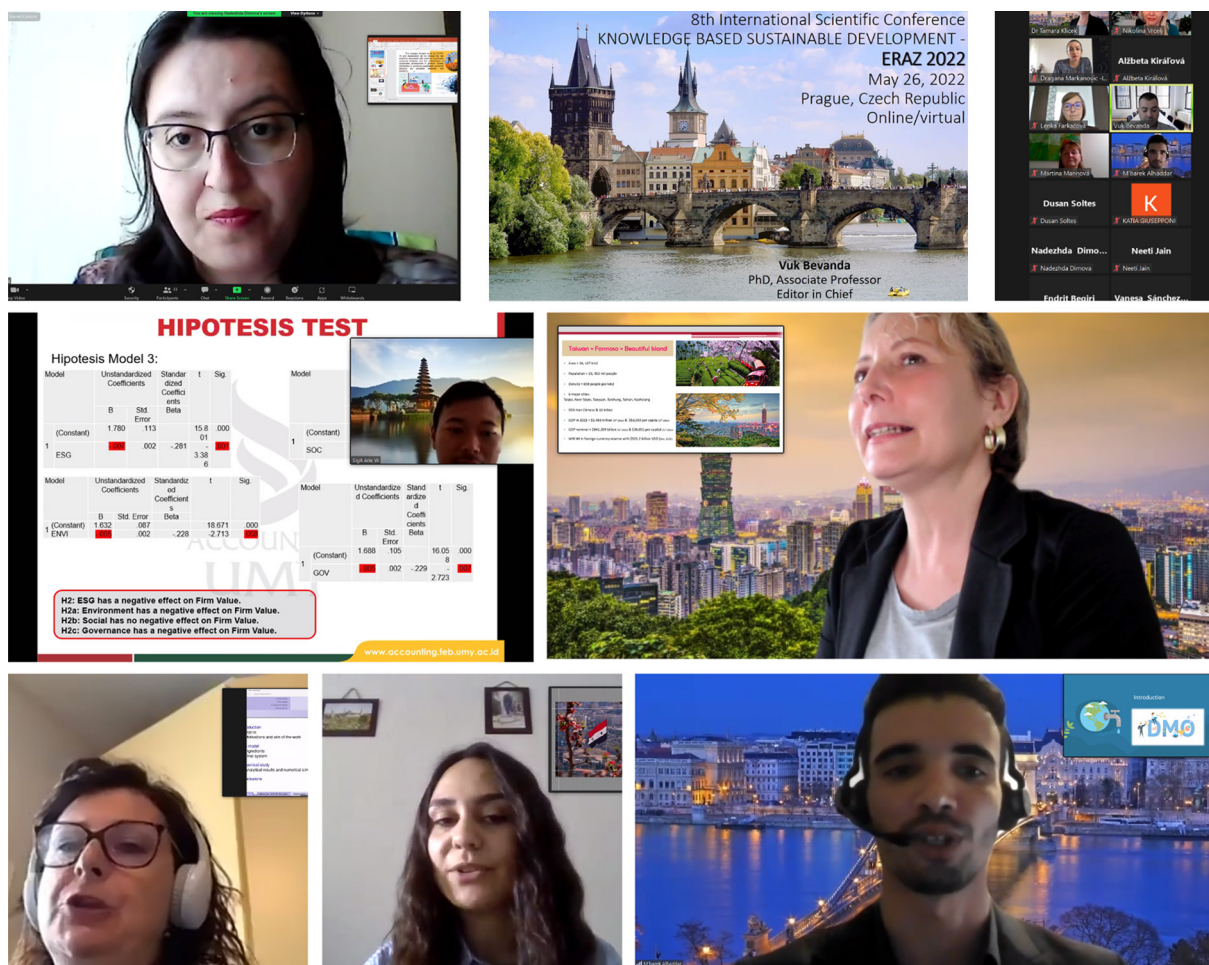
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Preface

Economic development refers to enhancing economic activities in a society, resulting in positive changes in both the socio-economic structure and living standards. Sustainable economic development aims to eradicate poverty, inequality, and unemployment, ultimately promoting social inclusion and improving the overall quality of life. Consequently, analyzing this crucial issue requires a highly interdisciplinary approach.

The issue of sustainable economic development has gained recognition and attention from esteemed academic institutions in the Balkans region and the Czech Republic. Notably, University of National and World Economy – Sofia, Bulgaria; Faculty of Economics and Business, Mediterranean University – Podgorica, Montenegro; Faculty of Commercial and Business Studies – Celje, Slovenia; Faculty of Applied Management, Economics and Finance, Belgrade; Association of Economists and Managers of the Balkans along with the AMBIS University from Prague, Czech Republic have recognized the following issue and organized the 8th International Scientific Conference titled: **Knowledge Based Sustainable Development – ERAZ 2022** online/virtually (Prague, Czech Republic) on May 26, 2022.



The primary aim of the conference was to facilitate the gathering of the academic community, including experts, scientists, engineers, researchers, students, and other interested parties, with the purpose of disseminating scientific knowledge and promoting personal and collective growth. To achieve this goal, the conference provided a platform for the presentation and pub-

lication of scientific papers, as well as interactive discussions and other forms of interpersonal exchange, which enabled participants to share their experiences and knowledge. The conference program was designed to cover the latest scientific developments in the following areas:

- Microeconomics and macroeconomics,
- Economic policy,
- International Economics and Trade,
- International Business,
- Economic diplomacy,
- Lobbying,
- Globalization,
- European business,
- Modern management and innovation,
- Business and Public Finance,
- Fiscal policy,
- Stock exchange and financial markets,
- Risk management,
- Insurance and reinsurance companies,
- Financial Management and Banking,
- Modern forms of entrepreneurship and investment,
- Investment Management,
- Enterprise and Learning,
- Women and Entrepreneurship,
- Corporate entrepreneurship,
- Agribusiness Strategy,
- Marketing and trade,
- Marketing services,
- Marketing of non-profit sector,
- Research in marketing,
- Marketing in education,
- Marketing in sport,
- Marketing in culture,
- Accounting and auditing,
- Quality management,
- Labor law,
- Business law,
- The role of the rule of law in the country's progress,
- Human rights and protection of minorities,
- Legal aspects of EU integration,
- Intellectual Property Law,
- The reform of corporate law in countries in transition,
- CEFTA,
- Ecology and energy,
- Renewable energy,
- Energetic efficiency,
- Information technology and business intelligence,
- The use and integration of new technologies,
- E-society and E-learning,
- Sustainable tourism,
- Hospitality

Within publications from the ERAZ 2022 conference:

- 11 double peer reviewed papers have been published in the International Scientific Conference ERAZ 2022 – Knowledge Based Sustainable Development – **Selected Papers**,
- 37 double peer reviewed papers have been published in the International Scientific Conference ERAZ 2022 – Knowledge Based Sustainable Development – **Conference Proceedings**,
- 70 abstracts have been published in the International Scientific Conference ERAZ 2022 – Knowledge Based Sustainable Development – **Book of Abstracts**.

ERAZ 2022 publications have nearly 600 pages.

The conference attracted the participation of over **100 researchers** from **20 different countries**, including Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, India, Indonesia, Italy, North Macedonia, Palestine, Portugal, Romania, Russia, Serbia, Slovakia, Spain, Taiwan, Turkey, and Ukraine. These researchers came from a diverse range of academic institutions, such as universities, eminent faculties, and scientific institutes, as well as from colleges, various ministries, local governments, public and private enterprises, multinational companies, and associations.



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Risk Diversification in Central and Eastern European Capital Markets: Evidence from Russia's Invasion of Ukraine

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Received: July 1, 2022
Accepted: August 26, 2022
Published: December 30, 2022

Keywords:

Russian-Ukrainian invasion;
Central-Eastern European
markets;
Arbitrage;
Risk diversification



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Abstract: Following the Revolution of Dignity in Ukraine in 2014, Russia annexed Crimea, while separatist forces supported by the Russian government seized part of the Donbas region in south-eastern Ukraine. Since the beginning of 2021, a build-up of Russian military presence has occurred along the Russia-Ukraine border. The United States and other countries have accused Russia of planning an invasion of Ukraine. On February 24th, Putin announced a "special military operation," supposedly to "demilitarize" and "denazify" Ukraine. In light of these events, the global economy and consequently the financial markets had significant structural breaks; based on these facts, this paper aims to analyze the synchronizations between the capital markets of Austria (Austrian Traded), Budapest (BUX), Bulgaria (SE SOFIX), Croatia (CROBEX), Russia (MOEX), Czech Republic (Prague SE PX), Romania (BET), Slovakia (SAX 16), and Slovenia (SBI TOP), in the period from January 2nd, 2017 to May 6th, 2022. To perform this analysis and to get more robust results we divided the sample into two sub-periods: The first from January 2nd, 2017, to December 31st, 2019, with the second sub-period called capital markets stress comprising the time lapse from January 1st, 2020, to May 6th, 2022. In order to answer the research question, we aim to find out, whether the Russian invasion of Ukraine accentuated interdependencies in Central/Eastern European financial markets. The time series do not show normal distributions, with the Russian market showing the highest risk; we find that the markets broke down significantly, mostly in March 2022 arising from instability in the global economy. The results obtained suggest very significant levels of integration during the stress period in the capital markets analyzed, and we see that during the quiet period the Slovakian market tends to be highly integrated (8 out of 8 possible), while the Slovenian market shows no integration with its regional peers, which shows that we are dealing with a segmented market. These findings suggest that markets tend toward integration in periods of extreme volatility, calling into question the implementation of efficient portfolio diversification strategies.

1. INTRODUCTION

Financial instability is a very important factor for society since a financial crisis or a stock market crash can directly or indirectly affect the level of the economic well-being of a country's inhabitants. If a certain stock market is strongly linked to the stock market of another country, the financial stability of the former depends in part on the financial stability of the latter. For this reason, a close or strong connection between markets increases the levels of vulnerability

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to external shocks and, as a result, influences the economic conditions and welfare levels of the respective countries. Thus, the occurrence of integration between markets can have significant implications for international risk diversification (Bagão et al., 2020; R. Dias et al., 2020; Dias et al., 2021b, 2021a; Dias et al., 2020, 2021, 2022; Pardal, P., Dias, R., Šuleř, P., Teixeira, N., and Krulický, 2020; Pardal et al., 2021; Silva et al., 2020).

When integrating equity markets, investors generally seek to include assets in their portfolios that hold lower levels of correlation to promote effective diversification strategies. In the same context, Grubel (1968) and Levy and Sarnat (1970) argue that investing in international stock markets is substantiated by the fact that the correlation between assets is lower than that examined in domestic assets. Therefore, the low correlation between international stock markets is a key factor for portfolio diversification.

This paper aims to analyze financial integration in the capital markets of Austria (Austrian Traded), Budapest (BUX), Bulgaria (SE SOFIX), Croatia (CROBEX), Russia (MOEX), Czech Republic (Prague SE PX), Romania (BET), Slovakia (SAX 16), and Slovenia (SBI TOP) during the period from January 2nd, 2017, to May 6th, 2022. The results obtained suggest very significant levels of integration, and this evidence decreases the chances of portfolio diversification in the long run, except for the Slovenian market.

This research adds relevant contributions to the literature, namely to the study of risk diversification in Central and Eastern European markets in the context of the Russian invasion of Ukraine; to the best of our knowledge, this is the first study that analyzes in isolation these financial markets during this time-lapse. In terms of structure, this paper is organized into 5 sections. Section 1 is represented by the current introduction. Section 2 presents a Literature Review of articles on financial market integration. Section 3 describes the data and methodology. Section 4 contains the results. Finally, Section 5 presents the general conclusions of the paper.

2. LITERATURE REVIEW

Understanding international linkages between financial markets in periods of the financial crisis is relevant for investors, fund managers, and academics in different aspects, including portfolio diversification (Lee, 2017).

Voronkova (2004) analyzed the level of financial integration between Central European markets and developed markets; after accounting for structural changes, the author shows that Central European capital markets exhibit significant levels of integration, suggesting that the hypothesis of portfolio diversification may be called into question. Authors Lucey and Voronkova (2008), on the other hand, analyzed the integration of financial markets before and after the 1998 crisis, with cointegration tests with regime shifting, suggesting that markets are partially integrated.

Syllignakis and Kouretas (2011) highlight that the Central European capital markets (Czech Republic, Hungary, Poland, Slovenia, and Slovakia), and the German and US stock markets are integrated, while the Estonian and Romanian markets are segmented.

Özer, Kamışlı and Kamışlı (2016) show hybrid results by failing to highlight comovement between the market of Germany, Austria, Czech Republic, Croatia, Lithuania, and Greece. These findings have important implications for international investors, portfolio managers and

policymakers. Authors Moagar-Poladian, Clichici and Stanciu (2019), meanwhile, highlight that Central and Eastern European capital markets show a significant level of integration during the 2010 financial crisis.

Liu, Manzoor, Wang, Zhang and Manzoor (2020) studied the impact of the 2020 global pandemic on 21 capital markets, suggesting the presence of significant structural breaks. Zeren and Hizarci (2020), analyzed the effects of the Covid-19 epidemic on equity markets over the period January 23, 2020, and March 13, 2020. The authors' evidence levels of causality between the number of deaths from the global outbreak and financial markets. It was understood that the global outbreak cases have cointegrating relationships with the SSE, KOSPI and IBEX35 markets, but not with the FTSE MIB, CAC 40, DAX 30 markets.

In more recent studies, author Hung (2022) analyzed the integration in the capital markets of Croatia, Czech Republic, Hungary, Poland, and Romania using the multivariate dynamics equicorrelation - generalized autoregressive conditional heteroskedasticity (DECOGARCH) model and the spillover index. The results show that the average return equicorrelation between CEE and world stock indices is positive; this evidence undermines the benefits of portfolio diversification in these regional markets.

In summary, this work aims to contribute by providing information to investors and regulators in Central and Eastern European capital markets, where individual and institutional investors seek diversification benefits, as well as to help promote the implementation of policies that contribute to the efficiency of these markets.

3. METHODOLOGY AND DATA

3.1. Data

Data for the closing prices of the capital markets in Austria (Austrian Traded), Budapest (BUX), Bulgaria (SE SOFIX), Croatia (CROBEX), Russia (MOEX), Czech Republic (Prague SE PX), Romania (BET), Slovakia (SAX 16), and Slovenia (SBI TOP) for the period from January 2nd, 2017, to May 6th, 2022, were analyzed.

In order to perform this analysis and obtain more robust results, we have divided the sample into two sub-periods: the quiet one from January 2nd, 2017, to December 31st, 2019, and the second one called capital markets stress, which includes the super-period from January 1, 2020, to May 6, 2022. To mitigate distortions in exchange rates, we have maintained the stock indices in local currency.

3.2. Methodology

The research was developed in several stages. The sample was characterized using descriptive statistics, the adherence test of Jarque and Bera (1980), and quantile plots. To assess the stationarity of time series we will use the ADF (Dickey and Fuller, 1981), PP (Perron and Phillips, 1988) tests in the panel with Fisher and Choi transformations. To answer the research question, we will use the methodology of Gregory and Hansen (1996), considering we have examined a very turbulent period in the financial markets. Additionally, the reason why standard cointegration tests such as Engle and Granger (1987) and Johansen (1988) are not appropriate for testing cointegration with regime change is that such tests assume that the cointegration vector is time-invariant.

4. RESULTS

Figure 1 shows the evolution, in levels, of the 9 capital markets under analysis, namely, the stock market indices of Austria (Austrian Traded), Budapest (BUX), Bulgaria (SE SOFIX), Croatia (CROBEX), Russia (MOEX), Czech Republic (Prague SE PX), Romania (BET), Slovakia (SAX 16) and Slovenia (SBI TOP). Through graphical observation of the period from January 2nd, 2017, to May 6th, 2022, we see the existence of significant structure breaks, arising from the 2020 pandemic crisis as well as during the Russian invasion of Ukraine. These findings are in line with the evidence suggested by authors Vasco et al. (2021), Dias et al. (2022), Zebende et al. (2022) that show significant structure breakdowns in international capital markets.

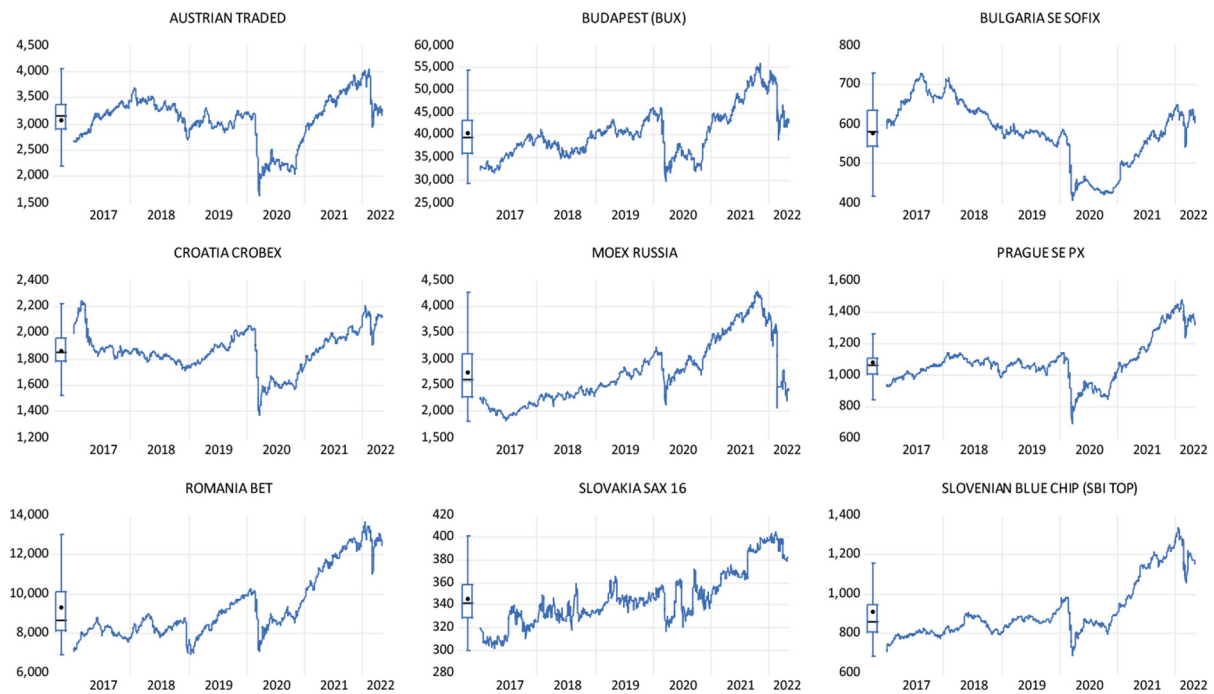


Figure 1. Evolution, in levels, of the 9 financial markets, in the period from January 1st, 2017, to May 6th, 2022

Source: Own elaboration

Figure 2 shows the evolution of the return of the 9 stock markets under analysis and shows extreme volatility during the first and second quarters of 2020, as well as in 2022, derived from a sharp drop in the index prices due to the evolution of the global pandemic (Covid-19) and in 2022 due to the military operation carried out by Russia on Ukrainian territory.

In table 1 we can observe the descriptive statistics and verify that the average returns are positive, while the Russian market presents the sharpest standard deviation (0.17251). When we check the distribution of the data, we see that the time series present negative skewness, namely the IMOEX index (-8.837122), while considering the kurtosis, the values are different from 3, i.e., the skewness and kurtosis coefficients are statistically different from those with a normal distribution. These findings are validated by the adherence test of Jarque and Beta (1980), where the null hypothesis that the data follow a normal distribution is rejected at a significance level of 1%.

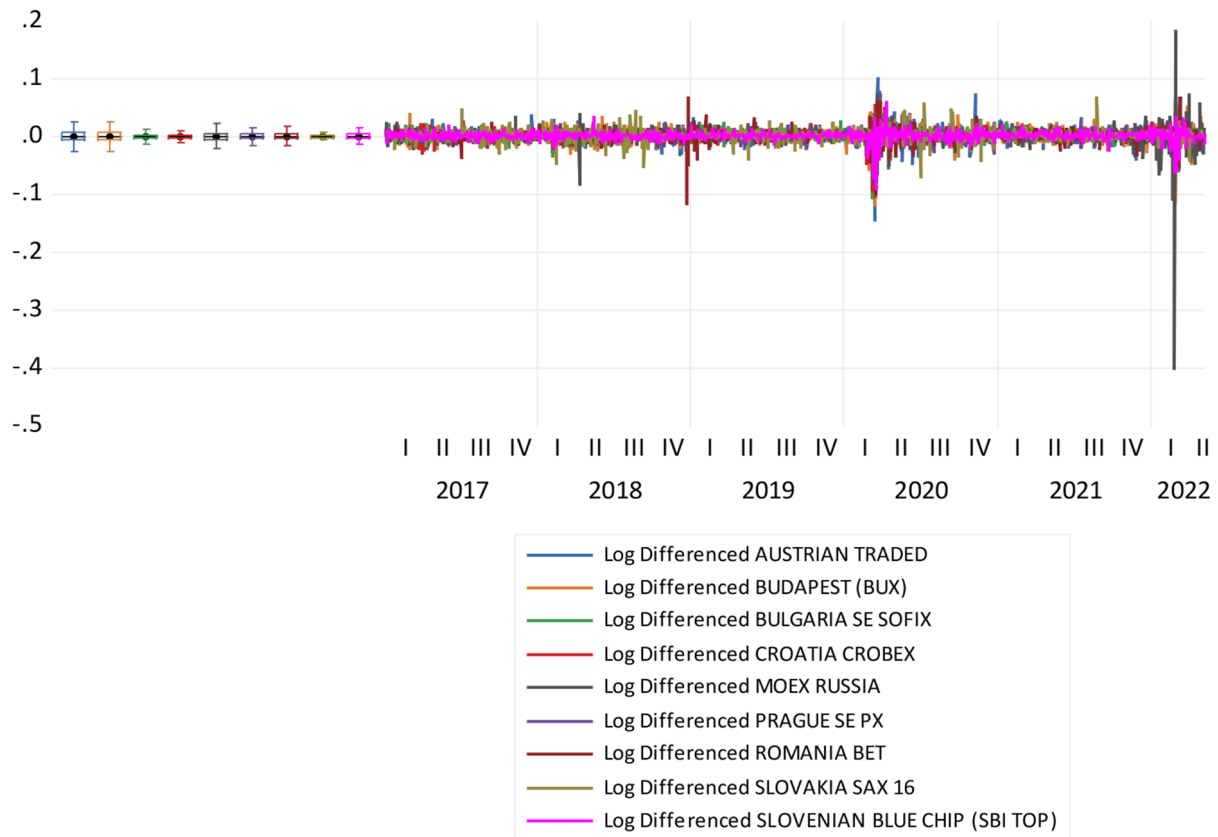


Figure 2. Evolution of the return of the 9 capital markets, in the period from January 1st, 2017, to May 6th, 2022

Source: Own elaboration

In summary, the Russian market shows much higher than average levels of volatility which was expected due to the Russian invasion of Ukraine in February 2022 and the instability caused in the global economy.

Table 1. Descriptive statistics, in returns, of the 9 capital markets over the period January 1st, 2017, to May 6th, 2022

	Mean	Median	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Probability	Observations
BUX	0.000201	0.000223	0.013073	-1.655406	18.63376	14843.73	0.000000	1395
SOFIX	2.28E-05	0.000000	0.008050	-2.722058	39.15623	77707.97	0.000000	1395
CROBEX	4.81E-05	0.000100	0.008220	-3.632165	49.42244	128329.1	0.000000	1395
MOEX	5.32E-05	0.000298	0.017251	-8.837122	230.9672	3038857.	0.000000	1395
PRAGUE	0.000255	0.000259	0.009319	-1.365256	19.44129	16145.49	0.000000	1395
BET	0.000404	0.000411	0.010737	-1.878556	26.88813	33989.09	0.000000	1395
SAX16	0.000131	0.000000	0.009444	-0.043912	13.64513	6587.103	0.000000	1395
SBITOP	0.000338	0.000116	0.008565	-2.049224	26.18284	32215.27	0.000000	1395
AUSTRIAN	0.000123	0.000230	0.013821	-1.347490	22.11028	21649.56	0.000000	1395

Source: Own elaboration

Through the graphic observation of quantiles illustrated in Figure 3, one can also infer the normality of the time series data under analysis. Comparing the data dispersion relative to the normal distribution line, it appears that none of the series is completely overlapping, and there is some skewness. Nevertheless, we find that the time series tend towards an approximately normal distribution, given that the number of observations is sufficiently large.

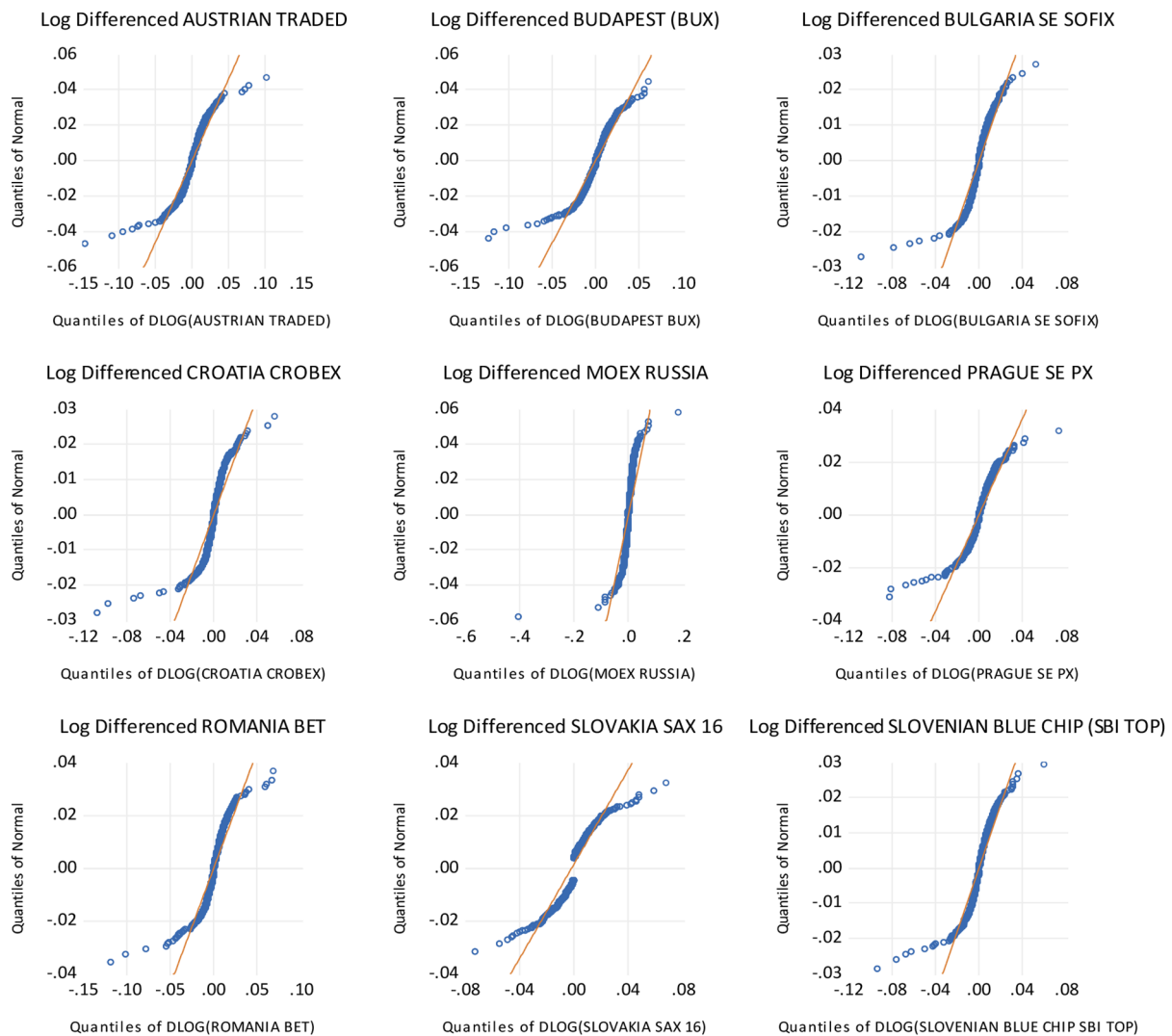


Figure 3. Evolution of the return of the 9 capital markets,
in the period from January 2nd, 2017, to May 6th, 2022

Source: Own elaboration

Table 2 shows the ADF and PP stationarity tests with Fisher and Choi transformations for the 9 capital markets under analysis, namely, the stock indices of Austria (Austrian Traded), Budapest (BUX), Bulgaria (SE SOFIX), Croatia (CROBEX), Russia (MOEX), Czech Republic (PragueSE PX), Romania (BET), Slovakia (SAX 16) and Slovenia (SBI TOP), for the complete sample period. The tests suggest that the time series are stochastic only in the first differences, that is, we are facing a white noise that allows us to validate the robustness of the results.

Table 2. Stationarity tests, in return, of ADF, with Fisher and Choi transformation, concerning the 9 capital markets for the period from January 2nd, 2017, to May 6th, 2022

Null Hypothesis: Unit root (individual unit root process)		
Method	Statistic	Prob.**
ADF - Fisher Chi-square	1295.75	0.0000
ADF - Choi Z-stat	-33.2900	0.0000

**Note: Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Source: Own elaboration

Table 3. Stationarity tests, in return, of PP, with Fisher and Choi transformation, concerning the 9 capital markets, in the period from January 2nd, 2017, to May 6th, 2022

Null Hypothesis: Unit root (individual unit root process)		
Method	Statistic	Prob.**
PP - Fisher Chi-square	605.291	0.0000
PP - Choi Z-stat	-22.5453	0.0000

**Note: Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Source: Own elaboration

In Table 4 it is possible to analyze the integrations between the pairs of financial markets under analysis during the two sub-periods: Quiet and during the period marked by the 2020 pandemic and more recently by Russia's invasion of Ukraine in 2022. During the quiet period we verified the presence of 15 integrated market pairs (out of 72 possible), with the Slovakian market registering the highest level of integration (8 out of 8 possible). Slovenia, on the other hand, has no integrations with its regional peers, which shows that this is a market that is segmented. When we analyze the sub period of stress in capital markets, we see that the level of integration rose sharply (from 15 to 33); the Slovak market continues to maintain, among the analyzed markets, the highest number of integrations, registering 7 out of 8 possible, followed by the Russian and Romanian markets with 5 integrations (out of 8 possible). The stock indices of Budapest and Prague showed 4 integrations, while the markets of Austria and Slovenia with 3 integrations. Bulgaria and Croatia maintained their level of integration (1 out of 8 possible). These findings are in line with the evidence suggested by Dias et al. (2020), Dias et al. (2021), Dias and Carvalho (2021), and Dias et al. (2022) that in periods of extreme volatility markets tend towards integration thus calling into question the hypothesis of efficient portfolio diversification.

Table 4. Summary of the results obtained in the Gregory-Hansen tests, in the financial markets under analysis, in the Quiet and Crisis periods

Markets	Quiet	Crisis	Evolution
BUDAPEST BUX	1/8 possible	3/8 possible	↑
BULGARIA SE SOFIX	1/8 possible	4/8 possible	↑
CROATIA CROBEX	1/8 possible	1/8 possible	=
MOEX RUSSIA	1/8 possible	1/8 possible	=
PRAGUE SE PX	0/8 possible	5/8 possible	↑
ROMANIA BET	1/8 possible	4/8 possible	↑
SLOVAKIA SAX 16	2/8 possible	5/8 possible	↑
SLOVENIAN BLUE CHIP SBI TOP	0/8 possible	3/8 possible	↑
AUSTRIAN TRADED	8/8 possible	7/8 possible	↓

Source: Own elaboration

5. CONCLUSION

This paper analyzed financial integration in the capital markets of Austria (Austrian Traded), Budapest (BUX), Bulgaria (SE SOFIX), Croatia (CROBEX), Russia (MOEX), Czech Republic (Prague SE PX), Romania (BET), Slovakia (SAX 16), and Slovenia (SBI TOP) during the period from January 2nd, 2017, to May 6th, 2022. In order to perform this analysis and gauge more robust results we partitioned the sample into two sub-periods: quiet from January 2nd, 2017, to December 31st, 2019, and the second called capital markets stress that comprises the super-period from January 1st, 2020 to May 6th, 2022. In order to answer the research question, we intend

to find out, whether the Russian invasion of Ukraine accentuate interdependencies in Central/Eastern European financial markets. The results show that during the Quiet period there were 15 integrated market pairs (out of 72 possible), with the Slovak market registering the highest level of integration (8 out of 8 possible). Slovenia, on the other hand, has no integrations with its regional peers, which shows that we are facing a market that is segmented. When we analyze the sub period of stress in capital markets, we see that the level of integration rose sharply (from 15 to 33); the Slovak market continues to maintain, among the analyzed markets, the highest number of integrations, registering 7 in 8 possible, followed by Russia and Romania with 5 integrations (in 8 possible). The stock indices of Budapest and Prague showed 4 integrations, while the markets of Austria and Slovenia with 3 integrations. Bulgaria and Croatia maintained their level of integration (1 in 8 possible).

The general conclusion to be retained and supported by the results obtained through the econometric model tests, is that the global pandemic of 2020 and the Russian invasion of Ukraine in 2022 have a significant impact on the memory properties of the Central and Eastern European financial markets. We find that the level of financial integration is very significant in these markets during this uncertainty in the global economy; so, these findings call into question the implementation of efficient portfolio diversification strategies. In conclusion, we believe that this evidence is relevant for policymakers and investors concerning regional development policies and portfolio diversification strategies in Central and Eastern European financial markets.

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Contribution of the Institutions of the Regional Political System to the Preservation of the Level and Quality of Life of the Population in the Context of the COVID-19 Pandemic (The Case Study of the Trans-Baikal Territory)

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Received: July 2, 2022
Accepted: August 22, 2022
Published: December 30, 2022

Keywords:

Level and quality of life of the population;
Social efficiency;
Level of administration;
Sustainability of regional political systems;
Sustainable development of the region;
Method of dichotomous assessment;
COVID-19



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Abstract: *The study of the activities of regional authorities to preserve the level and quality of life of the population in the context of the COVID-19 pandemic acquires scientific value due to the special conditions in which the regional community and the regional political institutions were placed.*

The article analyzes the impact of the conditions of the COVID-19 pandemic on the activities of the institutions of the regional political system to preserve the level and quality of life of the population within a particular subject of the Russian Federation – the Trans-Baikal Territory. As the main research method, a dichotomous assessment of the data obtained as a result of an expert survey in the fall of 2021 is used. The experts were the heads and specialists of the public authorities of the region and local authorities.

The contribution of the institutions of the regional political system to the preservation of the level and quality of life of the population is considered through the categories of “social efficiency” and “level of administration”. As a result of the study, we defined the pandemic has a negative impact on the functioning of the institutions of the regional political system in the field of maintaining the level and quality of life of the population. The revealed trends do not allow us to consider the regional political system sufficiently effective and capable of providing the basic conditions for the sustainable development of the region.

1. INTRODUCTION

The conditions of the COVID-19 pandemic have become a test for both population and regional political systems. According to experts and researchers, the difficulties faced by regional authorities are diverse. Restrictions imposed during the pandemic caused many negative socio-economic consequences (reduced income, loss of work, restriction in the sphere of entrepreneurial activity) that in its turn led to a decrease in the level and quality of life. Most often, a reduction of availability of general education (forced expenses of families to provide school-children with computer equipment or means of communication) (Osipov, 2020, p. 35), a shortage of social and medical services (Mau, 2020, p. 146), a negative impact of isolation on psychological health, etc. are seen by Russian researchers as social risks caused by the pandemic. The works of foreign scientists include the similar negative consequences associated with the violation of the standard conditions of social functioning with changes in social and psychological circumstances (Qiu, 2020, p. 1). On the other hand, representatives of social and political sciences note that the conditions of the pandemic contributed to checking the power institutions' ability to make timely decisions aimed at minimizing the crisis consequences and meeting the vital needs of citizens (Zhade, 2021, p. 736).

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The level and quality of life are not only complex socio-economic indicators measured in statistical data but also indicators determined through the population's perception and evaluation of its living conditions. While conducting a study of a level and quality of life, it is necessary to take into account not only objective factors (the dynamics of the money income level and expenditures of population, the subsistence level, health status, availability of material resources, work, etc.) but also subjective factors related to the perception of opportunities by individuals and the degree of satisfaction with the living conditions. Therefore, the activities of public authorities (including the regional level) should be evaluated from the point of view of their existence justification (execution of the functions assigned to them) and implementation of certain activities. In this article, we consider the area associated with the preservation of the level and quality of life of the population within the region (the Trans-Baikal Territory) in the context of the pandemic.

The purpose of the article is to identify the effectiveness of the activities of the regional authorities in the Trans-Baikal Territory in the sphere of preserving the level and quality of life of the population in the context of the pandemic, using a dichotomous assessment of the expert survey data.

The study hypothesized that the conditions of the pandemic have a negative impact on the functioning of regional political systems and lead to a decrease in the effectiveness of the functions assigned to them.

2. LITERATURE REVIEW

A significant amount of modern research is devoted to the study of the dynamics of the level and quality of life and the functioning of authorities (including the regional level) in the conditions of uncertainty that have developed under the influence of the COVID-19 pandemic. M.V. Shakleina, M.I. Volkova, K.I. Shaklein, S.R. Yakiro (Shakleina, 2020, p. 137-138), O. Kozlova focuses on the problems of measuring the level and quality of life and the need for a combination of objective and subjective indicators. A., Gladkova T. V., Makarova M. N., Tukhtarova E. Kh. (Kozlova, 2015, p. 281-282). F.D. Algahtani, S.-u.-N. Hassan, B. Alsaif, R. Zrieq revealed the negative impact of the pandemic on predictors of the level and quality of life-based on regression analysis of data. The authors concluded that in the crisis conditions under consideration, the population needs public and institutional support (Algahtani, 2021, p. 10).

The assessment of the impact of the COVID-19 pandemic on social and political processes at the level of separate regions is also widely presented in research papers. Dorothee Allain-Dupre, Isabelle Chatry, Antoine Kornprobst and Maria-Varinia Michalun underline the asymmetry of the impact of the pandemic crisis on the regions, the focus on its territorial dimension and emphasize the special role of the authorities of subnational territorial units (regions, constituent units of the federation) in taking measures to control negative consequences and maintaining the functioning of the health care system, social services, and regional economy (OECD, 2020, November 10). Spatial and managerial aspects of the pandemic are presented in the article by D. McCoy. Professor David McCoy writes about the need to develop a managerial strategy, where he identifies 3 key aspects of the activities of authorities: 1) Dealing with the disease; 2) Managing the health system; 3) Planning for the social and economic impacts of the crisis (McCoy, 2020). The priority of managing the consequences of the COVID-19 pandemic at the level of political and territorial entities is noted by Caroline Chang, Scott Moore and Ali Wyne. They point out that at the national level, the United States did not really cope well with the pandemic, but at the state level, there are numerous examples of managerial practices to follow (Chang, 2020).

3. METHODOLOGY

3.1. The Empirical Base of the Study

The collection of empirical data was carried out using:

- 1) the online survey on the Online Test Pad platform <https://onlinetestpad.com/hoy6ugd7p-kzxm>. The online survey was conducted in two stages: the first stage – from October to November 2020, and the second stage – from June to August 2021. 385 respondents took part in the survey;
- 2) in the expert survey conducted in November – December 2021 the number of experts was 79 persons: 10 of which were representatives of the executive regional authorities, 7 – legislative, and 62 – representatives of local authorities.

The answers of the respondents and experts were processed using the SPSS statistics program.

3.2. The Method of Dichotomous Assessment

This method of expert assessment is based on determining the evaluation of the indicator taking into account the priority (of direction, scope, tasks, results). It must be recognized that the application of this method introduces certain simplifications into the formulation of a research problem. Nevertheless, the dichotomous approach allows us to obtain necessary data about the problem, its condition, initial estimates and results to test the hypothesis and develop further actions.

The analysis is based on the construction of a goal tree – a hierarchical breakdown of the main goal – the estimated indicator – the contribution of the regional political system institutions to sub-goals - indicators that determine the top assessment. They, in turn, are also divided into two components, etc. (Fig. 1).

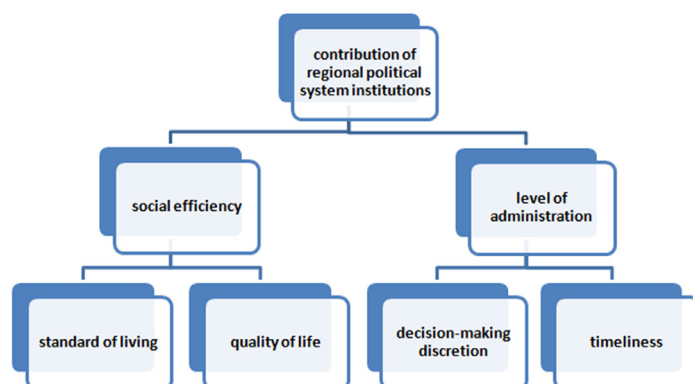


Figure 1. Hierarchical breakdown of the main goal – the estimated indicator

Source: Own research

In order to obtain an aggregated assessment of the contribution of the regional political system institutions to the preservation of the level and quality of life of the population, we took the directions of “social efficiency” and “level of administration” as the second level elements. To evaluate each of them, we defined the elements of the third level.

To evaluate social effectiveness, we take two variables: “standard of living” and “quality of life”. The validity of using these indicators as variables within the scope of the task and the

capabilities of the assessment methodology used is fully justified, since the indicators of the level and quality of life are comparative in their initial content, and in terms of the number of components and assessment methods (the use of quantitative and qualitative assessments) they are different and the result of their assessment is not always unidirectional.

The standard of living is a “numerical indicator” of the authorities’ activity, and the quality of life is an integral representation of subjective indicators, consisting of assessments of satisfaction with various spheres of life, including emotional assessments and objective ones – the degree and conditions of satisfaction with a wide range of material and non-material (spiritual) needs.

To assess the indicator “level of administration”, we identified the variables “decision-making discretion” and “timeliness” which were evaluated as the average value of expert responses.

Splitting into two elements for each indicator at all levels, except the top one, simplified the process of evaluation – convolution of estimates-indicators from the bottom to the top.

The dichotomous approach allowed us to build assessment matrices based on the priorities chosen by experts. When constructing the matrices for the evaluation of individual indicators, we took into account the monotonicity rule (the left estimate cannot be greater than the right one, and the value of the estimates increases from the lower left corner to the right).

With the help of the prepared evaluation matrices, the averaged expert assessments obtained made it possible to gradually evaluate the lower rows of the indicator elements at first, then the indicators of the next level, and as a result – to obtain an aggregated assessment.

4. RESULTS

As a result, we have formed three matrices to assess the priority and the “result” of the selected indicators. The first one is to assess the social efficiency of the institutions of the regional political system. The second matrix is to assess the level of administration. The third matrix is integral – it reflects the contribution of the institutions of the regional political system in the chosen directions, and shows the impact on the established variables.

For example, let’s consider the conditions for the formation of one of the matrices – the third one, which determines the final integral assessment (the rest are done by analogy, taking into account the indicators and the priority). To assess the contribution of the regional political system institutions, we will consider ensuring social efficiency as a priority.

While filling in the matrix, we will take into account the following provisions:

- 1) with an unsatisfactory assessment of both indicators, the contribution of the institutions of the regional political system is assessed as unsatisfactory;
- 2) with an increase in social efficiency ratings and lower assessments of the level of administration, priority is given to the efficiency, i.e. with good assessments of the level of social efficiency and an unsatisfactory/satisfactory assessment of the level of administration, the assessment of the “contribution” is satisfactory or good;
- 3) similarly, with an increase in assessments of the level of administration and lower assessments of social efficiency, priority is given to this indicator and the “contribution” as a whole is assessed only as satisfactory with a negative trend;

- 4) even with a high assessment of the level of administration, but a satisfactory and good assessment of social efficiency, power institutions of the regional political system will not receive an excellent assessment.

To assess the lower-level variables, we took answers to the questionnaires of the surveys conducted: among the population of the Trans-Baikal Territory and an expert survey, where state and municipal employees participated as experts.

So, we assessed the “quality of life” through the average responses to questions about the evaluation of the social sphere development (2,8548) and the security evaluation (2,8197). Interpreting these data taking into account the scale of responses (they shift to “unsatisfactory”), it is impossible, in our opinion, to talk about an ordinary “satisfactory” assessment. We will consider it as a trend towards a decrease in the quality of life.

To assess the “standard of living”, we took answers to questions about changes in the level of income (50% of respondents said that income has not changed significantly, 27.8% indicated a decrease in income, 5% said that income has increased slightly since there was support from the state) and an evaluation of economic policy (the average estimate is 2,931). In this case, we can designate the state as a “stable” one.

The economic component – the standard of living – is easier to regulate and ensure than the quality of life, which, as has already been mentioned, is more subjective.

The intersection of the lower-level estimates gives us the value of the indicator for social efficiency. If we choose the standard of living as a priority, then the social efficiency of the institutions of the regional political system can be estimated at 2.884 (satisfactory) (Table 1.).

Table 1. Matrix with the results of assessing the social efficiency of the regional political system institutions of the Trans-Baikal Territory

Great	4		4	5	5
Good	3		4	4	4
Satisfactory	3		3	3	4
2.931	3	(2.884)			
Unsatisfactory	2	2	2	3	3
Standard of living/Quality of life	Unsatisfactory	2.837	Satisfactory	Good	Great

Source: Own research

Assessing the level of administration – in fact, the effectiveness of the “official” activities of the regional authorities, we considered two variables that determine this indicator in the context of the research task: discretion in making decisions and timeliness.

In the case of crisis situations, in particular pandemics, in our opinion, decision-making time becomes a priority. The direct result depends on the timeliness of decisions and their implementation: the number of infected, sick people, and the level of provision with the necessary funds. Of course, decision-making discretion of regional authorities in general, and especially in the context of a pandemic, is of priority importance, since the situations in separate regions are different and measures should be taken according to the development of events with respect to regional specifics.

To assess this variable, we took the average value of experts' answers to the questions about decision-making discretion in crisis conditions by regional authorities (3,608) and the effectiveness of legislative practice during the pandemic (3,515). And the average result of the answers to the question about the timeliness of making necessary decisions became a direct assessment of this variable (3,972). Both indicators are quite close to the "good" rating. Nevertheless, in crisis situations, according to experts, decision-making time has a priority. Taking this fact into account, we assign "good" (3,744) (Table 2.) to the indicator of "level of administration".

Table 2. Matrix with the results of the assessment of the level of administration for the regional political system in the Trans-Baikal Territory

Great	4	4		4	5
Good	3	3		4	5
3.515	3		Good (3.744)		
Satisfactory	2	3		3	4
Unsatisfactory	2	3	3	3	3
Discretion/Timeliness	Unsatisfactory	Satisfactory	3.972	Good	Great

Source: Own research

The final stage of assessing the contribution of the regional political system institutions (the regional authorities) is to combine the two results obtained: a satisfactory assessment of social efficiency and a good assessment of the level of administration. It is the choice of priority that is of particular importance here. The question of priority, as a scientific or research task, is debatable. In practical terms, the further development of the situation and possible adjustments depend on the priority chosen by the experts (Table 3.).

Table 3. Integral matrix for assessing the contribution of the regional political system institutions of the Trans-Baikal Territory to the studied indicators (directions)

Great	4		4	5	5
Good	3		4	4	4
Satisfactory	3		3	3	4
2.884		3			
Unsatisfactory	2		2	3	3
Social efficiency/Level of administration	Unsatisfactory	3.744	Satisfactory	Good	Great

Source: Own research

As a result, we state that taking into account the priority of social efficiency in relation to the level of administration, the contribution of the regional political system institutions of the Trans-Baikal Territory to the preservation of the level and quality of life of the population can only be assessed satisfactorily with a negative trend. The data obtained do not allow us to consider the regional political system as sufficiently effective one in the sphere of providing the basic conditions for the sustainable development of the region.

5. FUTURE RESEARCH DIRECTIONS

Discuss future and emerging trends. The results of this study allow us to talk about the negative impact of the COVID-19 pandemic conditions on both the level and quality of life of the population within the study region – the Trans-Baikal Territory and on the functioning of regional authorities. Despite the fact that the institutional framework of political systems is more resistant to various kinds of disturbing influences, the analysis of the results of the surveys conducted

using the dichotomous method allowed us to establish a decrease in the level of social efficiency of the authorities in the conditions of Coronavirus infection and to assess the degree of fulfillment of the functions assigned to the institutions of the regional political system as “satisfactory”. Such a trend of reducing the social efficiency of regional authorities in a crisis situation is natural and ordinary not only for the subjects of the Russian Federation but also for the political-territorial entities of many other states.

Further research will be aimed at detailing the results obtained and establishing a correlation between the indicators of the level and quality of life of the population within the region and the stability of the regional political system.

6. CONCLUSION

The dichotomous analysis used in this article as the main method, despite some simplifications, allowed us to identify trends in the influence of the COVID-19 pandemic conditions on the institutions of the regional political system within the Trans-Baikal Territory and assess their contribution to maintaining the level and quality of life of the population.

The article is based on empirical data obtained through a survey of the population of the Trans-Baikal Territory and an expert survey. Therefore, the obtained results, first of all, reflect the subjective component of the categories “standard and quality of life” – they show the perception of socio-political situation in the region by the population and experts, their assessment of the contribution of the authorities to maintaining the level and quality of life. In this article, we did not set the task of correlating the indicators of official statistics with the results of the conducted surveys. It is a guideline for future studies.

ACKNOWLEDGMENT

The research was conducted on the basis of the laboratory of “Regional Management and Policy Studies” of the Trans-Baikal State University. We express our gratitude to our colleagues and the administration of the Trans-Baikal State University.



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COVID-19: A Story Told by Women Entrepreneurs about How to Survive by Turning a Crisis into an Opportunity

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Received: June 27, 2022

Accepted: August 30, 2022

Published: December 30, 2022

Keywords:

Women entrepreneurs;
COVID-19;
Challenges;
Crisis management;
Financial pressure



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Abstract: *The Covid-19 epidemic has generated an environment full of confusion and instability among global economies. It has put enormous strain on the governments and the economies, both on an international and national scale. No single day goes by without news about the consequences of the Covid-19 pandemic's devastating economic, health, and emotional well-being. The intensity of its burnt is unprecedented since it is a humanitarian crisis that has generated shock to the global economic system. The crisis had a significant influence on economic activities all over the world, but on the other hand, it boosted the presence of women as entrepreneurs, resulting in a shift in the demographic features of business and economic processes. This research investigated how women entrepreneurs had to deal with all of this during Covid-19. The study exemplifies the difficulties that a female entrepreneur faces as a result of the crisis. Furthermore, it sheds light on the strategies used by female entrepreneurs to deal with the impacts of the crisis in order to safeguard their businesses. The focus of the paper is also on the associated obstacles, challenges, and potential solutions for the emergence of female entrepreneurs in this pandemic era. We provide a paradigm to aid in making sense of how gender and entrepreneurship research is currently framed and positioned. The possibilities in disguise and future potentials that will alter women's choices and talents following the Covid-19 outbreak have been briefly examined. Women entrepreneurs have the potential to convert the Covid-19 critical point into an even better opportunity. This study is unique in that it will serve as the foundation for many future studies that will strive to investigate further the status of difficulties and opportunities for women entrepreneurs to manage and sustain their entrepreneurial endeavors effectively.*

1. INTRODUCTION

When holistically considered, Covid-19 has presented a real challenge to both established and small businesses. This pandemic was a total outlier, and it came at a point when it was unprecedented, and so were the consequences. The impact of the Covid-19 pandemic rocked all sectors of society, but the economic systems were the most affected due to the forced lockdowns and social restrictions that hampered the coordination of the usual flow of business activities (Mo et al., 2020). Ultimately most businesses were brought to their knees as they could not sustainably keep the workforce while operating with limited customers as most people went indoors in fear of contracting the virus. However, some like Amazon and other e-commerce companies recorded a historically high increase over the same period (Bhadury, 2017).

This underscores the point the pandemic was a redefining point in history in which the roles and positions of businesses in the global market were recalibrated. This had the same impact on women's run businesses which had to structure new mechanisms and a fresh framework for dealing with the downturns of the pandemic. Therefore, the pandemic was a real redefining

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moment for all businesses. Within these critical moments, big exchanges occur, favoring the ones that adopt suitable strategies for combating the challenge. Concerning the latest Covid-19 cases, it marked a period in which businesses were tried and tested. This was also a great opportunity for the women-led business, which goes the same opportunity alongside other businesses to fight and thrive.

Women's entrepreneurship is a vehemently debated academic issue, with scholars vying to provide more to the increasing body of knowledge. To many economic players, particularly entrepreneurs, the burden of lockdown on significant sectors of society and economic and social life has come as a shock. The worldwide lockdown caused by the epidemic, which forced people all around the world to stay home, also revealed the creative and inventive spirit. With the epidemic causing financial pressure in every home, women have been forced to discover new ways of making extra money. These women have worked hard to fulfill themselves, not only through marriage and motherhood but also by starting businesses and earning money to support themselves and their families, with the most difficult constraining factor being the dual role in home and business. Uncertainty produces worry and fear, and, at times, denial. This research aims to emphasize what these developments signify for female entrepreneurs and their current position in a changing society by pinpointing specific significant changes that society has gone through over the last decades.

Women have responded to the Covid-19 pandemic in diverse ways. The strategies that they applied in surviving through the pandemic are major determinants of how they are likely to respond in the ensuing years hence the maturity that has been realized in women's business. The challenges of the obstacles presented by women have been a real test of the strength of problem-solving and the innovative levels among women-owned businesses (Kareska, 2016). Indeed, these businesses have come of age regarding the coping mechanisms they applied. This paper shall comprehensively look at the strategies that most of these businesses applied during the pandemic period, thus laying the ground for determining the maturity levels and the competence of these businesses in countering future uncertainty.

2. LITERATURE REVIEW

This section shall be related to a review of the available literature related to women's struggle in business over the Covid-19 period. It shall, therefore, give a detailed account of the methods and approaches that were applied and that could have been applied, and those that can be applied in addressing future uncertainty.

According to Ogundana et al. (2021), women operate in an unfriendly business environment which is majorly characterized by corruption, lawlessness; incoherent policies, lack of government transparency, poor infrastructure, disproportionate taxes, lack of legislation for supporting property ownership rights among women and poor infrastructure among other factors which are detrimental to business strength and stability (Cabeza-García et al., 2018). This presents an unfriendly working environment for women to operate on, especially in times of crisis when fast and sweeping decisions are essential for keeping the businesses pertinent to the presented situation (Bakare & Lawal, 2020). Moreover, this provided limited chances for navigating through the problem, and therefore, survival depends on the strength of the operators' underlying strategy in coping with the challenge (Ogundana et al., 2021). In parallel, considering the women have the responsibility of providing care to the children contributed to the challenges they encountered in remaining relevant to the situation of the day (Syedda, 2018).

Therefore, the striking differences in the operating environment where developing countries have palpable institutional voids and sociocultural values that undermine the well-being of businesses contribute to the operational differences when compared to their counterparts in developed countries who have well-structured policies and a better operational environment (Cherrier et al., 2018). Even though various studies have been conducted on the factors that determine the growth and survival of women-operated businesses, most of these have lacked a theoretical framework; thus, it has been challenging to arrive at a reliable conclusion (Hussain et al., 2019). Therefore, the lack of theoretical conceptualization resulting from inadequate research represents some of the hurdles experienced in understanding the real scope of women's challenges. Moreover, it presents researchers as they are no basis for the formulation of a hypothesis. Therefore, the lack of prior studies examining the plight of women is a major contributor to the current lack of policy for supporting women's presence in business.

However, this research has been able to identify some of the factors that determine women's success and presence in business. Some of these include money access and usage within their premises (Stefan et al., 2021). Therefore, the exploration of the diverse methods of capital usage lays the ground for identifying the strengths and weaknesses of businesses in developing countries and how the innate factors in the aboriginal ground set the pace for the trajectory of their businesses (Barrachina et al., 2021). However, there is still a major research gap in determining how women utilize their capital regarding the stated challenges related to the lack of well-established policies and institutional voids. Furthermore, education is among the leading determinants of the performance of women's businesses. This study indicates that women's ability to operate effectively in businesses increases up the curve depending on their levels of education, with the better-educated ones possessing better capabilities for dealing with problem-solving challenges (Grandy et al., 2020). Additionally, the study unravels the impact of the market as a determinant of the strength of women's entrepreneurship. Finally, it explores the impact of motherhood and other factors in the macro-environment and their role in determining business success.

Dzisi (2021) explores the progress of women in social entrepreneurship through the lenses of women's involvement in the construction industry in Ghana. The study found that innovative enterprises are becoming quite common and attracting more people in the modern world. This provides the basis for examining women's prevalence and participation in such opportunities. This study reveals that there is an increasing number of women entrepreneurs in social entrepreneurship. It also reveals that socio-entrepreneurship is an integral and important component of society as it assists in generating fresh and innovative ideas to solve societal problems (Dzisi, 2021). The author finds out that social enterprises provide men with better incomes which give them a leg up in home decisions making, thus influencing the affairs within their homes. Therefore, this creates a vicious cycle in gender matters; thus, men have a higher predilection for deciding whether women join social entrepreneurship. This research has identified that women's involvement can be useful in the diversification of income while adding to the available innovation in the market (Rao & Giri, 2021). Therefore, this may assist in minimizing the poverty levels, thus establishing more stable communities. In this study which specifically focused on the construction industry, it was realized that women's absence or low participation in entrepreneurship had been influenced by low technical skills, shortage of adequate funding for underpinning entrepreneurship activities, and the presence of social and cultural limitations (Scur et al., 2021).

Even though this section has explored the available literature evidence pertaining to women's involvement in entrepreneurship, there is limited theoretical literature related to the study topic, which has hampered the realization of comprehensive research related to the topic. Therefore, further research is needed to lay the ground for more research related to the subject.

3. METHODOLOGY

This paper utilized the available literature pertaining to women's involvement in entrepreneurship activities. Some of the selected materials are the ones that were based on empirical research, while the others are literature reviews of the available research works. These materials were selected from credible sources, thus allowing for the drawing of relevant conclusions. Moreover, the selected studies are from different years in history, which was useful in the assessment of the evolution and advancement that has been achieved in relation to the subject. Similar, a review of secondary research was useful in this study in allowing the incorporation of numerous scholarly perspectives, thus identifying the common points between the research. In parallel, this was useful in gaining high-quality research within a short time frame, thus paving the way for reducing the research duration.

4. RESULTS

Innumerable obstacles in today's culture stand in the way of the success of enterprises run by women. According to the research that has been done, very few policies and programs are designed to support the presence of women in businesses. This issue is more prevalent in developing economies due to institutional voids, poor governance, corruption, and limited legislation that allow women to own properties. In addition, because women are expected to fulfill their responsibilities as mothers, they require a healthy work-life balance if they are to continue to be productive members of the workforce. As a consequence of this, women faced a greater number of obstacles in the face of the Covid-19 pandemic (Mahat et al., 2021; Boiral et al., 2021). This was an additional deficiency to the one that already existed, which further restricted their ability to carry out their roles. As a result, they were forced to resort to a variety of coping mechanisms in order to survive the dangers posed by the epidemic, which put them in a stronger position to prevail over the obstacles that were placed in front of them (Strielkowski et al., 2016). In addition, women face additional barriers that prevent them from effectively participating in the operations of businesses. These barriers include things like a lack of access to financial resources, an inadequate grasp of the critical technical skills required for successfully operating a business and sociocultural beliefs that discourage the participation of women in activities that result in financial gain (Kabukuru & Afande, 2016). In addition to this, males play a significant role in the financial responsibilities of their families and make up the majority of the population in these countries. As a result, they have a propensity to exercise control over significant decisions, such as determining whether or not their wives should join in the business.

5. DISCUSSION

According to current research findings, women were at a significant disadvantage when attempting to deal with the challenges posed by the recent epidemic. It's possible that this was because our culture has a limited number of institutional frameworks for dealing with women's issues in business. As a result, they were required to devise methodical coping techniques to tackle the challenges posed by the pandemic while continuing to fulfill their responsibilities to society (Risley, 2020). Women who lived in countries with lower levels of economic development carried a greater share of the load. In these countries, women frequently lacked access to essential resources, such as financial backing to support their academic enterprises. Despite the fact that women are faced with difficult obligations and many obstacles that prevent them from participating, their presence in the workforce is strong. In addition to this, women have

been actively participating in the creation of jobs and the expansion of the economy business (Sangem, 2020). Studies have indicated that the participation of women in business is a key factor in overall economic growth (Melkani et al., 2021). Even though there is just a little amount of research available on women's roles in the expansion of corporations, their contributions to economic growth can nevertheless be felt. In most cases, a lower participation rate for women in the labor force results in a slower rate of economic growth since fewer individuals are put to work. As a result, women play a dual role in the growth of the economy through engagement in activities that create money and the supply of job opportunities to the population (Burrell, 2021).

As a result, of the global economic crisis that began in 2008, there was a corresponding increase in the number of unemployed people, which suggested that women play an essential role in providing work opportunities for a sizeable section of the population. Women's participation has been greatly endangered due to the pandemic that has wreaked havoc on the world's economy. Consequently, ingenuity has been sparked, which some people have harnessed to enable themselves to withstand the existential threat created by the pandemic. As a direct consequence of this, the spirit of entrepreneurship has been reignited, which has led to an increase in the number of new opportunities and ideas on the market.

In order to succeed in the business world, one must engage in appropriate and thorough planning in order to respond appropriately to the Covid-19 problem. As a result, female business owners responded to the pandemic by coming up with additional ways to generate cash by capitalizing on the chances the scenario gave (Afshan et al., 2021; Matharu et al., 2021). In the same way that Toyota and Tesla reorganized in order to manufacture ventilators after widespread movement hindrances inhibited the movement of people and led to lower demand for vehicles, some women were innovative and embarked on providing the essentials required to prevent the disease from spreading. Some people could only scrape together enough money to start manufacturing and selling facemasks, detergents, and sanitizers to support themselves (Mustafa et al., 2021). This demonstrates the importance of women's actions to increase their chances of surviving the pandemic's effects (Ayatakshi-Endow & Steele, 2021). The implementation of these policies has enabled women to amass significant financial resources.

Women have a number of options available to them to help them triumph over the challenges they face. This can be accomplished by giving them access to business management programs that will help them achieve the competence that will allow them to function more effectively in the environment in which they are currently operating. In addition, there is a multitude of funding programs available, some of which are specifically designed to support the entrepreneurial endeavors of women. In addition, women are able to prevail over such challenges if they adopt a collaborative strategy that involves coordinating their efforts to build larger firms that are eligible for funding and that make it possible for employees to share responsibilities. Because of this, they will be able to more easily attain the goals they have set for themselves, thereby overcoming the obstacles that currently exist in their firm. In addition, working together can be helpful in the creation of an environment in which they can share their experience, thereby boosting their capability to run businesses successfully. Parallel to this; they can easily be registered as differentiated corporates when operating together, so addressing the sociocultural problems that hinder the development of women-led firms. Most notably, the 21st century has experienced massive technical developments; as a result, the current technologies carry a huge potential for streamlining commercial operations through effective financial management, stock tracking, and progress predicting enterprises (Intawong et al., 2021). Therefore, all of these components

can be skillfully put together to realize a conducive work atmosphere that can allow businesses to leverage the available opportunities in the market to take advantage of the supply gaps afforded by the pandemic. When travel is limited, one of the choices that can be made is to offer delivery services directly to customers' homes. Alternately, persons knowledgeable in nursing can offer home care and mobile medical services to those suffering throughout the Covid-19 period. This can be done in order to assist those who are affected by the disease.

6. CONCLUSION

Tersely, the preceding sections have provided an elaborate and thoughtful analysis of women's coping strategies over the Covid-19 period. Moreover, it has highlighted the research gaps and the leading issues that affect women's performance and participation in entrepreneurship, especially in developing countries. It has been established that women in developed countries have the upper hand regarding their counterparts in developing countries, especially in Africa, where institutional gaps and poor policy formulations for supporting women's involvement in business activities prevail. In parallel, it has been discovered that women's success in entrepreneurship ventures hinges on various factors ranging from sociocultural beliefs, access to capital, and the level of education, among other less significant elements. All these contribute to determining women's involvement as they shape the market, thus shifting it in favor of some players. Moreover, corruption and the absence of policies are among the other contributors to market inequalities. Therefore, the paper has reflected the true position and state of women's participation in business concerning the Covid-19 pandemic. This has laid the basis for pinning down the possible remedies and coping mechanisms that can be useful in enabling women to deal with future uncertainty more decisively.

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The Role of Women in Founding Top Startups Worldwide

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Received: June 14, 2022

Accepted: July 22, 2022

Published: December 30, 2022

Keywords:

Startup;
Women co-founders;
Founding team;
Role of women in startups



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Abstract: *The work investigates the role of women as co-founders of globally successful startups, particularly their impact on the company's mission and vision. The authors' initial research on entrepreneurial and organizational profiles in top startups worldwide underlined that the presence of women as co-founders of globally successful startups is very limited (Giusepponi, Tavoletti & Tosi, 2019). The study presented here highlights that a female presence in the founding team supports the sharing of the vision and the effectiveness of the mission, and these elements are reflected in the organizational culture, specifically in the sense of corporate belonging and cohesion. This study is based on secondary sources derived from advanced analyses in terms of connections between variables within the startups studied. From an advancement perspective, the research could be deepened by studying other impact profiles and, considering that it is here limited to 109 top global startups, extended to other entrepreneurial realities.*

1. INTRODUCTION

Women are increasingly playing a leading role in international business but the public debate among practitioners is focused on careers inside MNEs, work-life balance in large organizations, and the percentage of women in top hierarchical positions. There is not the same attention to the role of women in top startups worldwide and their entrepreneurial contribution to the founding and growth of those global players: how frequently are women part of the founding team? What is the benefit of their role and contribution?

Gender studies in business have focused mainly on the presence of women as CEOs and corporate officers in MNEs and well-established leading Fortune 500 companies (Catalyst, 2019a, 2019b). While academic research on women's entrepreneurship is extensive (Jennings & Brush, 2013; Cardella et al., 2020), limited attention is paid to the role of women in founding teams of globally successful startups and international new ventures. The words “startups” and “ventures” are entirely and significantly missing from the World Economic Forum Global Gender Gap Report (2018, 2021) despite the growing interest of the international business academic community in international new ventures (Vaccarini et al., 2017).

Our recently published research on entrepreneurial and organizational profiles in top startups worldwide fills that gap (Giusepponi, Tavoletti & Tosi, 2019). This study reveals that the presence of women as co-founders of globally successful startups is as limited as in top positions of MNEs and leading Fortune 500 companies. We underline here that, despite being rare, the presence of women has a positive impact on vision, mission, and organizational cohesion.

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2. RESEARCH DESIGN AND METHODS

The research covered 109 startups valued at 1.1 billion US dollars or more according to the list available at The Billion Dollar Startup Club (Austin, Canipe & Slobin - Dow Jones Venture Source and The Wall Street Journal; access: 2017).

The list only includes privately held companies that have raised funds in the past four years with at least one venture capital firm among their investors (Ibidem). The list includes famous names such as Uber, Lyft, Airbnb, Dropbox, BlaBlaCar, Qualtrics, Pinterest, and many others. Distinguishing the gender of the co-founders was possible for all but 2 of the 109 companies surveyed. Among the 107 valid elements, 97 companies were found to have only male co-founders and only 10 with at least one female co-founder. The startups with at least one woman co-founder are located in California (6), New York (1), Singapore (1), China (1), and Germany (1).

The considered startups were analyzed for what concerns their strategic perspective, with attention to different profiles, particularly focusing on the *level of shared vision*, the *effectiveness of mission* and the *organizational culture as a sense of belonging*. These profiles were observed and evaluated based on online information and resources: companies' websites, the Dow Jones Venture Source, The Wall Street Journal, LinkedIn, Crunchbase Pro, Bloomberg, Glassdoor, AngelList, Quora, interviews released by the founders, and other corporate actors. However, the assessment of the organizational sense of belonging has been made based on what emerged from the statements of employees and other corporate actors. These statements were drawn mainly from online sources other than companies' websites.

Table 1. Rating scale

SCORE	0	1	2	3	4	5
MEANING	(worst performances) highly	widely	slightly	slightly	widely	(best performances) highly
	negative			positive		

Source: Own elaboration

The evaluation was carried out using a 0 to 5 rating scale as shown in table 1. This even (vs odd) scale was chosen because it requires analysts to choose between a positive or negative intermediate value (that is between "slightly positive" and "slightly negative" in our case), avoiding the risk of non-choice potentially linked to a unique central value. The evaluation was based on a process of rigorous comparison. Within the sample, 0 was given for the worst performances and 5 for the best; the other scores were attributed following a comparative and differential approach. Two researchers cross-checked their independent evaluations until a consensus had been reached to assure homogeneous and consistent evaluations (Giusepponi, Tavoletti & Tosi, 2019). The assessment was done when the sub-groups of startups with women co-founders had not been identified, and gender issues were not the main purpose of the research.

3. FINDINGS

Out of the total 234 co-founders (men and women), 11 women (4.70%) and 223 men (95.30%) have been observed. The figure concerning women is dramatically low, especially considering that we are studying top startups worldwide; however, these numbers are in line with the 5% of women (25) currently holding CEO positions at SP 500 companies (Catalyst, 2019b) and the

4.7% Fortune 500 board leadership position with women (Catalyst, 2019a). As the low figure refers to co-founders, it cannot be explained by a preexisting masculine organizational culture as for MNEs or Fortune 500 companies. The reason for the very low number of female co-founders has to be searched in the business environment outside corporations, in startups success drivers, investors' preferences, and gender-differentiated motivations for launching a startup.

The *level of shared vision* concerns the strength of the corporate vision as stated in companies' websites, strategic lines, and interviews with the founders and other actors. The *effectiveness of the mission* regards the incisiveness, characterization, and strength in terms of the orientation of the actions shown by the mission as declared and disseminated online. The *sense of belonging* is observed here as a reason and result of individual commitment and involvement in the organization and studied as a fundamental factor of organizational cohesion and culture.

Table 2. Level of shared vision and effectiveness of mission: mean values

	Level of shared vision (average)	Effectiveness of mission (average)	Organizational culture as a sense of belonging (average)
Startups with women co-founders	4.22	4.67	3.50
Startups without women co-founders	3.04	3.86	2.87
All startups considered	3.14	3.93	2.89

Source: Own elaboration

Based on our results, 10 companies with women co-founders expressed an average *level of shared vision* of 4.22 (vs average values of 3.14 for all the startups, and 3.04 for startups with only men as founders). They also expressed average *effectiveness of the mission* of 4.67 (vs average values of 3.93 for all the startups, and 3.86 for startups with only men as founders). In terms of a *sense of belonging*, they expressed an average of 3.50 (vs average values of 2.89 for all the startups, and 2.87 for startups with only men as founders) (table 2).

Table 3. Pearson correlation coefficient (ρ)

	number of women co-founders	level of shared vision	effectiveness of mission	organizational culture as a sense of belonging
number of women co-founders	1	0,22**	0,20**	0,17*
level of shared vision	0,22**	1	0,54***	0,45***
effectiveness of mission	0,20**	0,54***	1	0,17*
organizational culture as a sense of belonging	0,17*	0,45***	0,17*	1

Significance: * $P < 0.10$; ** $P < 0.05$; *** $P < 0.01$

Source: Own elaboration

The number of women co-founders can be observed in positive correlation both with the *level of shared vision* ($\rho = 0.22$) and with the *effectiveness of the mission* ($\rho = 0.20$). Therefore, a positive role of women co-founders emerges in the strategic contextualization and finalization. Furthermore, their contribution to strategic design and communication, in terms of sharing and focusing, also suggests possible positive links with organizational cohesion. In fact, our data reveal that the number of female co-founders positively correlates with an organizational culture that emphasizes a sense of belonging to the startup – highlighting a statistically significant Pearson correlation coefficient, equal to 0.17 (table 3). This result is of critical importance for

practitioners and managers who are committed to supporting and advising a founding team, as there is evidence that the presence of women adds value to the organization, with special reference to cohesion, shared vision, and effectiveness of the mission.

Furthermore, the fact that the strategic profiles of the mission ($\rho = 0.17$) and, above all, of the vision ($\rho = 0.45$) are in positive correlation with the sense of belonging (table 3) was also observed. It is thus possible to conclude that a female presence in the founding team supports the *level of shared vision* and the *effectiveness of mission*, and these elements are reflected in the organizational culture, specifically in the sense of corporate belonging and cohesion (figure 1).

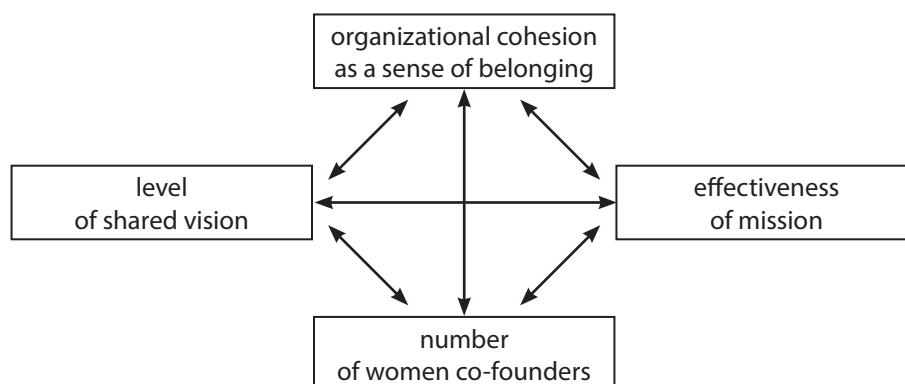


Figure 1. Women co-founder, strategic orientation and sense of belonging

Source: Own elaboration

The implications for managerial practice cannot be underestimated: the involvement of women in the founding team is beneficial for developing corporate belonging and cohesion. Some representative examples of female co-founders of globally successful startups are provided below.

Nichole Mustard, who went from being a trainee manager at Pizza Hut to being a co-founder of Credit Karma (a \$4 billion startup making consumer credit scores easier for people to see and monitor), is representative of a contribution to organizational cohesion. She underlines the importance of motivation in achieving challenging objectives, and she highlights how having not only financial perspectives is important for sustaining risks and constant changes: «“I love people,” [...] *“there were people I wanted to be with,” she said of her cofounders. “To do this in a way that’s really actually helping consumers and not just making money, that feels great.”*» (Bort, 2018).

Adi Tatarko, co-founder of Houzz (a startup that helps people remodel their homes based on her individual experiences), is an example of determination in building a shared vision, including letting people go when they do not fit the company’s vision and goals: «“When someone is not a good fit, it’s better to let go sooner rather than later. [...] *It’s all about the people. The people that help us build Houzz all over the world day-to-day and the people that are part of the Houzz community*”» (Krishna, 2017).

Amy Pressman, co-founder of Medallia (a startup leader in customer experience management software), is an example of effectiveness of mission for her ability to promote a culture of direct connection between customers and employees: «If you want to help employees thrive, don’t focus on perks, being “hot,” or buzzwords. Instead, connect employees to the impact of their work. [...] *In my experience, a great way to help employees understand their impact is to connect them to customers.*» (Weiner, 2018).

Tan Hooi Ling, co-founder of Grab (Southeast Asia's mobile technology company that connects consumers to drivers and businesses), is representative of the importance of focusing on strategic orientation through a continuous problem-solving approach and a constant drive towards enhancement: «As many Grab employees would attest, it is not uncharacteristic of Ling to jump into “problem-solving” mode. At the company she oversees strategy, people operations and new business, spending much of her work day in meetings to analyze how best to take the company forward» (Soo, 2019).

Jessica Schultz, co-founder of HelloFresh (a global recipe kit delivery service), underlines the importance of a «big vision», beyond the fear of failure, because it is «a key to continuous improvement» and «you are only learning when you don't see what lies ahead» (Northzone, 2019).

4. DISCUSSION AND CONCLUSIONS

By revealing that the number of women co-founders in globally successful startups is very similar to the number of CEOs in SP 500 companies, our research removes any easy-escape explanation to be found in the organizational culture of big businesses, confirming that the obstacles women face in their careers are embedded in business environments external to business organizations, as well as in social ecosystems worldwide (Berger & Kuckertz, 2016; Bullough et al., 2022).

The work positions itself in the management literature that provides evidence about the enriching role of women in startups (Berger & Kuckertz, 2016), their limited presence (Kanze, 2018), and the obstacles they face in getting funding (Kuschel et al., 2017). It contributes to this available literature by focusing on the presence of women in the founding team of the 109 most successful startups globally; the positive role of women in strategic design, communication, and the consequences for the development of organizational culture with a sense of belonging and cohesion. Therefore, it integrates and explains the reported evidence that, despite being a minority, «businesses founded by women ultimately deliver higher revenue—more than twice as much per dollar invested—than those founded by men, making women-owned companies better investments for financial backers» (Abouzahr et al., 2018). It also provides a different picture of the top successful global startups concerning previous regional studies that reported slightly less strong skill of strategic vision among women, compared to men (Kuschel, Labra & Díaz, 2018).

The results have strong implications for practitioners and managers because, by revealing that the presence of women in global startups is as low as in MNEs and Fortune 500 companies, they remove the widespread idea that gender discrimination is limited to hierarchy and big corporations' masculine culture. On the opposite, the limited presence of women in the founding teams of globally successful new ventures shows that the issue extends to markets and business environments. No one is exempted from taking affirmative action, not even practitioners with limited responsibility. That is because we reveal that the presence of women is beneficial for cohesion, corporate culture and sense of belonging, shared vision and effectiveness of mission in a very critical area for world innovation and future prosperity: the founding of the most globally successful startups.

As our sample is limited to the 109 most globally successful startups, we hope that our framework and analysis will be theoretically replicated, as well as regarding the specific industry and national settings to better understand which skills more frequently observed in women are particularly relevant to these perspectives. Furthermore, improving the analysis through interviews directly addressed to founding teams and their associates would be useful for more robust research.

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AUTHORS' CONTRIBUTIONS

KG and ET jointly undertook the research project, carried out the study and wrote all sections of the manuscript.



Financialization – Evidence from Dynamic Connectedness among Agricultural Index Futures

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Received: July 3, 2022

Accepted: August 31, 2022

Published: December 30, 2022

Keywords:

Agricultural commodity markets;
TVP-VAR;
Futures markets



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Abstract: *The introduction of index futures was a landmark event for global commodity markets. It has been blamed by regulators and academicians for its role in food price surges from time to time. This paper examines the price discovery and volatility spillover relationship among agricultural index futures globally. Results from the study reveal that index futures play a dominant role in contributing to price discovery. The price leadership of the futures market, although found to be strong, is diminished in the presence of stringent regulatory trading curbs that were put in place as a response to the crisis.*

Furthermore, an improved Diebold & Yilmaz method based on TVP-VAR-SV model was used to analyze dynamic connectedness between the index and standalone contracts of agriculture commodity markets. The results show that the impacts on the net spillover of various indices are different. However, the evidence fails to support the argument that volatility is induced due to spillovers among the indices.

1. INTRODUCTION

Over the last decades, the market environment of commodity trading has undergone vast changes. With trade barriers diminishing, the need for modern risk management and measurement has become crucial. The spillovers among markets can be measured through connectedness relating to systemic risk and systematic risk. Understanding the systemic risks helps to determine the contribution of financial markets to the overall financial system and acts as an early warning system.

Bulk commodities mostly listed on organized futures markets, form an important part of the industry chain and transmit superimposed demand. Financialization is the transformation of a segmented market into an asset class for portfolio investors that has distorted commodity pricing in the futures market. The financialization of commodities is linked to the market developments in the mid-2000s period. Financialization of the futures market has been linked to diminishing hedging mechanisms and increasing speculative behavior. In times of geo-political tensions, there is an increase in such exuberant behavior. Agricultural commodities have a vital strategic influence on most countries. The consequence of high agricultural prices is more dramatic for emerging and developing economies characterized by major expenditure spent on food consumption.

2. LITERATURE REVIEW

Using Markowitz's (1952) portfolio setting, Bodie and Rosansky (1980), Jensen et al. (2000) and Edwards and Liew (2013) concluded that the presence of commodities enhances the portfolio

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return, while Cao et al. contested that the inclusion of commodities is not advisable and evidenced that their contribution is a placebo effect (Bodie & V.I., 1980; Cao et al., 2012; Edwards & Liew, 2013; Jensen et al., 2000).

Post-2003, the increase in open interest of commodity futures markets has increased cross-linkages among markets as hedge funds and commodity index funds are used for risk management reasons. Sharp downward movements in equity markets have led to financial investors liquidating their stakes in commodity markets in order to raise cash for margin calls or safeguard investments (Büyüksahin et al., 2010). Events of the global financial crisis of 2008 and the subsequent commodities super-cycle that lasted up to 2011 provide an opportunity to study such scenarios (Cargill, 2021; Clapp & Helleiner, 2012; Singleton, 2014). Academicians and practitioners have pressed for substantial allocations to commodities as an asset class for the purpose of diversification and return generation (Carter et al., 2017; le Pen & Sévi, 2018; Naeem et al., 2021).

Basak & Pavlova (2016) conclude that the effects of financialization are only on storable commodity prices (Basak & Pavlova, 2016). In the presence of institutions, the prices of storable commodities and their inventories are higher than in the benchmark economy and the effects are more pronounced for commodities that are part of an index. Irwin and Sanders (2012) observe largely unrelated regressions and the limited result of Granger causality from index trading to returns (Irwin & Sanders, 2012).

Asymmetry between the costs of going long and short restricts the ability of some investors to trade pessimistically on new information. However, such behavior has limited evidence of inducing volatility. Boyd et al. (2016) find consistent evidence, documenting that herding behavior by speculators across 32 futures markets was limited in scope and serves to stabilize markets—speculators herd by buying (selling) into falling (rising) markets (Boyd et al., 2016). Index investments having agricultural contracts as their underlying asset are more adaptive to informational disclosures relating to global supply and demand forecasts (Balcilar et al., 2021)

Index investments having agricultural contracts as their underlying asset are more adaptive to informational disclosures relating to global supply and demand forecasts. The introduction of commodity index funds is targeted as a driver of creating global liquidity imbalances. The question stands - Has speculative trading in agricultural futures markets led to increased volatility, leading to a global food security crisis?

There is a greater need of understanding the factors that lead to speculation and volatility. The price discovery function of agricultural products is ambiguous in the current literature. The paper attempts to discuss how futures prices adjust to demand-driven changes in commodity prices and by gradual entry and exit of index investments. The ambiguity of what classifies as a shift of demand and supply and what as bubble formation remains to be detangled.

3. METHODOLOGY

TVP-VAR model enables us to capture a possible time-varying nature of underlying structure in the economy flexibly and robustly. All parameters in the VAR specification are assumed to follow the first-order random walk process, thus allowing both temporary and permanent shifts in the parameters (Balcilar et al., 2017). Dependence among commodity price co-movements helps to extract information related to risk management & hedging. With comparatively fewer

parameters compared to other econometric models and simplicity of comprehending solutions, the method is suitable to broaden our understanding of financialization through the lens of agricultural futures indices.

The connectedness approach introduced by Diebold and Yilmaz is used to explore complex nonlinear transmission mechanisms in networks across areas of finance and economics (Diebold et al., 2009; Diebold & Yilmaz, 2012, 2014). It allows the comparison of different impacts that a shock in one variable has on the ability of another variable to forecast error variance while considering the feedback loops. The joint spillover index enables a natural depiction of spillover along with measuring the goodness-of-fit measure.

The stochastic volatility model is a generalized version of Black-Scholes model to allow analysis of stochastic volatility, assuming that there exists the price of the underlying factor, two risk factors and a price volatility factor (Xu & Gong, 2022). The risk neutral state can be denoted as:

$$dS = (r - \delta) S dt + \sqrt{v} S dz_1$$

And

$$dv = \kappa (m - v) dt + \sigma_p \sqrt{v} S dz_1 + \sigma \sqrt{1 - p^2} \sqrt{v} dz_2$$

where

κ = Rate of mean reverting,

m = Long run mean.

Mean reversion is an assumption of the model. Volatility process can be associated positively or negatively correlated to the price discovery process, dependent on the sign p denotes. Previous studies have concluded that indices or equity securities exhibit negative correlation between prices and price volatility while the converse holds true for commodities.

The arbitrage equation for $V(S, v, t)$ is:

$$rv = V_t + (r - \delta) S V_S + \kappa (m - v) V_v + \frac{1}{2} v S^2 V_{SS} + \sigma_p p v S V_{Sv} + \frac{1}{2} \sigma^2 (1 - p^2) v V_{vv}$$

On conversion of the prices into logarithm scale, $s = \ln(S)$. Applying Ito's Lemma, the equation is represented as:

$$ds = (r - \delta) dt + \sqrt{v} dz_1$$

Arbitrage equation for $V(S, v, t)$ in the reduced form can be expressed as:

$$rV = V_t + (r - \delta) V_s + \kappa (m - v) V_v + \frac{1}{2} v V_{ss} + \sigma_p p v V_{sv} + \frac{1}{2} \sigma^2 (1 - p^2) v V_{vv}$$

The underlying state process that is expressed in form of s and v is a form of affine diffusion. Stochastic Volatility models refer to the stochastic and time varying specification of the variance evolution. In particular, the assumption of following AR(1) process is made for log-variance.

4. DATA

The selection criteria for the data were covering agricultural indices that were frequently traded, had agricultural futures contracts majorly as underlying assets and covered key commodity markets. The data was extracted from Bloomberg Terminal and covers the period from 17 February 2009 to 20 May 2022.

Daily index futures data from Bloomberg Commodities Sub Index Australia (BCOMAU), ICE Futures Europe - Index Future Contract on MSCI BRIC Index in USD (MBRI), S&P GSCI Agriculture Enhanced Euro Index (SGCUEGE) and Bloomberg Commodities Sub Index US (BCOMAG) are considered. BCOMAU is represented as AUS, MBRI as BRIC, SGCUEGE as EURO and BCOMAG as US based on the geographical location or group of countries and their underlying markets.

The descriptive analysis is presented in Table 1. All the series had significantly leptokurtic distributions indicating that the tails were fatter than a normal distribution. This supported the Jarque-Bera normality tests of the distributions not being distributed normally. Hence, the squared returns were used to employ TVP-VAR-SV approach.

5. RESULTS

The section covers the dynamic and average connectedness measures. The average value of the Total Connectedness Index predicting the entire dataset is depicted across time in Figure 2. It is useful to evaluate the response of TCI to various economic factors prevailing during the period. During 2020, vast disruptions were experienced by commodities across the board. Table 2 illustrates the joint spillover index that enables comparisons across the dataset. NPT represents Net Pairwise Total that evaluates interrelation among the indices over the evolution of time and their potential roles. It should be noted that for the indices under study, a positive value indicates the net transmitting role while negative values refer to the net receiving role.

Table 1. Descriptive Statistics

	EURO	BRIC	AUS	US
Mean	500.0232	84.7479	99.47631	60.53626
Median	473.6545	79.30025	100.2998	57.30335
Maximum	843.387	163.8554	146.1163	97.6683
Minimum	212.023	55.9502	70.9493	34.1523
Std. Dev.	108.2023	16.20589	14.32732	15.7856
Skewness	0.626714	1.49555	0.31073	0.402672
Kurtosis	3.175581	5.978568	2.422268	2.235013
Jarque-Bera	214.3889	2384.715	96.35812	165.1214
Sum	1606075	272210.2	319517.9	194442.5

Source: Own research

It can be seen that the US index BCOMAG (US) and European index MBRI (Euro) assume the role of both net transmitters and receivers at the same time; however, the effect of spillover does not appear to be de-stabilizing. From the impulse response table, figure 2, the time varying behavior of active portfolio management is undermined as the volatility having a contagion effect is underscored.

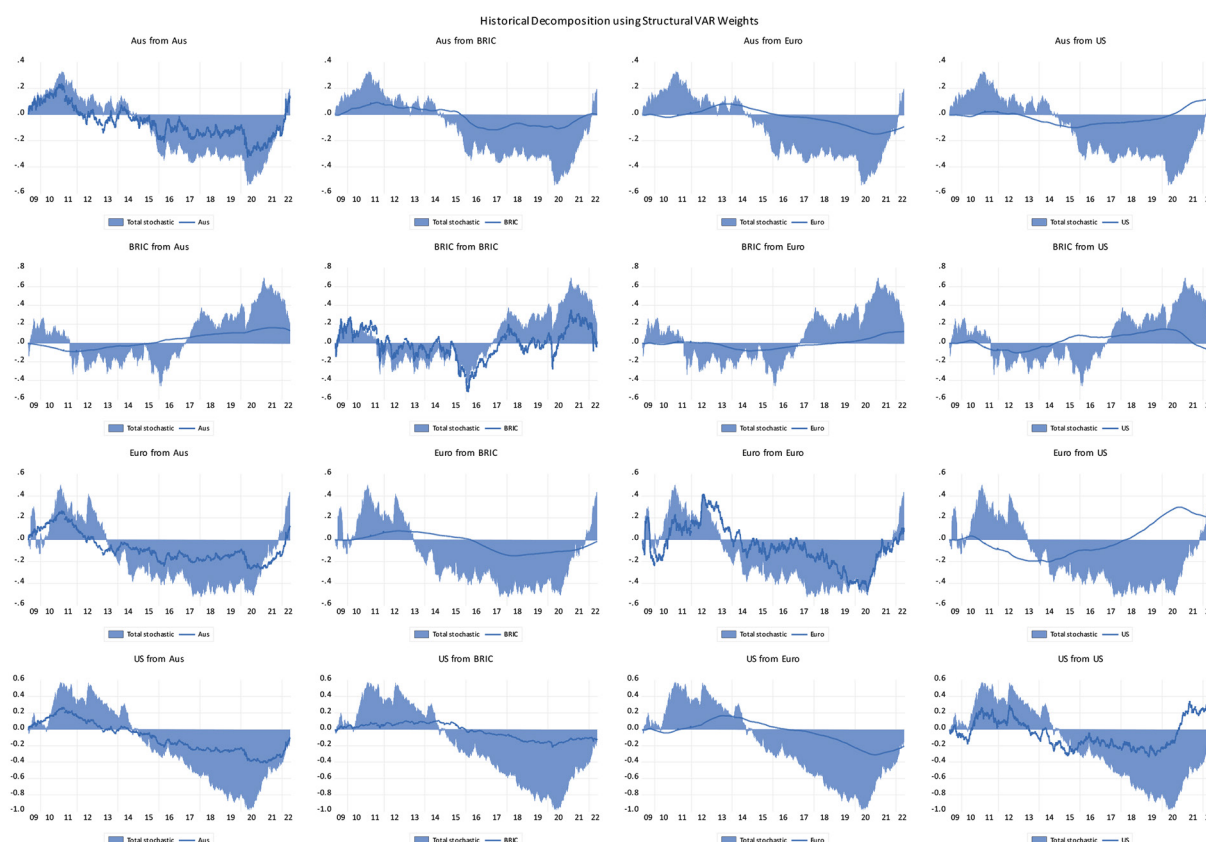


Figure 1. Historical decomposition structural VAR Table

Source: Own research

The MBRI index (BRIC economies) and BCOMAU (Australian index), in the stated order exercise influence in term spillover effect. An argument for the same is that during times of increased market uncertainty and risk, there is an effect on government interventions that leads to increasing volatility connectedness of agricultural markets. In the case of rising markets, the volumes of investors diversifying or switching their investments from bonds and equity to commodity markets increase, leading to high volatility. Another argument relates to the lead-lag relationship between information transmission and price discovery. As developed markets such as US and Eurozone have wider participation from institutional and retail investors in their indices, and their agricultural futures markets are deep, these markets are dominant in determining the price vis-à-vis the developing markets.

Table 2. Dynamic Net Connectedness Table

	Aus	BRIC	Euro	US	FROM
Aus	63.44	2.24	17.14	17.19	36.56
BRIC	4.48	81.17	5.09	9.27	18.83
Euro	9.89	2.37	53.65	34.09	46.35
US	10.85	3.3	35.65	50.21	49.79
TO	25.22	7.9	57.87	60.54	151.53
Inc.Own	88.66	89.07	111.52	110.75	cTCI/TCI
NET	-11.34	-10.93	11.52	10.75	50.51/37.88
NPT	1	0	3	2	

Source: Own research

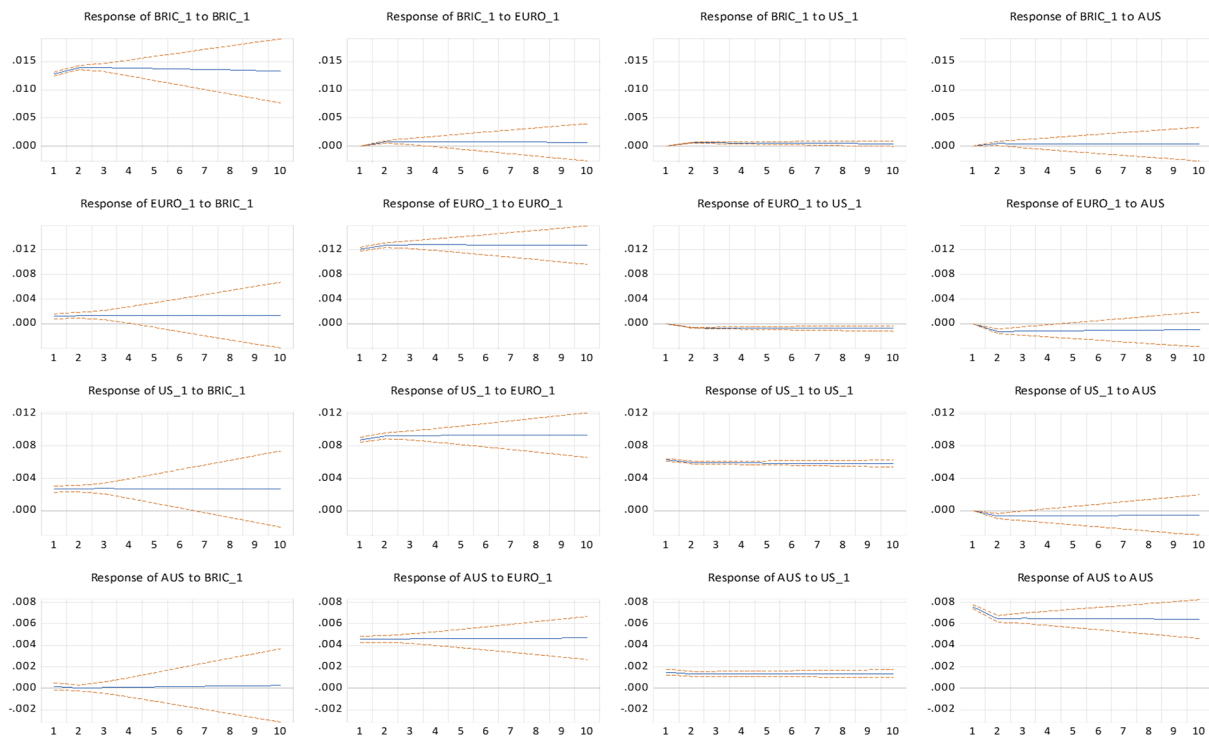


Figure 2. Impulse Response Table for Stochastic Volatility

Source: Own research

6. CONCLUSION

The volatility spillover based on information transmission is marginally high in American & European Markets. It indicates the price discovering role for these markets. There is no strong evidence of financialization having a direct impact on the 4 indices.

We can envisage agricultural commodities indices have an informational transmission in the long run so that the results of the correlation test provide that at least one co-integrating equation exists between two variables, that is, two global indices. The patterns are essential in order to capture the movement of the volatility trend. It can be straightforwardly envisaged that the trend of responses occurred by different exogenous shocks in different periods. The impulse response function suggests that there is no significant effect of shocks on the global indices.

The findings are crucial for portfolio and risk managers aspiring to design an optimal risk-return strategy. The connectedness effect can act as an early warning system for potential spillover. Understanding the key factors driving spillovers in agricultural commodities can help determine the future macro-economic environment as well. This will help in maximizing the welfare objectives for the investors.

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Financial Literacy of People Gaining Economic Education in the Context of Acquired Practical Experience

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Received: June 27, 2022

Accepted: July 20, 2022

Published: December 30, 2022

Keywords:

Decision making;
Economic education;
Finance;
Financial management;
Financial market



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Abstract: Financial literacy affects numerous economic decisions of people on a daily basis, as well as the strategic financial management of corporations. In several previous studies, the authors confirmed a significant difference in the level of financial literacy between full-time and combined students. Based on these results, they hypothesized that practical experience has a positive effect on the level of financial literacy, but this needed to be verified. Therefore, a new survey was conducted with an extended version of the questionnaire with questions specifically related to the practical use of financial products and services. Students of economics who have access to education that supports the growth of financial literacy were interviewed. However, the distribution of the examined groups was not determined by age, a form of study and other common aspects, but the divider was in form of the experience gained, which provided a unique approach using an adequate statistical set of respondents. The results from primary research showed differences in knowledge and the way of solving tasks in the monitored groups of respondents. Using statistical analysis methods and hypothesis tests, the authors' hypothesis was confirmed and it was shown that students using a wider range of services performed better. It provides usable interdisciplinary outputs for HRM, applied psychology, pedagogy and financial management. The level of financial literacy was tested by the personal finance index which is an innovative metric that analyses knowledge from the eight functional areas of financial literacy. Given that the research sample was drawn from a group of people studying financial management and entrepreneurship subjects, it was also confirmed that theoretical knowledge alone is not sufficient to significantly enhance financial literacy. Thus, the irreplaceability of practical experience for enhancing the level of financial literacy was demonstrated.

1. INTRODUCTION

Financial literacy is one of the crucial skills of a citizen of modern society in the 21st century. We encounter the need to make the right financial decisions that can affect our entire future life almost every day. Whether it's securing our financial situation in old age, making the right decision to finance our own home or providing financial security in times of illness, it is always essential to make the right decision at an early stage. Therefore, it is extremely important to strengthen the financial literacy of young people as they are facing these life decisions but with minimal experience.

In our previous research (Kozubík, Kozubíková, & Polák, 2019; Polák, Kozubíková, & Kozubík, 2018), we compared the level of financial literacy of students in the face-to-face and distance

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learning forms of study. It turned out that distance learning students achieved a higher success rate. Since these are students who have a permanent employment relationship, we concluded that their enhanced practical experience is the factor that positively influenced their results. In order to confirm this conjecture, it was considered necessary to conduct another survey, this time focusing on real practical experience.

In this follow-up survey, we focused on the relationship between practical experience with financial market products and the level of financial literacy. In doing so, we abstracted from the form of study and focused only on actual practical experience. In this spirit, we also formulated the research hypothesis.

H1: Students with more practical experience with financial market tools and services achieve higher levels of financial literacy.

2. LITERATURE REVIEW

There are a number of studies studying financial literacy in various social groups. Some of them are united by the claim that a higher level of financial literacy of respondents subsequently improved their financial decisions which seems to be logical. Van Rooij *et al.* (2011) measure financial literacy and examine its relationship to stock market participation in their research. They found that most respondents have basic financial knowledge and are familiar with concepts such as interest-bearing, inflation and the time value of money. The situation has changed for more complex concepts. Many respondents did not know the difference between bonds and stocks, the relationship between bond prices and interest rates, and the basics of risk diversification. Based on their findings, van Rooij *et al.* (2011) state that financial literacy influences financial decisions. People with lower financial literacy and low-wealth investors then invested less in stocks and often hold the wrong portfolio. The situation in which respondents move to a system where they have to decide how much to save for retirement and how to invest their retirement wealth is pushing them to change their approach.

According to the findings of Sun *et al.* (2021) financial literacy has a significant positive impact on the choice of wealth management products, risky financial assets and the total amount of retirement financial assets. On the other hand, it has a negative impact on the choice of bank savings. Another negative impact of financial literacy is on the proportion of savings but Sun *et al.* (2021) found also a significant positive impact on the proportion of wealth management products and risky financial assets. In the context of risk perception, research by Riepe *et al.* (2022) identified a lower risk aversion for entrepreneurs with lower financial literacy. The difference disappears for entrepreneurs with higher financial literacy.

A higher level of financial literacy seems to be an advantage. However, Zhu (2020) identified certain disadvantages in research focused on adolescents. Adolescents who are too confident in their financial literacy are more likely to engage in risky financial behavior and show a higher level of financial autonomy. Zhu (2020) also identified this type of behavior in adults. Excessive self-confidence can therefore weaken the necessary prudence in decision-making. Kawamura *et al.* (2021) even state that people with high financial literacy tend to take risks and over-indebtedness. These people also take naive financial attitudes and become bold and reckless, but on the other hand, they are more responsible in retirement planning. Gerth *et al.* (2021) also point to the negative connection between excessive self-confidence and financial literacy

in their article examining the contribution of behavioral characteristics to the financial literacy of UAE residents.

The development of financial literacy can also be viewed from the point of view of the cultural, customary and social environment. Razen *et al.* (2021) focused on the level of financial literacy of adolescents in Austria. They state that the level of financial literacy is positively associated with patience, the male gender, and the educational level of the father. At the same time, they found that risky behaviors such as smoking and gambling are positively associated with various measures of risk tolerance and negatively associated with patience. Among other things, their results underline the importance of financial education as a family effort.

Bottazzi & Lusardi (2021) claim that the gender differences in the financial literacy of young people in Italy are large. They identify this fact in all regions of the state, especially in the south and the islands. The role of parental background and especially the role of mothers were identified as a key role in the development of financial knowledge. Bottazzi & Lusardi (2021) state that the social and cultural background of boys and girls and the historical context of the locality are important for gender differences in financial literacy. The authors identified favorable conditions for the transformation of the role of women in society in the original medieval commercial centers and the nuclear family structure.

Okamoto & Komamura (2021) also state the positive effect of financial literacy. In their research, they focused on seniors living in Japan. They identified an increase in financial literacy by age 60. Subsequently, this literacy decreased among the respondents, but self-confidence in decision-making remained high (so-called overconfidence bias). With declining financial literacy, the authors identified a decline in cognitive abilities, beliefs about the benefits of accumulated experience, and stereotypes about better financial literacy of men. The research also identified that men's financial decisions are less thoughtful. However, lower financial literacy for women may be associated with access to adequate education and the amount of financial assets. In any case, as women live to be older, they must have a financial plan in place. Socio-cultural aspects associated with financial literacy are evident in the results of this research.

Kim *et al.* (2021) identified a decline in financial literacy among the senior population in the United States but they also found in this group that more financially educated individuals sought the services of counsellors, which can be described as responsible behavior. However, this behavior does not preclude subsequent inappropriate financial decisions.

Fong *et al.* (2021) identified an understanding of interest rate composition and inflation in a sample of pensioners in Singapore, but only half of the respondents understood the issue of risk diversification. The authors also identified significant problems with the appropriate portfolio allocation, which would correspond to the age of the investors. Respondents with higher financial literacy had a higher tendency to repay credit cards on time, hold stock, and follow an age-appropriate investment glide path in their research.

A number of studies demonstrate the importance of financial literacy and its benefits and risks to respondents living in given social groups. In this context, it is interesting to mention the study by the author's Park & Martin (2021), which states that financial behavior cannot be judged solely on the basis of the influence of financial factors. They state that this is a complex area of how the financial environment interacts with consumers' psychological factors and influences their

decisions. They, therefore, emphasize the need for clear and comprehensible financial services for consumers with low financial literacy. Although increasing financial literacy is important, many financial services are relatively complex and require a more advanced understanding of the issue.

Just as financial aspects affect many aspects, people with higher financial literacy affect their surroundings. This statement can be broken down by the results of several studies. The first is a study from Bangladesh. The variables such as professions, income levels, knowledge of depositing and withdrawing money and knowledge of interest rates have a major impact on overall access to finance and, together with education programs on financial literacy, improve the financial integration of rural regions in developing countries and they help alleviate poverty reduction and prosperity development (Hasan, Le, & Hoque, 2021). However, if we look at a market in which financial literacy is already developed, it is possible to document the study of Jin *et al.* (2021), which examines the relationship between financial literacy and transparency of bank financial reporting on a sample of US banks. They state that the financial literacy of banking institutions' customers can influence the behavior of bank managers in terms of the mechanics of the loan loss provisioning and their opportunistic actions. Their article also states that financially literate customers represent more stable sources of financing, enabling more predictable creation of provisions for credit losses. This situation subsequently contributes to more lasting profits.

In a Swedish study by Anderson & Robinson (2021), the behavior of financially literate and environmentally conscious financial market users can be found. The study states that households with environmental preferences generally do not make green financial decisions due to financial disengagement and information constraints associated with green investment decisions. Households with strong pro-environmental behavior and beliefs are not financially involved and are generally not interested in financial matters. However, if we look at active investors making decisions in their pension portfolios, environmentally oriented investors are more likely to buy mutual funds with pro-environmental names. Within the available information, they give priority to environmental preferences. The availability and manner of providing relevant investment information remain an issue. In this example, it is also possible to identify the impact of financial literacy of environmentally-based individuals on investment decisions and thus on their surroundings.

Fujiki's (2022) research from Japan showed that financial literacy helped to ensure the required social distance during a pandemic through the ability to use non-face-to-face financial services and cashless payments.

The documented examples show that higher financial literacy affects the behavior and decision-making of financial market participants, but at the same time, financially literate participants affect their surroundings and the financial market.

Quality education has its positive effects on the development of society, but it is necessary to observe new phenomena that create further challenges. At the same time, it is necessary to implement new scientific knowledge at the political level and into practice. Petrů, Kramoliš, & Stuchlík (2020) state, among other conditions, that if the state or educational institutions could create truly effective teaching support, the reluctance of many business owners to educate and implement changes in their business could be alleviated. This statement follows their research on small and medium-sized enterprises in the Czech Republic.

3. METHODOLOGY

Methodologically, our research, like all statistical investigations, had two phases. The first phase involved data collection, and the second phase involved data evaluation using methods of mathematical statistics.

A standard procedure for collecting data on financial literacy is a questionnaire survey. Our survey was no exception to this traditional approach. We used the personal finance index (shortly P-FIN index) introduced in Lusardi, Yakoboski, & Oggero (2017) as an instrument to measure financial literacy. We adapted the composition of our questionnaire to cover all eight functional areas of financial literacy defined in the P-FIN index. Specifically, the functional areas of the P-FIN index are determined as:

- earnings, determinants of wages and income,
- consuming, budgeting and spending,
- saving, comprehension of the accumulation factors,
- investing, understanding the types and risks of investments,
- borrowing and debt management,
- risk management, comprehension of the uncertain outcomes,
- insurance and the understanding of coverages,
- accessing and working with information sources.

To test the respondents' abilities in each functional area of financial literacy, we designed the theoretical part of the questionnaire. This part contained 30 questions with multi-choice option responses. Of the possible choices, only one was always correct, and one choice was of the "I don't know" type. We then interpret the P-FIN index as the percentage success rate of the whole test.

In the second part of the questionnaire, we investigated respondents' practical experience with banking and insurance market products. Among banking services, we were interested in both deposit and loan products. Since the use of personal accounts has become standard, we considered respondents who used at least two deposit or investment products to be more experienced. Here we were particularly interested in term deposits, savings accounts, mutual funds, and also building savings. In the area of credit products, we have included mortgage loans, consumer loans, student loans, as well as loans from non-bank entities and instalment sales. Finally, from insurance products, we surveyed experience in life insurance and non-life insurance, in particular liability insurance, car insurance, and property insurance. In the case of credit and insurance products, we divided respondents into two groups based only on whether or not they use a product.

In the second phase, we further analyzed the data obtained from the questionnaire survey using statistical methods. The main tool was the statistical hypothesis testing technique. First, we had to check whether our research samples could be considered samples from a normal distribution. We used the Shapiro-Wilk test to verify normality. The result of this test then influenced the decision to select the appropriate test for comparing results across groups. If the assumption of normality of distribution is rejected, the Kruskal-Wallis test should be used, otherwise, the Welch t-test can be applied.

All numerical calculations were performed in the specialized statistical environment R. All mentioned tests are implemented as functions in this programming language. For this reason, we do not provide a detailed explanation of the test methods used.

4. RESULTS

We performed our survey at two universities in the Czech Republic and Slovakia. Specifically, the University of Žilina in Žilina and AMBIS in Prague. The research targeted students in management fields of study. We distributed 750 questionnaires among the students as part of the survey. After removing incompletely filled answer sheets and maliciously completed answer sheets (all questions answered in with “I don’t know” responses), we obtained 652 questionnaires. The corresponding response rate is 86.93%.

Table 1. Counts and percentages of respondents according to their experience with financial products

	Experience with products		
	Deposits	Loans	Insurance
Count	342	28	134
Percentage	52.45%	4.30%	20.55%

Source: Own elaboration

It showed that 342 respondents use multiple deposit products, while 310 use only a current account. Thus, two numerically balanced groups emerged. There was a significant imbalance when disaggregated by the use of credit products. Here there were only 28 cases that have practical experience with loans. Despite this disproportion, we have compared their test scores here as well. The use of insurance products was reported by 134 respondents, about one-fifth. These counts are summarized in Table 1.

Table 2. Descriptive statistics of the P-Fin scores according to the experience types of the respondents

	Min.	1st Quartile	Median	Mean	3rd Quartile	Max
No deposit experience	0.10	0.40	0.47	0.48	0.56	0.86
Deposit experienced	0.17	0.47	0.53	0.56	0.67	0.97
No loan experience	0.10	0.40	0.53	0.52	0.60	0.97
Loan experienced	0.20	0.52	0.60	0.62	0.74	0.93
No insurance experience	0.10	0.40	0.50	0.50	0.57	0.90
Insurance experienced	0.27	0.50	0.60	0.62	0.75	0.97

Source: Own elaboration

Based on their experience with different types of financial market products, we divided respondents into experienced and inexperienced groups. The basic statistical characteristics of the resulting P-FIN index values are summarized in Table 2. In all indicators, there is a shift towards better results for more experienced respondents. The only exception is the maximum value when broken down by loan experience.

Before proceeding to test the hypothesis of equality of the mean values of the P-FIN index, it is necessary to verify that the results are normally distributed. For this purpose, we performed the Shapiro-Wilk test. To save some space, we report only a summary that in all tests the p-value of the test ranged from $2.2 \cdot 10^{-16}$ to 0.002. This means that we can reject the hypothesis of a normal distribution with high confidence, and we need to use the Kruskal-Wallis test to test for equality of means. Tables 3-5 present the results of tests for equality of average success rates among respondents, broken down by product experience. As we can see from the tables, in all three cases we can reject the hypothesis at a high confidence level. Thus, we can conclude that more experience with financial market products and services leads to higher levels of financial literacy.

Table 3. Results of the Kruskal-Wallis test of equality of the mean percentages for the respondents experienced and inexperienced with the credit products

Credit experience	Mean percentage	chi-squared	p-value
Inexperienced	48.47 %	41.66	$1.083 \cdot 10^{-10}$
Experienced	56.08 %		

Source: Own elaboration

Table 4. Results of the Kruskal-Wallis test of equality of the mean percentages for the respondents experienced and inexperienced with the loan products

Credit experience	Mean percentage	chi-squared	p-value
Inexperienced	52.03 %	10.007	0.002
Experienced	62.14 %		

Source: Own elaboration

Table 5. Results of the Kruskal-Wallis test of equality of the mean percentages for the respondents experienced and inexperienced with the insurance products

Credit experience	Mean percentage	chi-squared	p-value
Inexperienced	50.01 %	60.095	$9.041 \cdot 10^{-15}$
Experienced	61.94 %		

Source: Own elaboration

A more detailed look at the structural differences in financial literacy levels can be obtained by testing the average scores achieved in the individual functional areas. Table 6 summarizes the results of the Kruskal-Wallis test for equality of means for each functional area according to the experience of using deposit and savings products. As can be observed from this table, respondents with more experience with deposit and savings products achieve higher levels of financial literacy in all its functional areas. This result is confirmed with a confidence level exceeding 95% in all cases.

Table 6. Results of the Kruskal-Wallis test of equality of the mean percentages in all functional areas for the respondents experienced and inexperienced with the credit products

Functional area	Credit experience	Mean percentage	chi-squared	p-value
Earnings and income	Inexperienced	46.85%	30.416	$3.486 \cdot 10^{-8}$
	Experienced	57.97%		
Consuming, and spending	Inexperienced	63.63%	5.3177	0.02111
	Experienced	68.05%		
Savings	Inexperienced	56.61%	8.6659	0.003242
	Experienced	63.74%		
Investing	Inexperienced	37.10%	7.864	0.005043
	Experienced	42.76%		
Debt management	Inexperienced	62.50%	14.993	0.000108
	Experienced	70.18%		
Risk management	Inexperienced	31.53%	6.2859	0.01217
	Experienced	36.11%		
Insurance	Inexperienced	40.73%	42.827	$5.981 \cdot 10^{-11}$
	Experienced	54.09%		
Information sources accessing	Inexperienced	49.19%	4.531	0.03329
	Experienced	55.41%		

Source: Own elaboration

Table 7. Results of the Kruskal-Wallis test of equality of the mean percentages in all functional areas for the respondents experienced and inexperienced with the debt instruments

Functional area	Credit experience	Mean percentage	chi-squared	p-value
Earnings and income	Inexperienced	52.20%	4.8131	0.02824
	Experienced	63.39%		
Consuming, and spending	Inexperienced	65.70%	1.5061	0.2197
	Experienced	71.43%		
Savings	Inexperienced	60.10%	1.323	0.2501
	Experienced	66.07%		
Investing	Inexperienced	39.78%	2.1137	0.146
	Experienced	46.43%		
Debt management	Inexperienced	66.11%	3.9357	0.04727
	Experienced	75.89%		
Risk management	Inexperienced	33.29%	10.94	0.000941
	Experienced	36.11%		
Insurance	Inexperienced	48.21%	14.831	0.000118
	Experienced	66.96%		
Information sources accessing	Inexperienced	52.32%	0.171961	0.6784
	Experienced	55.36%		

Source: Own elaboration

The results in the same structure for respondents grouped by their level of experience with debt instruments are shown in Table 7. Here the situation is not as clear-cut as in the previous case. The hypothesis that the average level of financial literacy is the same can be rejected in only half of the functional areas. Specifically, these are earnings, determinants of wages and income, borrowing and debt management, risk management, comprehension of the uncertain outcomes, insurance and the understanding of coverages.

Finally, Table 8 presents the results according to experience with insurance products. It is clear from the results presented in the table that only in the area of access to information resources the difference in results cannot be considered significant. In all other areas, the null hypothesis can be rejected with a confidence level exceeding 99%.

Table 8. Results of the Kruskal-Wallis test of equality of the mean percentages in all functional areas for the respondents experienced and inexperienced with the insurance

Functional area	Credit experience	Mean percentage	chi-squared	p-value
Earnings and income	Inexperienced	48.99%	52.915	$3.483 \cdot 10^{-13}$
	Experienced	66.98%		
Consuming, and spending	Inexperienced	64.62%	8.3138	0.003934
	Experienced	71.08%		
Savings	Inexperienced	58.49%	9.3412	0.002241
	Experienced	67.53%		
Investing	Inexperienced	38.12%	13.898	0.000193
	Experienced	47.57%		
Debt management	Inexperienced	64.53%	16.766	$4.229 \cdot 10^{-5}$
	Experienced	74.25%		
Risk management	Inexperienced	31.56%	23.672	$1.142 \cdot 10^{-6}$
	Experienced	43.10%		
Insurance	Inexperienced	42.86%	86.611	$2.2 \cdot 10^{-16}$
	Experienced	66.60%		
Information sources accessing	Inexperienced	51.83%	0.74021	0.3896
	Experienced	54.85%		

Source: Own elaboration

5. DISCUSSION

The results of our statistical analysis of the data clearly confirmed a higher percentage of students with a greater range of practical experience with financial sector products and services. This difference was reflected not only in the overall level of financial literacy as measured by the P-FIN index but also in the individual functional areas of financial literacy. This result is not very conclusive due to the small size of the group of respondents having experience with debt instruments. This is due to the low age of the respondents who do not yet have the need to incur debt, for example, to secure their own housing, etc. The fact that they do not tend to finance consumption through debt is also positive. It is also surprising that not a single respondent mentioned the use of student loans. In all cases, these results confirm the validity of our research hypothesis. Based on the findings of our research, we can conduct the following comprehensive discussion.

According to a number of studies (Fong *et al.*, 2021; Kim *et al.*, 2021; van Rooij *et al.*, 2011), financial literacy has a positive effect on responsible financial decision-making. In this research, we approached a sample of respondents by dividing students according to their experience with financial market products. This created a group of respondents with basic practical knowledge and a group of students with advanced knowledge of financial products (inexperienced and experienced group). Full-time and part-time students were mixed. However, both groups have access to the same quality management and economic education.

Based on the findings of this research, it can be agreed that financial literacy has a positive effect on financial decision-making, but at the same time we have identified a significantly higher level of financial literacy among a group of students who have practical experience in the financial market. This group of students was put into a decision-making process, where they had to decide what source of financing they would use, how they would invest money, how they would ensure their lives and health, and how they would lead their company financially and managerially.

In such a situation, the individual is often internally motivated to make the right decision. It is a stronger motivation than simply attending school and gaining a positive assessment. The personal involvement of the individual is relatively high here because, in the case of decision-making in personal finances, a bad decision can be associated with a threat to basic human needs. At the same time, one can also perceive the fact that a financially literate individual subsequently influences his / her surroundings due to his / her acquired knowledge, skills and preferences, as stated e.g. by Hasan, Le, & Hoque (2021) and Jin *et al.* (2021).

The authors of this article identified a similar way of human behavior and decision-making in their research as Zhu (2020), Kawamura *et al.* (2021) and Okamoto & Komamura (2021). Respondents from our research also answered questions that seemed easy in the wrong way. They did not pay them the necessary attention and approached them irresponsibly. Fong *et al.* (2021) and Kim *et al.* (2021) agree that higher financial literacy leads to more responsible financial behavior, but Kim *et al.* (2021) add that this behavior does not preclude subsequent financial decisions. These findings also correspond to the results of our research. Obviously, higher financial literacy will not solve all the problems that modern society faces. Park & Martin (2021) also state that financial behavior cannot be assessed solely based on the influence of financial factors, but the psychological factors of consumers must be taken into account.

Therefore, in the implementation of research, it is important to perceive the broader context of aspects affecting financial literacy. Based on our results, we state the importance of internal motivation of respondents themselves, for whom their life situation drove them to measurably improve financial literacy above the level of respondents at the same level of education, who have not yet needed to use the acquired knowledge in their lives and gain deeper knowledge individually. Other researchers (eg Bottazzi & Lusardi, 2021; Okamoto & Komamura, 2021; Razen *et al.*, 2021) also examine financial literacy in the context of the need to meet the living needs of individuals and their cultural, habitual and social environments. These aspects cannot be overlooked and it is important to work with them in increasing financial literacy, but also in solving other social problems.

At the same time, it is appropriate to draw attention to the need to apply scientific knowledge at the political level and in business practice, which may not use its potential for development, as stated by Petrů, Kramoliš, & Stuchlik (2020). The research from this article and also a number of researches listed in the literature provide valuable knowledge applicable in the management of private and corporate finances.

6. FUTURE RESEARCH DIRECTIONS

The results of the research are important findings in the field of financial literacy development not only for students but also for managers in companies. Effective training leads to the development of competencies and reduction of negative social manifestations, which include a higher percentage of foreclosures, inappropriate financial management of the company leading to stagnation of market value and bankruptcy, fraudulent sales practices, etc. Further research can focus on strong sources of motivation which will affect people's willingness to develop knowledge and skills related to financial literacy.

The findings of some authors (e.g. Kawamura *et al.*, 2021; Okamoto & Komamura, 2021; Park & Martin, 2021; Riepe *et al.*, 2022; Zhu, 2020) can be followed up and deepened for further research, as it is clear that having a community of financially literate individuals is not yet a target state in which social problems are solved. For this reason, it is also appropriate to focus research on identifying the factors of overconfidence that cause wrong decisions of financially literate individuals, as well as on the perception of risk itself, which will enrich the findings in the field of science.

The findings of the article also offer other research directions where it is possible to study the influence of financially literate individuals on their immediate surroundings and on the system as a whole within the countries of Central Europe, which have been involved in the development of financial literacy for several years.

In the context of current developments, it is necessary to perceive that the economies of many countries are declining and, hand in hand with this, the social situation of their inhabitants is deteriorating. Expectations are associated with this situation in the form of an increase in the number of foreclosures, an increase in the debt of individuals and families, a lower ability to save, etc. This leads to the possibility of follow-up research into the application of knowledge and skills in financial literacy in a time of crisis, where it is possible to examine which aspects mitigate the decline in private and corporate finance and which previously positively assessed aspects of financial literacy are failing.

The area of financial literacy is therefore far from exhausted, and the current state of events in society opens up new areas of research. As Ajaz Khan, Çera, & Pinto Alves (2022) stated, there is a need to fully understand the significant factors affecting financial capabilities.

7. CONCLUSION

In this paper, we focused on financial literacy research for students of economics (full-time and part-time - with a wider range of ages) who have access to education that supports the growth of financial literacy. We used the personal finance index (P-FIN index) as an instrument to measure financial literacy and we composed our questionnaire to cover all eight functional areas of financial literacy defined in the P-FIN index. We focused on the relationship between practical experience with financial market products and the level of financial literacy and we divided respondents into experienced and inexperienced groups. Individuals with a practical need to use the services of the financial market privately and/or professionally can be expected to have a deeper internal motivation for education and a practical grasp of our researched issues. We tested the hypothesis: Students with more practical experience with financial market tools and services achieve higher levels of financial literacy.

The results of our statistical analysis of the data clearly confirmed a higher percentage of students with a greater range of practical experience with financial sector products and services. This difference was reflected in the overall level of financial literacy as measured by the P-FIN index and also in the individual functional areas of financial literacy. We found a number of interesting facts. For example, young respondents do not tend to finance consumption through debt which can be perceived as positive. It is also surprising that not a single respondent mentioned the use of student loans.

However, the positive findings are connected with a certain weakness of our research. In the group of respondents having experience with debt instruments is our result not very conclusive due to the small size of this group. It was a group represented by younger respondents who do not yet have the need to incur debt. On the other hand, in all cases, our results confirm the validity of our research hypothesis. Another limitation of the research is associated with turbulent changes in society. The results of our research cannot fit into the period when the effects of rising energy prices, the looming energy crisis and the uncertainty of further economic development are economically apparent. This period will be a test of the practical application of knowledge and understanding of financial literacy in the management of private finances, but also in the adaptation of corporate finance and business economics as a whole to new conditions. E.g. for many family companies, you can find a habitual management style, which, however, does not correspond to the modern needs of financial management and the development of a competitive company.

We discussed the results of our research with the results of a number of current scientific articles, where we found certain similarities in the findings in areas such as risk perception, overconfidence factor, social environment factor, and the responsible approach of financially literate individuals to personal financial management and corporate finance management. These findings and the current economic situation open up further possibilities for follow-up research.

ACKNOWLEDGMENT

The paper was conducted within the project KEGA No 007ŽU-4/2021 Innovative courses to improve financial and economic literacy of the technical fields' students.

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Preparation for the Career outside the Army: The View of Soldiers of the Czech Armed Forces

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Received: July 2, 2022

Accepted: August 24, 2022

Published: December 30, 2022

Keywords:

Military organization;
Sociology;
Soldiers;
Second career;
Labor market;
Transition;
Czech Armed Forces



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Abstract: *The paper focuses on the means of support during soldiers' labor market integration after the termination of military contracts. To find out how the military personnel of the Czech Armed Forces cope with their training for a second career and whether they are interested in the support tools used abroad, the research included 176 students of military studies at the University of Defence and 284 soldiers in active military service. Broadening their knowledge and skills for a better opportunity in the labor market is the wish of 90 % of respondents. More than four-fifths of the respondents have not started training for their second career yet. According to the results, the respondents are interested in helping with preparation for a second career. However, compared to other NATO countries, a systematic approach is not being applied in the Czech Republic at this time.*

1. INTRODUCTION

Every year a certain percentage of soldiers, get detached from the military due to retirement or various terms of service. Most of the soldiers who leave the army do not reach the statutory retirement age and belong to a relatively young population aged from 30 to 40 years. Hence, they remain with substantial productive age with a potential of working for 15 – 30 more years. Resettlement of soldiers becomes a challenge as they wish to maintain a certain living standard, financial security and expected quality of life for their families. Hence, they make an effort to build a new career in new civilian employment (Chopade & Gupta, 2020). Although the soldiers usually know the date of their terms of service, most of them do not prepare for this period or focus on rather unhelpful training activities. Unpreparedness is partly attributable to organizational barriers, limited initiative and motivation. This apparent lack of agency may be associated with the institutional nature of the military (Keeling et al., 2018).

However, career transition from armed forces to civilian life plays a prime role in the resettlement of military personnel (Chopade & Gupta, 2020; Alonso et al., 2021). Obtaining civilian employment after military separation not only provides financial stability but also a sense of purpose and meaning, which helps foster a new identity as a civilian (Kintzle & Castro, 2016). Conversely, a lack of employment following military separation is associated with poor mental health, increased stress, and financial insecurity (Zoli et al., 2015). Leaving military service creates an intense and major life transition, which requires a series of adjustments (Zoli et al., 2015; Chopade & Gupta, 2020; Geraci et al., 2020). Therefore, practical experience shows that it

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can be difficult for ex-servicemen to integrate into the civilian labor market (Kintzle et al., 2016; Keeling, 2018; Cooper et al., 2018; Aronson et al., 2019; Gonzalez & Simpson, 2021).

Although evidence suggests the majority of ex-servicemen eventually find civilian employment, some of them have persistent employment problems years after discharge (Keeling et al., 2019). Moreover, some ex-servicemen who had initial success in securing employment have jobs they are over-qualified for or uninterested in (Alonso et al., 2021) and later struggle to maintain their job (Keeling et al., 2018).

Almost half of post-9/11 veterans report that securing employment is their most significant challenge when transitioning from the military (Stern, 2017). For example, veterans were found to have a 58% higher odds ratio of being unemployed compared to matched civilian peers (Kleykamp, 2013). Research suggests that between 54% (Sayer et al., 2015) and 75% (Castro & Kintzle, 2017) of ex-servicemen report reintegration challenges, with approximately 80% leaving service without a job lined up and approximately two-thirds of veterans reporting not knowing where to go for assistance. This lack of assistance is problematic because ex-servicemen who feel supported during their transition report more successful transitions than those who lack support (Kintzle et al., 2016; Castro & Kintzle., 2017; Keeling et al., 2019).

Finding satisfying employment is a key aspect of successful transition (Ahern et al., 2015; Keeling et al., 2018). To assist with the transition out of the military and into the civilian workforce, transitioning service members must often rely on their networks of personal and professional contacts (Hall, 2017). James (2017) found that 10 out of 10 veterans reported networking as pivotal to securing civilian employment. Besides family (Bennett et al., 2015; Wilson, 2015), former colleagues (James, 2017) and civilians (Delbourg-Delphis, 2014; James, 2017), one of the most important circles of people for transitioning service members are formal resource persons, including professionals trained in helping them transition into civilian professions (Bennett et al., 2015; Alonso et al., 2021). Hence, it becomes the responsibility of the nation to utilize this capable and potential workforce for the betterment of society (Chopade & Gupta, 2020).

Studies have shown that planning and careful preparation for the second career period before the process of integration into the labor market is the only factor that provably facilitates the period of transition from the military to another career. The importance of employment preparedness to the well-being of individuals transitioning from one institution to another (military to civilian) has been noted in past research (Skomorovsky et al., 2020). According to Keeling et al. (2018) or Roy et al. (2020), preparation should not begin post-discharge but much earlier. Preparing for the transition well in advance (approximately 1 year before separation) can significantly reduce the difficulty of the transition (Ahern et al., 2015). Those who had adapted well were those who had carefully planned the transition. Keeling et al. (2019) found that the longer service members had to plan their transition, the easier the transition into the civilian workforce. Veterans from all service branches both employed and unemployed demonstrated that obtaining information about civilian careers before leaving the service eases the transition and lessens the time unemployed after separation (Keeling et al., 2019).

Individual responsibility and activity of the soldiers are essential, but the support of programs and services that help prepare transitioning service members with finding education and employment is necessary (Lee et. al, 2020). Facilitating the reintegration and ensuring a safe environment within which to find satisfying employment for military service members is a societal priority (Elnitsky et al., 2017).

The article aims to present:

- the literature review related to the second career of military professionals in order to appropriately introduce the research issue;
- the results of the content analysis of department-specific documents from foreign countries in order to summarize the approaches to the preparation and training of professional soldiers for a second career in selected NATO member states,
- the main findings from the authors' sociological survey that was carried out in order to find out how soldiers of the Czech Armed Forces approach their own preparation and training for a second career and whether they would be interested in the support tools used in foreign countries.

Following the aim of the survey, three research questions (RQ) were stated:

- RQ 1:** Have the respondents already started preparing for their second career? Do the age of soldiers in active service, their length of a service contract and the remaining period of their service contract until the contracted date of termination plays a significant role in their current state of preparation for a second career?
- RQ 2:** What are the job preferences of respondents in terms of a second career?
- RQ 3:** What are the wishes and expectations of respondents pertaining to preparation for a second career? Are they interested in the support tools used in foreign countries?

2. THEORETICAL BACKGROUND

Studies suggest that service members' reintegration into civilian life has the potential to become a challenge for military personnel due to their deeply learned military self-identities (Grimell, 2016a). Years of being immersed in a rigid hierarchy and following orders may decrease one's ability to take initiative and rely on personal autonomy (Zarecky, 2014; Keeling et al., 2018). Leaving behind the structure of military existence, military culture, and comradeship to navigate civilian life in and of itself poses numerous challenges. Despite the fact that the majority of service leavers do not leave with physical injuries or mental health problems, many will have functioning issues that make reintegration difficult (Roy et al., 2020). While military standards, discipline and team spirit were valued by ex-servicemen and were an asset with regards to some employment opportunities, their absence in a civilian working context conversely resulted in some describing reentry into civilian employment straight out of services as a shock, often because of the divergence between the two cultures (Roy et al., 2020). Armed forces are "separate world" where people live a specific lifestyle, dress in a specific way and speak specific language. Military communication is marked by frequent use of acronyms, direct command-oriented exchanges, and nuances in vocabulary and colloquialisms. Mismatch in communication and being misunderstood can lead to feelings of invalidation, disconnection and uselessness (Ahern et al., 2015; Smith & True, 2014).

Barriers to employment include insufficient education or specialized military training that does not necessarily translate to the civilian world (Pease et al., 2016; Gordon et al., 2020). Military professionals master skills that have very little application in the civilian sector, and after approximately 15 years of military service, it is not realistic to expect they could get back to the vocation they had originally trained for (Gaither, 2014).

However, the qualities and habits that they establish during the service are highly positive and often even exceed the requirements of civilian employers. Their unique skill set, a vast amount of training, experiences, impeccable work ethics, and personal characteristics are beneficial to an organization (Minnis, 2017). Hiring an ex-serviceman conditionally presents the opportunity to secure an individual who is loyal, disciplined to mission, comprehends team success, appreciates hierarchy, respects orders and superiors and can make decisions under pressure, which can yield financial benefit to the organization (Stern, 2017; Pollak et al., 2019). However, although ex-servicemen were perceived as having greater leadership and teamwork skills, they were also viewed as having poorer social skills (Yanchus et al., 2018; Stone et al., 2018; Shepherd et al., 2019)

There are additional issues that can affect the employment of ex-servicemen. Research suggests, due to the possible unfamiliarity with military service, civilian employers may struggle to understand the different roles and training of military service, thus making it hard to assess how military experience may be transferrable and military skills translated to a civilian job (Stern, 2017; Roy et al., 2020). Moreover, due to the lack of awareness of military life among civilians and the increasing gap between civilians and the military (Hines et al., 2015; Liebert & Golby, 2017) civilian employers tend to treat ex-servicemen differently due to stereotypes they hold about the military (Shepherd, Kay, & Gray, 2019). They often believe that former soldiers are too regimented and that their strict adherence to autocracy and organizational policies will be ineffective or a poor fit for the organization (Stone & Stone, 2015). Former soldiers who gain employment tend to face discrimination, negative stereotypes, stigma, underemployment, identity strain, exclusion, and a lack of adjustment (Shepherd et al., 2019). For these and other reasons, many veterans struggle with integrating into a workplace as part of their transition into civilian life, which could include failing to find or maintain employment (Ford, 2017).

This speaks to the importance of advanced career planning (Wilson-Smith & Corr, 2019). The military literature has proposed and evaluated interventions and strategies aimed at helping ex-servicemen with regard to specific issues, such as developing desirable job market skills. Some government and private initiatives are helping military personnel in search of jobs and reemployment (Chopade & Gupta, 2020). Some countries have established various systems facilitating ex-servicemen integration into the labor market. These include usually governmental agencies collaborating with the defense ministries and other support organizations. Programs currently available offer employment services such as online job boards, job fairs, resume writing resources, career counseling, coaching, mentoring, training and certification programs, and formal networking opportunities (Aronson et al., 2019).

Ex-servicemen can utilize career counseling and mentoring services with experienced professionals. Career counselors help ex-servicemen translate their military experience into civilian terms so they can more effectively illustrate their relevant expertise on resumes and in interviews with hiring managers (Delbourg-Delphis, 2014). They help them set realistic expectations regarding salaries, learn about their career goals, identify their strengths and weaknesses and provide them with actionable steps to identify and achieve appropriate vocational outcomes (Buzzetta et al., 2017). An important factor for a successful transition from military to civilian life often involves the obtainment of educational goals to support the future obtainment of meaningful employment (Ainspan et al., 2018). Some organizations, therefore, attempt to meet the needs of ex-servicemen by providing the necessary training and certification for civilian careers (Owings et al., 2015).

There is some evidence that participation in employment-related programs yields positive results and has its intended effects which can be seen for example in a low rate of unemployment reported by participants (Curry Hall et al., 2014; Kerrick et al., 2016; Kerrick et al., 2014; Perkins et al., 2019). Scholars have suggested that veteran-serving organizations should develop and implement a strategy to determine what types of programs need to be offered. (Batka & Hall, 2016; Perkins et al., 2019). Ex-servicemen should be taken into account, current understanding of transition and transition support services evaluated, and improved (Roy et al., 2020). Ex-servicemen may feel more confident and supported, and less abandoned, if there is visible, strong leadership at the highest levels of government.

The Ministry of Defense of the Czech Republic offers soldiers whose service contract lasted five or more years various retraining courses aimed at preparation for the civilian environment and allowing them to obtain such knowledge and skills that they could apply to the labor market. However, the maximum allowed period the soldiers can spend in the retraining courses, which is 3 months, is not always sufficient for attaining new professional skills. It is very difficult to fully reskill a specially trained professional in a such short period. Moreover, most of the retraining courses focus just on basic knowledge and skills required for the jobs for which the soldiers retrain, and this is insufficient for the actual labor market. Some of the departmental companies offer soldiers exiting active service opportunities for further employment. These most commonly include positions of technicians, aircraft mechanics, or cooks. However, this is a benefit primarily aimed at current war veterans (Binková, 2018).

In the operational program Human Resources and Employment, which had enabled the use of funds from the European Social Fund in human resources during the 2007 – 2013 program period, seven projects focused on employing war veterans. Their drawback, however, was their short-term functioning and the strict focus on war veterans, whereby soldiers without previous participation in military missions could not take part in the activities offered under the projects (Binková & Bednář, 2017).

According to previous research, on average 18 % of former soldiers of the Czech Armed Forces of productive age remained unemployed after they terminated military service for 8 months. This is a high percentage, which is more than three times higher than the average general unemployment rate in the Czech Republic in this period, which was 5.7% (Binková, 2019).

2.1. Examples of Good Practice from Selected NATO Member States

To assist professional soldiers with integrating into labor market, in some countries, various systems are facilitating the soldiers' transition to their second career. Most of them are provided by governmental agencies collaborating with the ministries of defense, as well as by other support organizations providing counselling, training, and mediating contact with the civilian labor market.

A role model in this aspect is France. Since 2009, the French Defense Mobility Agency (Défense Mobilité) has been a part of the workforce policy of the Ministry of Defense supporting external mobility of the military personnel and enhancing the attractiveness of professional soldiers on the labor market, both to public and private organizations. The agency draws from a network of over 700 local military and civilian experts in retraining, with excellent knowledge of the specific needs of both the candidates and employers and cooperates with more than 7,000 public

and private corporations. The agency monitors professional soldiers, provides professional assistance with developing their professional projects, expert training meeting their needs, guides them, and connects with potential employers. Every year, more than 16,000 candidates use the services of the agency. The headquarters of the agency is based in Paris; there are six regional centers, 57 local offices (52 in France and 5 overseas), one retraining institute for officers, one military training center, and one center for unemployment support. The agency provides its services based on the principle of equality, regardless of the military ranking or position in the army (Bilan reconversion, 2014).

Table 1. Comparison of support tools in selected NATO member countries

Support tools	Czech Republic	Poland	France	Great Britain	Germany
Advisory		x	x	x	x
Seminars		x	x	x	x
Vocational education: training, reskilling, study	x	x	x	x	x
Assistance with job seeking		x	x	x	x
Supported job opportunities		x	x	x	x
Professional experience		x	x	x	x
Job fairs		x	x	x	x
Help with starting a business		x	x	x	x
Special job portal			x	x	x
Financial compensation, coverage of activities related to preparation for second career	x	x	x	x	x

Source: Own research

Great Britain has a similar approach. The Career Transition Partnership (CTP) project runs in collaboration between the Ministry of Defense and Right Management Ltd. Corporation, which provides full service to exiting soldiers for four years – two years before the end of their service contract and two years afterward. The aim is to provide full assistance to help the soldiers integrate into the labor market and to prepare them for future career growth. Throughout its existence, the agency has helped more than 200,000 soldiers. The agency runs one training center and nine contact centers that cooperate with employers interested in employing soldiers exiting the army. Support is provided to all soldiers, regardless of their ranking and length of their contract period, but the level of support differs upon the meeting of a set of predefined criterions. During the project, the soldiers can choose from a range of retraining courses, career advisories, or services of a special job portal (The Career Transition Partnership, 2018).

Germany is yet another example of good practice. Law governs the preparation of soldiers for a second career and it pertains to soldiers in active service as well as to soldiers whose service contract had already terminated. Berufsförderungsdienst der Bundeswehr, i.e. the agency responsible for preparing the soldiers for the second career, employs approximately one thousand civilians in 46 branches across all the military districts. The services of this institution ensured a planned and systematic preparation for the change of the soldiers' working environment, which begins with basic training and runs throughout the entire duration of one's service contract as well as after its termination. An important role in the expert preparation of professional soldiers for the needs of the labor market is played also by the Bundeswehrfachschule, which is a so-called "second chance" vocational institute established specifically for professional soldiers and training them for their second career (Jonsson, 2014).

In Poland, there are one central and seven regional offices of The Professional Activation Center (Ośrodek Aktywizacji Zawodowej), which systematically prepares soldiers for a second career. The center provides information and training services, career advisory, help with finding employment and support during starting up a business; it offers internships and reskilling courses, job fairs, and other opportunities (Rekonwersja kadry i byłych żołnierzy, 2017).

A comparative analysis of the provided tools to support the integration of soldiers into the labor market in individual countries was performed – see Table 1.

3. METHODOLOGY

To find out how the soldiers of the Czech Armed Forces approach their preparation and training for a second career, the authors of this paper performed a questionnaire survey utilizing the Google Forms application. After data acquisition, the answers were coded and entered into a data matrix in Microsoft Excel. IBM SPSS Statistics 25 software was used to verify the true-ness of the statistical hypotheses.

The respondents in the total number of 460 (which is approximately 2% of the total number of members of the army) comprised two groups:

- students of military studies at the University of Defence – UD students (176 respondents, of which 141 men and 35 women). The age of respondents from the group of UD students varied from 19 up to 26 years and by military ranking, they included all the ranks from private first class up to staff sergeant.
- professional soldiers of the Czech Armed Forces in active service (284 respondents from 43 divisions of the armed forces, of which 260 men and 24 women). The age of respondents from the group of professional soldiers varied from 20 up to 51 years and by military ranking, they included all the ranks from private first class up to colonel. By achieving degree of education among professional soldiers, there were soldiers with a high school education (63 %) and a university degree (37 %). Besides the basic sociodemographic variables, the survey covered also the length of service employment and the period until the soldiers' expected exit from service employment. The length of service was as follows: up to five years of service (2.4 %) 6 – 10 years (7.3 %), 11 – 15 years (11.8 %), 16 – 20 years (17.4 %), and 21 years and more (27.9 %). The average remaining period of service was 3 years, with the shortest period of nine months and the longest of 10 years.

This research sample comprised both military professionals and military students, especially with regard to the priority measures of The Czech Armed Forces Development Concept 2030. It aims at increasing the attractiveness of military service, the motivation and the fulfillment of social needs of the personnel in all categories, declaring the University of Defence will be a high priority (Ministry of Defense & Armed Forces of the Czech Republic, 2021). The studied sample was not homogeneous in terms of sex, but this composition corresponds with the proportion of men and women in the studied reference population. Due to the very low percentage of women in the studied group, the factor of sex was not considered a discriminatory sign.

4. RESULTS AND DISCUSSION

RQ 1: Have the respondents already started preparing for their second career? Do the age of soldiers in active service, their length of the service contract and the remaining period of their service contract until the contracted date of termination plays a significant role in their current state of preparation for a second career?

Only 19 % of the respondents (23 % of professional soldiers in active service and 12 % of UD students) have already started their own preparation for a second career. More than four-fifths of the total number of respondents are not preparing for their second career yet. This finding is in line with the previous study by Keeling et al., (2018).

Table 2. Relation between the current state of preparation for a second career and age, duration of service employment and the remaining period of service contract until the contracted date of termination – significance threshold 0.05

Statistical hypothesis 1: Among soldiers in active service, there is no statistically significant correlation between the current state of preparation for second career and their age.

Preparation for second career	N	Average age	Levene's test for homogeneity of variance		t-test		
			F	p-value	t	p-value (bilateral)	Difference between averages
Yes	65	33.26					
No	219	33.96	0.252	0.616	-0.635	0.526	-0.702

Statistical hypothesis was not rejected.

Statistical hypothesis 2: Among soldiers in active service, there is no statistically significant correlation between the current state of their preparation for the second career and the length of their service contract.

Preparation for second career	N	Average length of service contract in years	Levene's test for homogeneity of variance		t-test		
			F	p-value	t	p-value (bilateral)	Difference between averages
Yes	65	9.65					
No	219	11.3639	2.468	0.117	-1.418	0.157	-1.714

Statistical hypothesis was not rejected.

Statistical hypothesis 3: Among soldiers in active service, there is no statistically significant correlation between the current state of preparation for second career and the remaining period of service employment until the contracted date of expiry.

Preparation for second career	N	Average remaining period of service in years	Levene's test for homogeneity of variance		t-test		
			F	p-value	t	p-value (bilateral)	Difference between averages
Yes	65	2,74					
No	219	3.1482	3.276	0.071	-1.963	0.051	-0.40817

Statistical hypothesis was not rejected.

Source: Own research

Many authors examine the role of various factors affecting the course of preparation for a second career and the success of a soldier's integration into the civilian sector. E.g. age, sex, health status, length of a service contract, number of deployments, the remaining period of a service contract until the contracted date of termination or support of the family (Brunson, 1996; Vigo-da-Gadot et al., 2010; Morin, 2011; Robertson, 2013; Hachey et al., 2016). Therefore, the group of soldiers in active service was further studied in terms of the relation between the current state

of preparation for a second career and age, duration of service employment and the remaining period of their service contract until the contracted date of termination. To verify the individual statistical hypotheses, a two-sided (non-paired) Student t-test was used. With the presumption of homoscedasticity of variance, a test of the mean values agreement hypotheses was performed. Table 2 presents the results of the tests.

Statistical hypotheses were not rejected. Among soldiers in active service, there is no statistically significant correlation between their current state of preparation for a second career and their age, the duration of their service employment and the remaining period of their service contract until the contracted date of termination.

RQ 2: What are the job preferences of respondents in terms of a second career?

Struggling with civilian work culture points to the need for job roles in organizations that share a similar ethos of structure, discipline, and teamwork (Roy et al., 2020). The largest group of respondents – 39 % (45 % of soldiers in active service and 29 % of UD students) wish to find a job opportunity in the public sector after terminating their service contract. Forty-nine percent of all respondents (58 % of UD students, and 43 % of professional soldiers in active service) want to be employed in the security forces (Police and Fire Rescue Service of the Czech Republic). This result is consistent with studies that show veterans pursue careers in the public sector and protective services jobs (Schulker, 2017). In the second position the preference of the target groups, differ. Whereas the students wish to start their own businesses, soldiers in active service prefer to work in the private sector.

RQ 3: What are the wishes and expectations of respondents pertaining to preparation for a second career? Are they interested in the support tools used in foreign countries?

Twenty-four percent of the respondents believe that preparation for a second career needs to start about 4 to 6 months before the end of their service employment. Twenty-three percent of the respondents state one year to 1.5 years before the end of their service employment, and 22 % of the respondents state 7 months to 1 year to the end of their service employment. Fourteen percent of the respondents state the need for continuous preparation throughout the entire military career; other responses showed a low percentage. This finding confirms previous studies emphasizing the importance of early preparation for a second career, starting well in advance before the separation from the army (Ahern et al., 2015; Keeling et al., 2018; Keeling et al., 2019; Wilson-Smith & Corr, 2019; Skomorovsky et al., 2020; Roy et al., 2020).

If an ex-serviceman is able to manage the idea of an occupational transition from military to college and is willing to engage in specific occupational engagement tasks, he or she will also be ready to accomplish the tasks needed to achieve career-planning activities (Ghosh & Fouad, 2015). The vast majority of respondents (90 %) wish to extend their knowledge and skills during their service employment in order to find better opportunities in the labor market. 47 % of all respondents prefer retraining courses, and 29 % prefer university studies. Among the most frequently stated fields in which the respondents wish to improve, are foreign languages, IT and computer skills, management and leadership, electrical engineering, and training for driving licenses.

Seventy-two percent of respondents would welcome, during their service employment, an individual approach focused on training for further career opportunities. They could also rate three

specific forms of such individual assistance on a scale of 1 to 5 (1 = the least useful, 5 = the most useful). According to the arithmetic average of achieved point rating respondents highlighted coaching as the most useful activity (4), while the help of a psychologist achieved the lowest score (2.4) and career counselling was rated 3.7. A job coach can help ex-servicemen learn and develop additional skills necessary to succeed in their civilian roles. Specific approaches to coaching can be used, for example, Zarecky's model (2014), focusing on soldiers' strengths.

Fifty-six percent of the respondents are interested in organizing group workshops focusing on preparation for a further career during their service employment. The topic of the highest interest is the principles of preparation and behavior at a job interview and self-presentation techniques. Research shows the usefulness of workshops of this kind. For example, a pre-and post-test comparison of results of 1315 young veterans who participated in a 5-day workshop aimed at facilitating their transition to civilian life showed that participation in the workshop reduced the participants' career decision-making difficulties and increased their career decision self-efficacy (Gati, Ryzhik, Vertsberger, 2013).

After leaving the service, those in transition may join one or more possible career pathways - employment, further education, or business start-up (Gray et al., 2017). Therefore, if the soldiers, before the expiry of their service employment, had an opportunity of consultations aimed at support during the start-up of their business as one of the possible directions of their second career, 62 % of the respondents would like to use it.

Both target groups expressed great interest in job fairs - 83 % of the respondents. As previous studies suggest, job fairs are networking-specific events that are available to assist ex-servicemen in exploring career options and obtaining employment. Beyond giving participants direct personal interaction with potential employers, job fairs may help participants determine if a specific employment opportunity is a good fit for them (James, 2017; Stonebraker et al., 2019).

Special websites, job portals, or social media sites, such as LinkedIn and Facebook, are often used by ex-servicemen to identify job leads (Weinburger et al., 2015; Hall, 2017).

Services of a job portal for professional soldiers, which would allow them to contact potential employers, would be used by 82 % of the respondents. Regular publication of job offers from employers was found as the most beneficial feature of this portal.

Respondents were also asked whether they would be interested in going on an unpaid expert internship of 3 – 6 months with a civilian employer during their service employment; during this time, they would continue receiving their service salary. Seventy-four percent of the respondents are interested in increasing their chances of employment through an expert internship in a civilian organization. The respondents also stated whether they would wish other organizations from the civilian sector (not just those under the Ministry of Defense) to offer job opportunities for ex-professional soldiers. Seventy percent of the respondents expressed their wish that organizations from the public sector offer job opportunities for ex-soldiers. The respondents were then asked to state which institutions should be involved in such activity; the results suggest respondents would be predominantly interested in security units of the state, units of the integrated rescue system, public authorities and state authorities, municipal, local, and regional authorities, healthcare institutions and educational institutions.

5. FUTURE RESEARCH DIRECTIONS

The current results may form a basis for further research on the larger sample, as this issue will be constantly addressed by all the countries across NATO.

6. CONCLUSION

More than four-fifths of the respondents from the target group of University of Defence (UD) students and soldiers in active service have not started any preparation for their second career yet. Among soldiers in active service, the current approach to preparation for the second career does not depend on age, length of their service contract, or the remaining period of their service contract until the contracted date of termination. Almost one-quarter of the respondents think that the preparation for a second career should start 4 to 6 months before the termination of the service employment. Approximately the same percentage thought that year to 1.5 years, or 7 months to 1 year before the termination of the contract period were sufficient. The option of 1 to 3 months, which meets the current condition of attending retraining courses in the maximum length of 3 months, was stated by only 8 % of the respondents. Broadening their knowledge and skills for a better opportunity in the labor market is the wish of 90 % of respondents. Almost half of the respondents from both the target groups prefer attending retraining courses and obtaining certificates or diplomas, while nearly one-third prefer a study at a university and obtaining a degree in a civilian field.

Nearly four-quarters of respondents would be interested in an individual approach focused on preparation for further career development, most often in the form of coaching. Almost two-thirds of the respondents expressed their interest in attending group seminars focused on the preparation for their further careers. All of them express the greatest interest in learning about the principles of behavior at a job interview and self-presentation techniques. Two-thirds of respondents are interested also in consultations focusing on assistance with starting up their own business as a potential direction of their second career. More than four-fifths of the respondents wish to attend job fairs organized specifically for professional soldiers, as well as to have a specialized job portal, the most useful function of which would be the direct publishing of job offers from employers. Three-quarters of respondents would be interested in a 3 – 6 months unpaid internship in a civilian company, and almost three-quarters of the respondents wish that organizations from the public sector communicated job offers targeted specifically at ex-servicemen. Examples of such organizations included most commonly the security units of the state, integrated rescue system units, public authorities and municipalities, healthcare and educational institutions, and security agencies.

The focus on the Czech labor market, the situation of the professional soldiers' second career, and the relatively low number of respondents limit the general conclusions. However, the current results are of high interest to the Ministry of Defense of the Czech Republic because based on the performed analysis retraining is insufficient and a systematic approach is not being applied in the Czech Republic at this time. One of the objectives of The Czech Armed Forces Development Concept 2030 is to cooperate with the civilian sector and improve the offer of retraining in order for a better reintegration of the outgoing personnel into civilian life. It is therefore necessary to examine the attitudes of all categories of soldiers to ensure that this goal will be met in the future.

The results should be of interest also to HR specialists who are responsible for managing the workforce in various civilian organizations and may use the workforce of military professionals exiting their active service in the army.

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The Impact of Personality Traits and Internal Locus of Control on Entrepreneurial Intention

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Received: June 2, 2022

Accepted: July 4, 2022

Published: December 30, 2022

Keywords:

Personality traits;
Internal locus of control;
Entrepreneurship;
Entrepreneurial intention;
Literature review

Abstract: A country's economic growth and development are closely linked to entrepreneurship and innovation, which is why entrepreneurs are recognized as one of the key drivers of the economy. Moreover, job creation, employment and innovation of products and services not only affect the national economy but also the global economy. Having that in mind, it is comprehensible why the ability to understand and predict entrepreneurial intention (EI) turned into a central category that is widely researched in the literature.

The main goal of this PRISMA-guided systematic literature review is to identify, present and qualitatively analyse relevant papers regarding entrepreneurial intention, personality traits and especially the internal locus of control. Moreover, other goals are to highlight the importance and influence of personality traits and the internal locus of control on entrepreneurial intentions and to present the findings regarding the interrelatedness of entrepreneurial intention, internal locus of control and personality traits.

This article uses a systematic review according to the PRISMA statement guidelines with stringent selection criteria to include relevant articles on the impact of personality traits and internal locus of control on entrepreneurship (i.e. entrepreneurial intentions). The two largest scientific databases, i.e. Scopus and Clarivate Web of Science databases have been explored with the key phrases „PERSONALITY TRAITS“, „INTERNAL LOCUS OF CONTROL“ and „ENTREPRENEURIAL INTENTION“. This PRISMA method led to a total of 9 relevant papers regarding the impact and influence of personality traits and internal locus of control on entrepreneurship (i.e. entrepreneurial intentions).

The scientific contribution of this paper is mirrored in the presentation of these relevant articles, their findings and in raising awareness among academic members, researchers and governments across the globe regarding the traits that impact entrepreneurial intentions, with a special focus on the findings regarding the internal locus of control. This article provides practical implications for national governments regarding their entrepreneurial policies, support system and climate.



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1. INTRODUCTION

Entrepreneurship and venture creation have been recognized as key drivers and significant forces of economic and social growth, regional and national competitiveness, social development and job creation through self-employment, innovation and technological advancement in society in both developed and underdeveloped countries (Denanyoh et al., 2015; Voda & Florea, 2019; Munir et al., 2019). It is now generally accepted that entrepreneurship is positively associated with higher economic development (Rajh et al., 2018). However, entrepreneurship is no longer associated with economic growth only but also with social and environmental performance (Fatoki, 2020). More importantly, entrepreneurs are considered to “bring an enormous contribution to a country’s economic growth” (Voda & Florea, 2019). Moreover, “the

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creation of a country's wealth and dynamism depends upon the competitiveness of its firms and this, in turn, relies fundamentally on the capabilities of its entrepreneurs and managers" (Cuervo et al., 2007). Both national governments and major international organizations worldwide, such as The World Bank and United Nations Industrial Development Organization (UNIDO) are starting to focus on improving countries' business and investment environments (e.g. establishing units to promote private sector development in developing countries and providing technical assistance in the formulation of SME and entrepreneurship policy) for increasing self-employment through entrepreneurship, as a part of their poverty reduction, growth and economic development programs (Acs & Virgill, 2009).

Entrepreneurship has a multidimensional nature and it is a subject of interest to many disciplines: economics, sociology and psychology, which all try to give a summary of the debatable question: what stimulates the self-employability of people and why do different people have different occupational choices (Jovanov Aspasieva et al., 2020). According to Eroğlu et al. (2011), "entrepreneurship is mostly about risks, innovation, creative thinking and the entrepreneur is the one who creates and innovates something recognized around perceived opportunities by accepting risks and failures". "Because entrepreneurship is increasingly seen as a way of dealing with global challenges, it becomes relevant to understand how young people might develop into entrepreneurs" (Ozaralli et al., 2016). Entrepreneurship is often defined as a career path characterised by considerable risk and uncertainty, which renders entrepreneurship attractive to individuals with a high propensity for risk-taking (Karimi et al., 2015). The entrepreneurial function, which discovers and exploits opportunities, leads to the creation of additional economic activities and the generation of new values and benefits for society (Reynolds, 2005). Entrepreneurship as a concept is a subject of great interest in the practice and academic literature. This is since entrepreneurship as an activity creates value for academics, business people and the government in each country around the world (Cuervo, et al. 2007). Therefore, considering the positive impact that entrepreneurship exercises on economic and overall societal development by integrating people, introducing innovations, and creating competition, it is clear why interest in this topic has been increasing rapidly.

Entrepreneurship is an essential element for social progress as it manifests its fundamental importance in different ways: a) by identifying, assessing and exploiting business opportunities; b) by creating new firms and/or renewing existing ones by making them more dynamic; and c) by driving the economy forward – through innovation, competence, job creation- and by generally improving the wellbeing of society (Cuervo et al., 2007). The fascination with entrepreneurs is not brand new and literature dating to the 18th century explores what drives entrepreneurs and whether their traits matter for the outcomes of their ventures (Kerr et al., 2017). Therefore, it should come as no surprise that entrepreneurship research appears to be "one of the most widely cited subjects in the management discipline", mostly due to its practical implications (Paul et al., 2017).

The main objective of this paper is to explore the two most relevant global scientific databases (the Scopus and Clarivate Web of Science) and to identify relevant papers regarding entrepreneurship, entrepreneurial intention, personality traits and internal locus of control. For this reason, a PRISMA-guided systematic literature review has been conducted. For more on the methodology see Liberati et al. (2009). Other objectives of this paper are to highlight the importance and impact of personality traits and the internal locus of control on entrepreneurial intentions and to present and elaborate on the findings regarding the interrelatedness of entrepreneurial intention, internal locus of control and personality traits.

This paper is organized as follows. The next section provides a brief theoretical background for understanding entrepreneurial intention (EI), Personality traits and Internal locus of control. The third section then presents the research approach. Section 4 presents the research results, i.e. the 9 surveyed papers and their findings. The study ends with a discussion and conclusions regarding the study's implications, limitations and directions for future research.

2. THEORETICAL BACKGROUND

2.1. A Theoretical Approach towards Understanding Entrepreneurial Intention

Entrepreneurial intention (EI) is referred to as “the first step in understanding the entrepreneurial process” (Ajzen, 1991; Munir et al., 2017). Entrepreneurial intention refers to the “positive or negative intention of an individual toward creating a new business”. Thus, “entrepreneurial intention is the base of entrepreneurial actions” (Çolakoğlu & Gözükar, 2016). Entrepreneurial intention shows the intention of a person to choose to be an entrepreneur for his/her career. People who have entrepreneurial intentions plan to take calculated risks, gather required resources and establish their own ventures. Entrepreneurial intention initiates entrepreneurial actions (Karabulut, 2016). In an entrepreneurial context, the entrepreneurial intention is “a significant construct that determines the process of creating ventures” (Çolakoğlu & Gözükar, 2016).

A large number of academic members and researchers have covered EI (entrepreneurial intention) (Lüthje & Franke, 2003; Fini et al., 2012; Nabi & Linan, 2013; Karabulut, 2016; Kerr et al., 2017; Rajh et al, 2018; Šubić et al., 2019). It can be defined as one's willingness to undertake an entrepreneurial activity or the intention to be self-employed and start one's own business. Strong entrepreneurial intention is likely to result in an attempt to start a new business (Ozaralli et al., 2016). According to Voda & Florea, (2019), “intentionality represents a state of mind that can turn actions into actual behaviour”. They also claim that EI is influenced by three global concepts as follows: “attitude (how attractive the target behaviour is for the individual), perceived social norms (social pressure in favour or against target behaviour) and perceived control over behaviour (individual perception and the ability to adopt the respective behaviour)”.

Theory of Planned Behaviour (TPB) has also shown to be very useful in the examination of the entrepreneurial intent of people. When it comes to TPB, the intention of an individual to perform certain behaviour is considered as its central factor, i.e. the stronger the intention is, the more likely would the performance be (Ajzen, 1988). The intention of the (potential) entrepreneur as a factor, grasps all the motivational factors that stimulate people to behave in a certain way, and their willingness to try to put an effort into performing the behaviour. Papers researching TPB and entrepreneurial intent show a direct link between the personal attitude and perceived behavioural control with behavioural (entrepreneurial) intention, which can be used in predicting behavioural (entrepreneurial) achievement (Rajh, et al. 2018; Jovanov Apasieva, et al., 2020).

2.2. A Theoretical Approach towards Understanding Personality traits

The personality traits approach is one of the classical and early approaches to entrepreneurship (Pupavac, 2015). At the same time, it is one of the more controversial areas of research (Rauch & Frese, 2007). In the 1980s, the literature led some researchers to criticize the trait approach and to draw conclusions that there was no correlation between personality and entrepreneurship. Namely, according to Gartner (1989), the trait approach has been unfruitful and the attempt to answer the

question “Who is an entrepreneur?” (which focuses on the traits and personality characteristics of entrepreneurs) will neither lead to a definition of the entrepreneur nor help us understand the phenomenon of entrepreneurship. There were other scholars in the 2000s (Utsch & Rauch, 2000) who believe research on entrepreneurial personality and entrepreneurial success has three major weaknesses: first, most studies investigate global traits that ignore the specific requirements of the entrepreneurial task. Second, studies of the direct relationship between personality and entrepreneurial success ignore the role of entrepreneurial behaviour. Whenever one investigates the personality of an entrepreneur one must also study the actions of the entrepreneur. Third, studies of entrepreneurship often use inadequate statistical methods or fail to exhaust the advantages of modern statistical methods. Furthermore, Utsch & Rauch (2000) argue that the problem with the trait approach in entrepreneurship research is that most investigated traits are not linked to the entrepreneurial situation or task. Personality characteristics are useful in explaining the generation of behaviour when the situation is considered. This means that the power of personality characteristics to predict a certain behaviour depends on the fit between these personality characteristics and the environment in which the behaviour is shown. Therefore, entrepreneurship research should use personality characteristics, which have face validity for the specific entrepreneurial task and work situation. Notwithstanding, a significant number of scholars and researchers have stood up for the traits approach and argued it cannot be dismissed and undervalued and that it still provides a number of promising issues for exploration and insight. Over time, the tide changed and there is now a revival of personality research in performance and leadership research and many other areas of industrial and organizational psychology too. There is now the consensus that there is ample evidence for the validity of certain personality variables in entrepreneurship research (Rauch & Frese, 2007). Consequently, the better recognition of heterogeneity among entrepreneurs and powerful new data sources suggest it might be fruitful to re-examine some of these areas again, some 20-30 years later. After all, the focus for many is now on describing how personality may influence the creation of new organizations, addressing at least some of Gartner’s concerns (Kerr et al., 2017).

In the theoretical background, personal history, social context, attitudes toward entrepreneurship, planned behaviour and personality traits are pointed out as factors that have an impact on the propensity to engage in entrepreneurship, and these factors are categorized as internal (personality) and external (contextual or environment) (Yıldırım et al., 2016).

Personality traits are the constructs describing behavioural patterns in individuals’ lives (Karabulut, 2016). They have also been extensively researched by previous researchers (Karabulut, 2016; Rajh et al., 2018; Jovanov Apasieva et al., 2020; Kerr et al., 2017; Utsch & Rauch, 2000; Karimi et al., 2015; Lüthje & Franke, 2003).

Rauch & Frese (2007) have distinguished two sets of personality traits in their model: broad personality traits (extraversion, emotional stability, openness to experience, agreeableness, conscientiousness) and specific personality traits (need for achievement, risk-taking, innovativeness, autonomy, locus of control and self-efficacy).

While personality theory remains rife with its own set of contentions, researchers have primarily gravitated over the last few decades to the Big-5 factor personality model. Several additional traits have been fused into the Big-5 for entrepreneurial work, including self-efficacy, innovativeness, locus of control, and risk attitudes (Kerr et al., 2017). Locus of Control and Risk-Taking Propensity represent personality variables and might allow exploring how personality differences affect entrepreneurial intention (Rajh et al., 2017).

2.3. A Theoretical Approach towards Understanding Internal locus of control

An important trait in entrepreneurship literature is locus of control (LOC). LOC is a personality characteristic that shows the level of control feeling (Karabulut, 2016) and is considered to be a culturally dependent trait (Kerr et al., 2017). Locus of control is conceptualized in two forms, internal and external, former is concerned with the self-efficacy of an individual to influence the outcomes and later talks about the influence of external determinants of the outcomes (Farukh et al., 2018). A person with an internal LOC “conceptualizes that their own decisions control their lives”. In contrast, those with an external LOC believe “the true controlling factors are chance, fate, or environmental features that they cannot influence and thus externally controlled people may be more passive” (Karabulut, 2016). If one believes that one is not able to control business outcomes, one has no reason to actively change one’s environment (Rauch & Frese, 2007). Persons with internal LOC believe that they can influence outcomes through their own ability, effort, or skills, rather than external forces controlling these outcomes.

Locus of Control (LoC) is represented as the extent to which a person believes he/she has control over his/her life, i.e. “the level of feeling of being in control” and is considered “a relevant trait in the literature of entrepreneurship” (Karabulut, 2016). The locus of control is a personality variable that reveals “how one’s personality can influence entrepreneurial intention” (Rajh et al., 2017). There is internal locus of control and external locus of control. The internal locus of control shows the extent to which a person believes has control over their own life, whereas the external locus of control reveals the extent to which a person believes they are affected by external variables such as destiny, luck and other individuals (Karabulut, 2016). Moreover, LoC is considered one of the “core personality traits in entrepreneurial activities” (Çolakoğlu & Gözü-kara, 2016). According to Karabulut (2016), “internal locus of control, need for achievement, risk tolerance, and entrepreneurial alertness are dimensions of personality traits which lead a person to develop the entrepreneurial intention”.

A person with an internal LOC conceptualizes that their own decisions control their lives. In contrast, those with an external LOC believe the true controlling factors are chance, fate, or environmental features that they cannot influence and thus externally controlled people may be more passive (Rauch & Frese, 2007). Persons with internal LOC believe that they can influence outcomes through their own ability, effort, or skills, rather than external forces controlling these outcomes.

Personality reflects the factors that affect the individual’s emotions, thoughts and behaviours, and it reflects both the traits of an individual and the traits of the society. The effect that personality has on entrepreneurship intention has been a widely debated topic recently (Irengun & Arikboga, 2015). According to Lumpkin (1985), locus of control (internal control and external control, i.e. chance) alongside risk-taking propensity according to Luthje & Franke (2003), are considered to be key personality traits that greatly influence entrepreneurial intent of a person. Due to the limited research on internal locus of control and its impact on entrepreneurial intent, this review focuses solely on studies regarding internal locus of control.

3. RESEARCH APPROACH

This in-depth systematic literature review has surveyed both Scopus and Clarivate Web of Science (WoS) scientific databases without imposing any exclusion criteria regarding the period of publication. Therefore, all of the published work has been included in the survey. The keywords

„personality traits“, “internal locus of control” and “entrepreneurial intention” have been applied to identify the relevant studies that focus on personality traits that impact the entrepreneurial intention, with a special focus on the internal locus of control. The survey was focused on peer-reviewed papers in journals in the English language with no exclusion criteria regarding the year of publication. This approach resulted in 6 hits in Scopus and 10 hits on WoS, which eventually (after the exclusion of 3 duplicate papers, and after the abstract screening), led to a total of nine studies remaining for the qualitative analysis (in the inclusion phase).

The complete survey process with the use of the PRISMA-guided systematic literature review is shown in Figure 1, and a more detailed analysis of these studies and their findings is presented in Section 4.

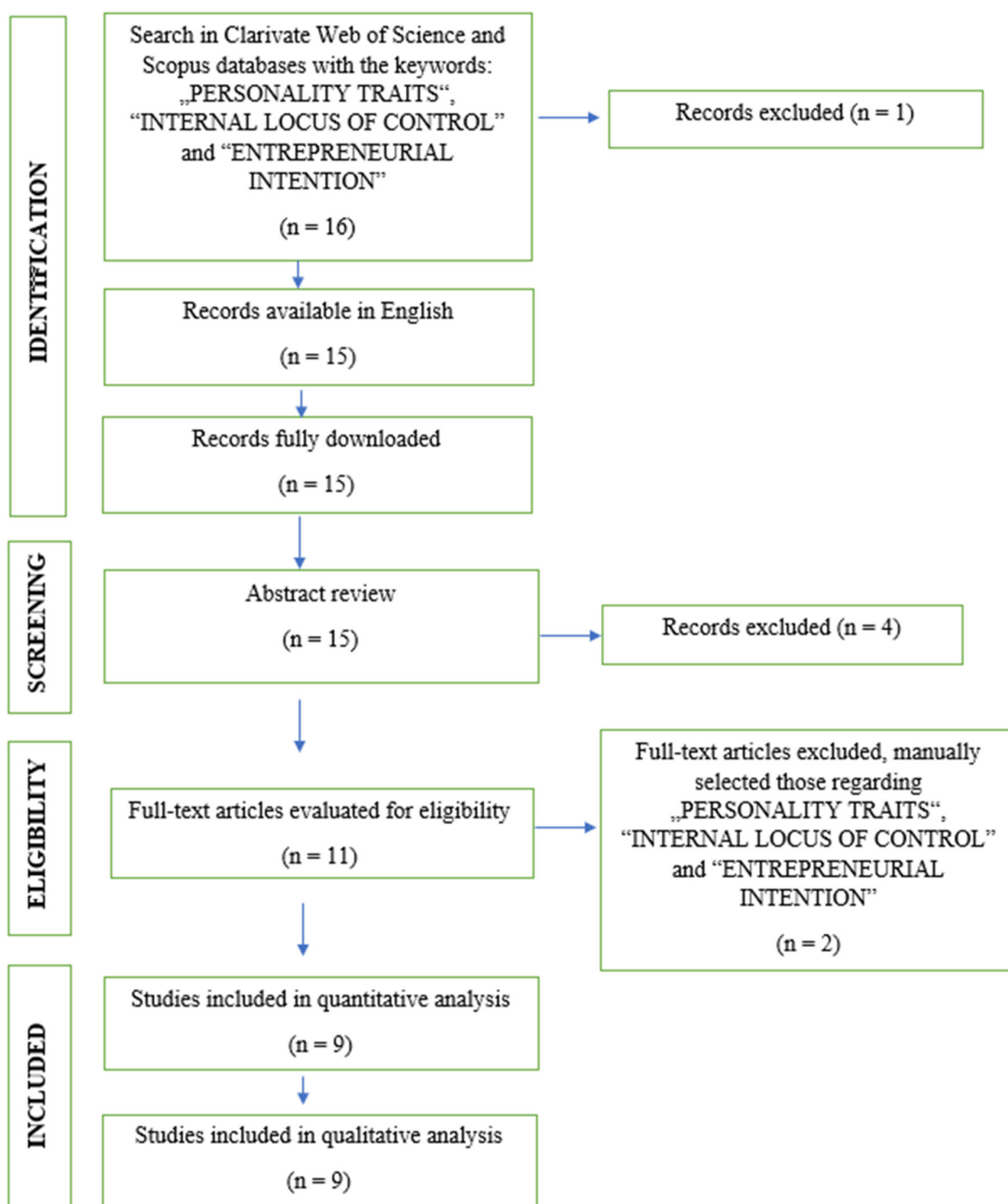


Figure 1. The selection process using the PRISMA method

Source: Author, based on Liberati et al., (2009)

The systematic literature review as a methodology provides a summary of past findings in a research area, and it “minimizes bias and maximizes a review’s contribution to science“. The PRISMA guidelines were developed in 2009 and consist of a “four-phase flow diagram that describes the identification, screening, eligibility and inclusion criteria of the reports that fall under the scope of a review” (Selçuk, 2019). According to Liberati et al. (2009), a PRISMA-guided systematic literature review represents an “essential tool for summarizing evidence accurately and reliably”.

4. RESEARCH RESULTS

By researching the world literature with the implementation of the PRISMA-guided systematic literature review, it is obvious that too few scientists are dealing with the research field of entrepreneurial intention and personality with a focus on internal locus of control. Considering that the framework of entrepreneurial behaviour and economic development provides a tool for analysis of the long-term economic performance of national economies, and particularly of the rise and decline of nations (Thurik et al., 2002), this study reveals there is a literature gap waiting to be addressed by scholars.

This study identifies all the relevant previous work regarding entrepreneurial intention, personality traits and internal locus of control and it provides a presentation of the studies and their findings. A short overview of the surveyed papers is presented in Table 1, and a thorough presentation and analysis of the findings are presented thereafter.

Table 1. Surveyed papers

Author/s and year of publication	Title of the paper	Data sample	Country
Saeed et al. (2013)	<i>Who is the most potential entrepreneur? A case of Pakistan</i>	100 business graduates from 5 public universities	Pakistan
Karabulut (2016)	<i>Personality Traits on Entrepreneurial Intention</i>	480 students	Turkey
Çolakoğlu & Gözükkara (2016)	<i>A comparison study on personality traits based on the attitudes of university students toward entrepreneurship</i>	226 vocational school students	Turkey
Molino et al. (2018)	<i>Personality and social support as determinants of entrepreneurial intention. Gender differences in Italy</i>	658 Italian participants	Italy
Munir et al. (2019)	<i>Personality traits and theory of planned behavior comparison of entrepreneurial intentions between an emerging economy and a developing country</i>	1,016 students	China and Pakistan
Voda & Florea (2019)	<i>Impact of Personality Traits and Entrepreneurship Education on Entrepreneurial Intentions of Business and Engineering Students</i>	270 students	Romania
Mahmood et al. (2020)	<i>Attitude towards entrepreneurship: a study among Asnaf Millennials in Malaysia</i>	310 Asnaf Millennials	Malaysia
Fatoki (2020)	<i>Determinants of Sustainability-Oriented Entrepreneurial Intentions of University Students</i>	408 participants	South Africa
Presenza et al. (2020)	<i>Start-up entrepreneurs’ personality traits. An exploratory analysis of the Italian tourism industry</i>	112 members of the Italian Tourism Start-up Association	Italy

Source: Author’s processing

Saeed et al. (2013) found that “among all big-five personality traits, only extraversion and openness to experience are significantly related to entrepreneurial intentions among business graduates in Pakistan”. Moreover, risk taking is found to be “significantly related to entrepreneurial intentions”. However, both internal and external locus of control do not impact entrepreneurial intentions.

Karabulut (2016) explored the impact of personality traits on entrepreneurial intention (EI), by using a sample of 480 graduate students in Turkey. The used methodologies are factor analyses and multiple regression analysis. The results confirm that “personality traits have a positive impact on the entrepreneurial intention”. His study is one of the most popular studies in the research field of personality traits.

Çolakoğlu & Gözükkara (2016) conducted research at a foundation university in Istanbul, Turkey with the goal “to compare personality traits based on the attitudes of university students toward entrepreneurship”. Their findings reveal that “students with entrepreneurial intention are more innovative, have a higher need for achievement and greater internal locus of control than those who do not have such intention”. Their results confirm that “entrepreneurial intention is significantly related to certain personality traits”. They furthermore suggest promoting entrepreneurship and including entrepreneurship education in order to “create an economically strong country”.

Molino et al. (2018) have focused on exploring the impact of personality traits and social support on entrepreneurial intention, with a special emphasis on gender differences in Italy. In their study, they gathered information from a sample of 658 Italian participants, of which 319 male and 339 female participants and developed a multi-group structural equation model. Their findings reveal that “self-efficacy totally mediated the relationship between internal LoC, self-regulation and EI”. Moreover, they found that contextual characteristics were the key mediational function of self-efficacy and found gender differences in the entrepreneur role.

Munir et al. (2019) have explored the differences between the entrepreneurial intentions between an emerging economy and a developing country, i.e. China and Pakistan. Their sample consists of 1.016 university students in their final year of studies. The used methodologies are structural equation modelling and the partial least square (PLS) method and present PLS path modelling, mediation analysis and multigroup analysis. Their findings show that the impact of TPB (theory of planned behaviour) “was positive and significant in both countries”. However, interestingly enough, the “TPB demonstrated more explaining power in China’s student sample”, meaning they found a stronger influence of personality traits among Chinese students. Their study is the first of a kind due to the comparison between two economies and it brings new insights for academic members as well as policymakers. Moreover, the integrated model they present is novel and original.

Voda & Florea (2019) have analysed the entrepreneurial intentions, locus of control, need for achievement and entrepreneurial education among 270 students from two universities in Romania in the period from March 2017 to October 2017. In their study, they have implemented multivariate logistic regression estimates, frequency analysis, internal consistency reliability of the constructs and moderating effects, and their findings indicate that “locus of control, need for achievement and entrepreneurial education proved to be important determinants for venture creation among young students, both independently and under the action of control variables”.

Moreover, they found that the respondents' gender impacts "one's intention of opening a business in the future, with males being more inclined to become entrepreneurs than females". Interestingly, not only gender but also age and faculty type impact the distribution of the answers for entrepreneurial intention. This study provides new and valuable insights regarding entrepreneurial intentions, locus of control, need for achievement and entrepreneurial education among students from a post-transition country.

Mahmood et al. (2020) explored the effects of selected entrepreneurial traits on the attitude of 310 randomly selected Asnaf Millennials from Kelantan, Malaysia towards entrepreneurship. They used structured interviews and found a "positive and statistically significant effect of innovativeness, internal locus of control, need for achievement and proactive personality on the attitude of Asnaf Millennials on entrepreneurship". Their work is novel since emphasizes the "non-cognitive skills for individual characteristics regarding entrepreneurship for the benefit of development practitioners and policymakers".

Fatoki (2020) has developed a unique multi-dimensional model that incorporates personality traits as antecedents of SOEI (sustainability-oriented entrepreneurial intentions), which is based on Ajzen's TPB (Theory of Planned Behaviour). This model has been later on examined by Partial Least Square Structural Equation modelling (The PLS SEM) and tested on a sample of 408 participants (220 females and 189 males) between the age of 20 to 30 years old. The results imply that "attitude towards sustainable entrepreneurship has a significant positive relationship with SOEI". Moreover, a significant positive relationship between perceived behavioural control and SOEI has been found and results show the "internal locus of control has a significant positive relationship with SOEI".

Presenza et al. (2020) examine the personality traits of "start-up entrepreneurs within the Italian tourism industry". Their goal is to "investigate how the specific personality traits of narcissism, locus of control, and the Big Five (i.e. extraversion, agreeableness, conscientiousness, neuroticism, openness to experience) influence the tourism start-up entrepreneur's behaviour". Their study has a significant scientific and practical contributes due to the two main results that arose from the empirical analysis, as follows: "tourism entrepreneurs seem to be particularly narcissistic, extroverted and friendly (extraversion), disciplined (agreeableness), self-assured, efficient and organized (conscientiousness), unconventional (openness to experience), and proactive and vigorous (internal locus of control); some personality traits are found to influence the efficiency and innovative capacity of entrepreneurs which ultimately lead to the success of start-ups".

5. DISCUSSION AND CONCLUSION

The main goal of this paper was to survey, identify and present the relevant studies regarding entrepreneurial intention, personality traits and especially the internal locus of control. Moreover, other goals were to highlight the importance and influence of personality traits and the internal locus of control on entrepreneurial intentions and to present the findings regarding the interrelatedness of entrepreneurial intention, internal locus of control and personality traits. For this reason, the PRISMA-compliant systematic literature review of publications regarding entrepreneurship, personality traits and internal locus of control has been the main methodology for this research.

The research approach (shown in Figure 1) has been initiated by the exploration of the two most reputable and renowned scientific databases nowadays (i.e. the Scopus and the Web of Science

databases), with the use of three key phrases as follows: „entrepreneurial intention“, „personality traits“ and „internal locus of control“. This resulted in a total of 9 published manuscripts (after the exclusion of the non-relevant papers). The research approach and the PRISMA method have led the authors to exclusion of papers that were not in English (1 paper), exclusion of papers after the screening and abstract revision (6 papers), which ultimately led to a total of 9 relevant papers for further qualitative analysis.

Eight out of nine surveyed studies use samples from one national economy. Only the study of Munir et al. (2019) is a cross-country study, employing the same research to samples from both China and Pakistan. Two of these studies analyse the entrepreneurial intention of Turkish students (Karabulut, 2016; and Çolakoğlu & Gözükar, 2016), two are regarding Italian students (Molino et al., 2018; and Presenza et al., 2020), while two analyse the entrepreneurial intention in Pakistan (Saeed et al., 2013 and Munir et al., 2019). It is evident that these studies are mostly conducted in developing and emerging countries in Asia, Africa and Europe, and the countries from Northern Europe and the Americas are less presented. This could be due to the fact that entrepreneurship education has already been integrated into the system thus providing a greater percentage of successful entrepreneurs that contribute to the economy.

The largest sample of 1016 students is used in the study of Munir et al. (2019), whereas the smallest sample has been applied to the study of Saeed et al. (2013), i.e. 100 students.

The surveyed papers give new insights into the entrepreneurial intent, i.e. SOEI (sustainability-oriented entrepreneurial intention) in South Africa, EI of start-up entrepreneurs in Italy, Asnaf Millennials in Malaysia, etc. Most of these studies confirm that personality traits and internal locus of control have a positive impact on entrepreneurial intention. These findings offer profound implications for governments, policymakers and entrepreneurship educators.

A major limitation of this study (as for any systematic literature review study) is the exploration and survey of only two scientific databases (in this case, the Scopus and the Clarivate Web of Science). Therefore, not all published relevant papers and studies may have been presented in this study due to their indexation in other scholarly databases. However, this study, through the presented findings, largely contributes to scholarly literature and the policymakers, as well as the interested public.

In future work, an empirical study is to be conducted to explore the impact of personality traits, internal locus of control and risk propensity on entrepreneurial intent in students in public universities in Croatia.

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Barriers to Effective Interpersonal Communication in Retail

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Received: May 30, 2022

Accepted: July 8, 2022

Published: December 30, 2022

Keywords:

Employees;
Communication partner;
Organization

Abstract: Communication is an inseparable part of our daily lives. Interpersonal communication appears between two and more people and consists not only of verbal communication by using words and consciously talking to others but also consciously or unconsciously by using non-verbal communication such as gestures, body movement and posture, facial expressions, haptics (touch), eye contact, proxemics (physical distance), paralanguage, etc. In verbal and non-verbal communication enter some issues that can cause misunderstandings in the communication process. People communicate everywhere and anytime, therefore it is natural that some difficulties and problems occur in interpersonal communication and are encountered in the workplace. There are different types of communication in the workplace, but this paper focuses mainly on interpersonal communication between managers and their team members. The way how they communicate influences the output of the entire communication process and has direct or side effects on performance, work environment, company goals and similar. The main goal of this paper is the identification of barriers to effective interpersonal communication in a selected branch of an international retail organization in Germany. Based on the research, it is possible to identify the barriers to the effective communication process between managers and their team members. Of a total of 187 employees working at this branch, 48 employees participated in this survey. This paper provides results from conducted research where some positive aspects and barriers were explored as well. Among positive results are that the employees do not afraid to address the company's management directly, employees are not interrupted while speaking, do not get the information they do not understand, the managers do not use the terms their employees do not understand, employees are not often overwhelmed with the information, not facing a misunderstanding from manager's side. On the other hand, the organization may support more communication between departments and provide more information to employees to feel well informed. This paper correlates with other research conducted in this field by different researchers in different countries and adds the missing barriers or confirmed already often occurring barriers to effective interpersonal communication.



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1. INTRODUCTION

Nowadays, we often come across various publications in conjunction with communication. Communication is an essential element of society that we meet every day. We constantly communicate, whether verbal or nonverbal. It is not possible not to communicate. Whether to talk about common problems, joys, work, or talk to friends, colleagues or family, people are constantly communicating. It means transmitting and receiving signals. Individuals are also affected by the environment in which they communicate. Not only in the workplace, but also in every situation, they should try to create suitable conditions so that communicators in the communication

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process feel relaxed and comfortable because this can affect the course of the entire communication. The basis for achieving the company's goals is a functioning communication and communication network. In general, it can be considered a critical area of management skills. The manager is responsible for effective communication in the organization. Communication is a complex process, so it needs to be understood in context. It is a unique process that reflects the life of the individual, the group and the entire organization. To complete the communication process, communication partners need to understand the importance of feedback and keep on delivering the completed message (Zahid, Qinghe and Sohail, 2021). Managers are people whose job success depends on their communication abilities. They need to learn how to maximize the effectiveness of their communication skills and how to achieve a meaningful work effect. In communication, people often encounter certain problems, and barriers. In order to be able to prevent them, they should know them. These can be barriers on the part of the sender, recipient, or environmental factors. Deficiencies and ineffective communication lead to problems in interpersonal relationships, lower work efficiency and demotivation. For the failure of a communication process, there can be a lot of reasons, therefore, communication partners need to communicate clearly, take the feedback from another person, and make sure that the message is communicated in proper way. Every activity of a communication partner involves direct or indirect interaction (Zahid, Qinghe and Sohail, 2021). Managers communicate daily with their team, whether about routine matters (work, private), tasks, goals, problems, problem-solving. Through communication, managers lead their team, evaluate employees, motivate them, guide them, communicate between departments, with the company board, personnel department and customers, clients. In every company can occur different barriers in communication which can cause immediate negative effects on the communication process and communication partners (Yusof and Rahmat, 2020). Lately, there were conducted only a few studies focusing on barriers to effective communication therefore it is needed to bring up this topic and go deeper to research what the main barriers are and how to avoid them.

The structure of this paper is the following: (1) Literature review – introduces the main topic of this paper and the latest results of research in this area. (2) Methodology – describes the data used in research and the whole methodology. (3) Discussion – presents the results of the survey. (4) Conclusion – shows concluding remarks about employee development and the limits of the research.

2. LITERATURE REVIEW

Communication is an active process that is occurring all around us. About 70 % of our time, we spend communicating, by sharing and receiving information through various meanings (Ansari, 2021). The best way to transfer information, attitude and emotions is through face-to-face communication. This form of communication provides immediate feedback between communication partners and non-verbal communication supports the message. It is also a good way to develop positive relations between people. Both verbal and non-verbal communication is important for meaningful interaction (Venter, 2019). If there is a conflict between verbal and non-verbal communication, verbal expression is often overlooked in favor of the non-verbal understanding of the message. Non-verbal communication builds comfort by avoiding ambiguity and creating a common foundation for understanding (Lamichhane, 2016). There can occur a lack of meaningful conversation between communication partners due to limited non-verbal cues, where they seek to understand the more emotional content of a conversation (Venter, 2019). Showing empathy and understanding the perspective of team members does not cause changes in goals or professional expectations. If managers have high emotional intelligence, they can still keep team members

responsible for results and positively address inefficiencies. The perception of the manager influences the work environment, team togetherness and cohesiveness. Observing individuals and listening to what others say can reveal more about their personalities, how they are and how they want to be treated (Nguyen et al., 2019). An inaccurate understanding of the meaning of the message can cause a communication barrier between communication partners (Demchenko, Khoro-shevskaya and Krukov, 2021). Among communication barriers can be found the loss of the original meaning of the message, distorted information, increase in the level of topics to be communicated, attitudes and behaviors in the communication process, giving and receiving feedback, managers expressing their superiority, missing effective listening skills, lack of interest, information overload, low level of trust between manager and employee, lack of understanding and concern and similar. These barriers were also confirmed in the research conducted by Vasilev and Stefanova (2021). A better look can help to overcome these and similar barriers and improve effective communication (Vasilev and Stefanova, 2021). The positive value is seen when the managers invest in improving their interpersonal skills and as a result improve the relationship between manager and team members which also impacts organizational economic growth (Saadi, 2018). There is evidence of the positive influence of effective communication in daily work. Interpersonal communication is seen as effective when there is a reaction or response from the communication partner. The meaning of the message has to be transferred in the communication process; the process is successful if the other side understands the basic idea of a message (Naumovski et al., 2016). Face-to-face conversations use communication strategies using verbal and non-verbal communication to express feelings and attitudes. Quality interpersonal communication requires listening and empathy, the ability to express emotions, lead the meaningful conversation for both communication partners as well as give and receive feedback (Venter, 2019). According to Rana (2013) one of the top reasons the organization fails is poor communication in the workplace which causes employees to tend to be cynical, lose their trust and respect for the leaders and the whole organization. Rani (2016) confirmed that when we communicate, we have a tendency to raise barriers that hinder our ability to communicate. Among the potential communication barriers belong the selection of words (e.g., too technical), grammar, sentence structure, punctuation and spelling can also hinder the understanding of the message, physical form of the message (appearance can affect its readability), personal appearance of the communicator (e.g., the credibility of the oral message, distraction), environmental factors (e.g., noise), the ability of communication partner (e.g., any disabilities), ineffective listening skills or other communication barriers (e.g., lack of interest, lack of knowledge, different cultural perceptions, linguistic differences, biases and similar). The communication partners should try to avoid any possible barriers of ineffective communication, related to communication barriers (Naumovski et al., 2016). Interpersonal communication skills make a person more charismatic which can help to sustain stability in the workplace, moreover, managers can maintain the work environment as positive and productive helping to build trust with their teams and retain them (Ansari, 2021). Also, the function of interpersonal communication is to reduce uncertainty, avoid and overcome conflicts, share knowledge and experience (Lusiawati, 2019).

3. METHODOLOGY

The subject of the survey is the identification of barriers to effective interpersonal communication in the organization. Two research questions were set: 1. What are the main barriers to effective interpersonal communication? 2. How is the communication flow in the organization? This second research question is answered by these questions from the questionnaire: “The organization supports communication between departments.” and “The company’s management

provides all necessary information in relation to employees.” Based on these questions and the characteristics of the way of communication in the organization and the identification of barriers occurring in the communication process, may be determined the deficiencies as well as the positives of communication in the workplace. This paper shows how employees and managers communicate and their mutual satisfaction. The survey was conducted before Covid-19 crisis has started in a selected international company in Germany.

The research is based on the quantitative-qualitative method, where the questionnaire consisted of 10 closed questions and 5 open questions focusing on describing what communication problems the employees can encounter in the organization, what they suggest to prevent the problem or how to fix it, how the way of communication in the organization can be improved, whether the organization provides training to increase communication skills, and the last question provides an answer to the overall satisfaction of employees with the way of communication in the organization. The questionnaire was co-created with HR professionals that consisted of questions where respondents answered whether they agree with the statement, disagree, or partially agree/disagree in the first part of the questionnaire, followed by five open-ended questions where respondents had the opportunity to present their views. Similar ways of working with this topic were chosen by other researchers and studies are presented in this paper.

48 employees (32 women and 16 men) participated in the questionnaire survey of a total of 187 employees, which means the return rate of the questionnaire is 25.67%.

4. RESULTS

The results of the research are summed up in the following Table 1, where are shown the respondents’ responses (in percentage) on barriers to effective communication:

Table 1. Barriers to effective communication in the organization

Barriers to effective communication in the organization	Agree with the statement	Disagree with the statement	Partially agree / partially disagree with the statement
1. I am not afraid to address the company’s management directly.	78,7 %	12,6 %	12,5 %
2. The organization supports communication between departments.	37,6 %	31,3 %	31,3 %
3. The company’s management provides all necessary information in relation to employees.	20,9 %	37,6 %	41,7 %
4. I often encounter a misunderstanding of my manager in the communication process.	10,5 %	54,3 %	35,5 %
5. I am often overwhelmed with a lot of information.	16,7 %	75,1 %	8,4 %
6. I don’t understand the terms my manager uses.	4,2 %	89,7 %	6,3 %
7. I often encounter my manager’s lack of interest in my problem.	6,3 %	73 %	20,9 %
8. I’m getting information I don’t understand.	6,3 %	85,5 %	8,4 %
9. When I talk, my manager often interrupts me.	8,4 %	75,1 %	16,7 %
10. When I talk to my co-workers, they often interrupt me.	12,6 %	68,8 %	18,8 %

Source: Own research

The results of the survey differ on whether the organization supports communication between departments. Employees tended to believe that the company's management did not provide all the necessary information to them, according to 36.7% of respondents and 41.7% partially agreed and partially disagreed that the company's management provide enough information to employees. On other issues, employees did not see significant problems. For example, when it comes to using terms that employees do not understand, as many as 89.7% of respondents said they understood the technical terms used by their manager. It was similar in terms of receiving information from managers that employees do not understand, where only 6.3% of employees do not understand them and 85.5% of employees do. According to Yusof and Rahmat (2020), if the communication partners are not able to understand each other, the communication barrier can occur and they cannot achieve an agreement. Moreover, some employees can have communication issues because of sending unclear messages for them, which can cause a lack of clarity (Adu-Oppong and Agyin-Birikorang, 2014). Different data have to be summarized or simplified to make a message clearer (Demchenko, Khoroshevskaya and Krukov, 2021). As we can see in Table 1, 73% of respondents do not agree that they would not be interested in their problem with their manager. It is expected of managers to create an environment with easy and effective communication flow (Oladiran and Burghate, 2016). According to one research, most organizations and managers have difficulties with communication strategies that influence employees' productivity and the success of the entire organization (Nelly and Mosley, 2018). The quality of communication exchange depends also on the status differences of employees (employees do not always inform their managers and managers also separate some information for their employees consciously or by using different communication channels) (Demchenko, Khoroshevskaya and Krukov, 2021).

The next part of the questionnaire consisted of three open questions. The first question is: Describe what communication problems you encounter in the organization? Responses to this question are divided into several areas: a) Information flow, hierarchy and feedback (little or no feedback, little direct communication between levels, especially manager vs. co-workers in the organization, the organization is led through managers, it is difficult to provide open criticism, the problem of finding the right person to communicate with, poorer flow of information, lengthy information flow through the organization, departments, team leaders, assistants and employees divide information or a gap in understanding, a large amount of information to pass to all employees are different, e.g. if they are also not at work every day, so it is difficult to find the person you are looking for), b) Time and workload (failure to provide information in advance, what is planned, open deadlines, no precise determination e.g. annual talk, increased time pressure, too many tasks divided among few people, often interrupt the phone during conversations – this one may be also include in area "openness and empathy), c) Openness and empathy (disregard for ideas, worries, fears, problems, dealing with only one's own interests, low ability to empathize, lack of interest), d) Ways of communication (barriers due to poor language skills, sometimes problems communicating with people for whom German is a foreign language, the responsibility of other areas, there are many ways of communication and it is often not clear which is the easiest for employees, insufficient information about the current problem, use of technical terms). Quantitative research conducted by Yusof and Rahmat (2020) for working adults coming from different types of companies found similar results to the presented survey above, people need some time to understand foreign colleagues when communicating and have some problems understanding the foreign accent. Among other results, there can be seen a correlation between the survey presented in this paper and research by Yusof and Rahmat in responses connected to time - not enough time to do work or other personal barriers such as

“not allowed to voice out the opinion unless someone asks, cannot question the seniors at the workplace, awareness of the emotional states of colleagues, ability to put into another’s shoes”. Studies present the importance of effective interpersonal communication in the workplace and the role of managerial communication in managing employees, conflict resolution, job responsibilities and organization’s productivity (Oladiran and Burghate, 2019). The information distortions may increase in organizations with multiple hierarchical levels (Demchenko, Khoroshevskaya and Krukov, 2021). Another study supports the face-to-face conversation between managers and their employees as an effective way of communication due to paying attention to the body language and more accurately interpreting the message (Jonsdottir and Fridriksdottir, 2019). Moreover, the pressure of work often blocks effective communication, time pressure and heavy workload can cause passing out insufficient or incomplete information to employees (Oladiran and Burghate, 2019). These examples clearly describe the problems that employees face in the organization.

In the second question, employees were asked what they suggest to prevent the problem or how to fix it. The most common suggestions include sharing information on what is planned for tomorrow / next week, providing feedback (even negative), talking about the problem with all stakeholders (either not to promise), meeting deadlines (talks, interviews), and collecting other opinions from the department. Other responses of respondents include increasing soft as well as professional skills such as increasing empathy, seeing each colleague as part of a team working with the same goal, raising team spirit, increasing motivation, adhering to, creating a central position or delegating an employee who is always located in a certain place, providing information from managers to employees, entrusting a company employee to whom employees can turn when their line manager is not available, follow the agreed goals more together, managers should be less committed and have more time spontaneously for employees, the structure of meetings at the level of managers should be understandable for employees, learning technical terms, more employees (staff planning), division of priorities, improve management structure, create training for each manager on various topics, e-mail access for all employees, regular mutual interviews, language course, etc. To communicate effectively, managers need to know how to handle formal as well as informal communication within the organization (Oladiran and Burghate, 2019). Employees suggested several options to solve various problems. Their implementation could prevent misunderstandings that currently arise in the workplace. Openness, active listening, body language, conflict resolution, assertiveness, negotiation skills, positive attitude, decision making and problem-solving, assertiveness, empathy and teamwork are the competencies needed for effective interpersonal communication (Beqiri, 2018).

The third question follows from the previous one, how the way of communication in the organization can be improved. The answers can be used to formulate useful recommendations such as talking at eye level and conducting open conversations more often (multiple meetings), improving time management (managers should devote more time to employees), leading conversations/meetings also between departments, but also to cooperate and explain the context for better understanding, to ask, request information and connect questions so that everyone can as quickly as possible come to more relevant, more transparent communication between departments, to be open and friendly to each other. The responses to this question are very similar to the previous one, they provide solutions to problems without suggestions for a specific implementation. According to a study conducted by Jonsdottir and Fridriksdottir (2019), in the communication process is important the understand both communication partners, use open questions to obtain certain information and lead the conversation, seek further clarification by asking. Another

survey added - what employees expect from their manager: openness, active listening, problem-solving and teamwork (Ansari, 2021). Having strong communication skills is a base for managers to communicate effectively and be able to make a decision and resolve problems; furthermore, it supports a smooth workflow and establishes a positive influence on the entire organization (Oladiran and Burghate, 2016).

Two questions were asked in the last part of the questionnaire survey. To the first question of whether the organization provides training to increase communication skills, 27.1% of employees say yes, 33.3% of employees say no and 39.6% of employees do not know. Organizing training to increase communication skills is important, at least at the level of managers, so that they can have effective talks, conversations, and interviews with their employees. Disilva and Arun (2017), who conducted a study in the hospitality industry, revealed that the programs created for communication skills development have a positive effect on employee development. What is more, 65,2% of respondents lack the training and development programs and see it among the biggest communication barriers. Therefore, they (89,1%) request an appropriate training program to overcome the communication barriers. In another survey conducted by Ansari (2021), 88,9 % of respondents stated that their organization lacks practical training such as body language. The second question provides an answer to the overall satisfaction of employees with the way of communication in the organization. Overall, exactly 50% of employees are satisfied.

5. CONCLUSION

The paper analyses the barriers to effective communication in a selected organization with the goal to identify them. The results of the research show that half of the employees are satisfied with the communication process in the organization. Open questions discovered many issues, even little ones in effective communication but the employees were able to seek solutions and suggested some. As positive results are seen that the employees do not afraid to address the company's management directly, employees are not interrupted while speaking, do not get the information they do not understand, the managers do not use the terms their employees do not understand, employees are not often overwhelmed with the information, not facing a misunderstanding from manager's side. On the other hand, the organization may support more communication between departments and provide more information to employees to feel well informed.

The current research has several implications for theory and practice. At the theoretical level, it extends the research from the fields of interpersonal and managerial communication about specific barriers occurring in the organization and summarized the similarities in other research conducted in this field. It also offers practical information for organizations, managers and human resources professionals to learn more about barriers and try to avoid them in daily work life. For scholars, it provides the base about barriers to effective communication and gives the opportunity to continue exploring this area.

This research required addressing several limitations. Firstly, the sample size is too small, only 25,67 % of employees participated. Secondly, the survey was conducted before the COVID-19 pandemic crisis has started, therefore there can be some differences between that time and nowadays. Thirdly, the questionnaire could go deeper and seek more details on barriers to effective communication. If the research will be conducted repeatedly with a higher number of respondents, after COVID-19 pandemic crisis and with detailed questions in the questionnaire, it can offer an even better overview of barriers occurring in the organizations.

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Virtual vs. Live Conferences: Measuring the Participants Memorable Conference Experience

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Received: June 18, 2022

Revised: November 24, 2022

Accepted: December 28, 2022

Published: December 30, 2022

Keywords:

Virtual conference;
Memorable conference
experience;
Behavioural intentions;
Independent t-test



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Abstract: Due to Croatian government measures to prevent the spread of COVID - 19, Croatian citizens have been in several lockdowns, which causally affected the normal function of society as a whole. One of the most common consequences of such restrictions was the reduction in social contacts and reliance on virtual contacts in the online environment. The scientific community and any other sphere of business had to change its processes, particularly in organizing conferences. Virtual conferences from “rescue solution” became “pleasant with the useful solution” for organizing committees but also for participants. The purpose of this study is to detect the differences in the memorable experiences of participants concerning different quality elements in virtual and online environments. Furthermore, the aim is to detect predictors of behavioural intentions for both virtual and live conferences. For the purpose of this research, the authors have created a questionnaire, which was distributed online and onsite. The T-test and regression analysis were conducted on a sample of 256 respondents. Results confirmed significant differences between virtual and live conferences in ten variables. Furthermore, regression results revealed that only “Memorable experience” is the common predictor for both virtual and live conferences.

1. INTRODUCTION

Business tourism is one of the quickest growing segments of tourism (Rogers, 1998) for which the acronym M.I.C.E is used in the scientific literature because it includes the following forms: (a) *meetings*, (b) *incentives*, (c) *congress/conference* and (d) *exhibitions* (Gračan & Rudančić Lugarić, 2011). This type of tourism, due to high tourist consumption (Štetić, 2007) generates multi-economic advantages for the host's place and at the same time represents one of the most profitable types of tourism (Oppermann & Chon, 1997). Therefore, its participants are of crucial necessity for tourist destinations (Zhang et al., 2007). For that reason, the tourist offer of a destination has adapted to this segment of tourism, with emphasis on specialising activities according to the type of business tourism which participants most frequently visit. The most important element of M.I.C.E tourism is definitely conferences; representing one of the most important sectors of the tourism industry (Šušić & Mojić, 2014). In support of this view is the fact that in the last twenty years, the highest rate of investment was present in the construction/building and reconstruction of congress and conference facilities (Šušić & Mojić, 2014). Due to their importance in the tourism sector, conferences have been chosen as the topic of this research. Conference implies counsel, agreement, meeting to reach an agreement, discussing an issue or a public lecture which usually includes a discussion (Anić et al., 2002). Also, it can be said that it represents an event which sometimes lasts for a few days, and where a certain topic is discussed (Cambridge Dictionary, online).

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According to Marušić et al. (2019), business is the secondary motif of tourists coming to a destination (4%), and only 18% of business tourists decide to go on a journey to participate in a conference. But, with the occurrence of COVID – 19 and after introducing several lockdowns, there has been a decrease in the number of journeys with the purpose of attending conferences. Due to this, conference organizers have been forced to secure alternative means of this type of event, allowing participants passive and active participation in online surroundings (Pacchioni, 2020). Despite this new practice, the objective of each conference organising board is to continue the contentment of the wishes and needs of participants through the insured high-quality memorable experience. This experience can, in the long term, contribute to a feeling of excitement and satisfaction (Csikszentmihalyi, 1990; Lian Chan & Baum, 2007) which is remembered forever (Larsen, 2007). The memory will in this context represent a single and the most important source for the individual during the return journey and while spreading positive word of mouth (Oh et al., 2007). So, a memorable conference experience is possible to define as the experience of positive intention which forever stays in the participant's memory, and which has mostly been influenced by the affordable conference cost, dealing with broader and more specific topics during the conference, easy access to information about the conference and the opportunities for professional growth and development (Rašan & Laškarin Ažić, 2021).

By researching databases and scientific literature, it has been established that there is only one existing research which dealt with measuring the quality of memorable conference experience (Rašan & Laškarin Ažić, 2021), but so far there are no studies aimed at examining participants on their accomplished conference experience in virtual environments. Therefore, this empirical research is of crucial importance and can later serve as the basis for future research. However, the literature contains scientific articles focused on the research of participants' satisfaction with the quality of a held conference (Chatzigeorgiou et al., 2017; Halim & Mokhtar, 2016; Price, 1993; Riper et al., 2013; Severt et al., 2007), which helped the authors to get a better understanding of the researched field. Rašan & Laškarin Ažić (2021) created a four-dimensional MCE model which measures memorable conference experience, determining in their study the following factors: comprehensive characteristics, outdoor activities, conference organisers and networking. They also came to the result that there is a connection between the main construct and behavioural intentions, or to be more exact, they confirm that affectively loyal participants show stronger behavioural intentions in relation to affectively disloyal participants. On the other hand, Severt et al. (2007) state that major motivators to take part in a conference are activities and possibilities, networking, the benefit of the conference, educational benefits, products and offers, while according to Price (1993) those are education, networking, career improvement and travelling to desirable places. Chatzigeorgiou et al. (2017), by analysing gathered primary data, came to know that the conference quality performance has a positive effect on the experience quality of the participants and that the perceived experience quality, together with individual aspects, has a significant influence on the overall examinee's experience. Also, this research has demonstrated the predictive relationship between the overall service quality and satisfaction with future behavioural intentions of the participants.

As mentioned so far, it is essential for conference organisers to pay more attention to the way participants perceive their experience (Halim & Mokhtar, 2016), as this is the only approach that will allow them to influence the future intentions of participants' attendance. Therefore, the main goal of this research is to examine the overall quality of memorable conference experience and behavioural intentions of participants in virtual and live environments. Starting from the purpose of the research, hereafter are the formulated research aims: (1) to examine and analyse the

socio-demographic characteristics of participants in virtual and live conferences; (2) to examine and analyse the key stakeholders of conference environments, memorable conference experience and behavioural intentions of participants; (3) to examine and analyse the differences in the perception of the memorable conference experience for participants who have taken part in live and of those who have taken part in a virtual conference; (4) to examine whether there are significant predictors of behavioural intentions with regard to MCE attributes and type of conferences. Based on the participants' attitudes, the conference organisers will through this research get a more detailed insight into the difference in the quality of virtual and live conferences. In accordance with this, the conference organisers will be able to determine the differences between the wishes and desires of virtual and live participants and will, according to the form of the conference (virtual or live), be able to adapt and enhance their current quality when organising future conferences. This scientific paper is structured in four parts: introduction, methodology, results and conclusion.

2. METHODOLOGY

Measuring the memorable conference experience is based on the MCE model (Rašan & Laškarić, 2021) which has been modified for the purpose of conducting this research. The following is the presentation of the modified MCE model, or more accurately, its study framework (figure 1).



Figure 1. Study framework: modified MCE model

Source: Authors' research

Figure 1 shows that the study's framework contains three constructs, the conference environment, memorable conference experience and behavioural intentions of the participants. In this research, the instrument for gathering primary data was an autonomous survey questionnaire which was distributed in online and onsite form. Accepting the above-mentioned constructs, the designed questionnaire included the examinees' sociodemographic characteristics. The first part of the measuring instrument was the main construct- conference environments, which included three dimensions: (1) comprehensive characteristics, (2) conference organizers and (3) networking. In this part of the questionnaire, all particles were in the form of structured questions where a Likert scale of importance was used for measuring and one (1) presents „not important“, and five (5) were „very important“. Furthermore, in the second and third parts of the questionnaire, the examinees were asked to, using the Likert scale of agreement from one (1 = I completely agree) to five (5 = I completely disagree) determine the achieved memorable conference experience and their behavioural intentions. The final part of the measuring instrument included statements referring to the examinees' sociodemographic profile, including their age, sex, marital status, level of education and the frequency of participating in conferences.

Moreover, the target group were participants of virtual and live conferences, and participation in research was voluntary without any compensation. It was not possible to apply a random sample in this research, due to the fact that there is no list of passive conference participants, while for active ones, we only have access to the Conference Agenda. Because of this, the research

will apply a convenience sample which is based exclusively on the availability of units. Since the appropriate sample size is possible to determine only for random samples, the decision on the size of the sample will depend on the researchers' subjective judgment. In distributing and collecting samples, the researchers used their private contacts, academic experts and students from various scientific fields who frequently attend conferences. An online survey questionnaire has been distributed via email and various social media with the goal of collecting a representative sample. Both ways of collecting, online and onsite, were conducted in the period between the first of December, 2021 and the thirtieth of January, 2022. A descriptive statistical analysis was used to examine the sociodemographic characteristics of the examinees and to determine the average value of all the particles within questioned constructs, while bivariate statistical analysis (independent t-test) was used to estimate the differences in the relevance of the particles' average values. After bivariate statistical analysis, regression analysis was performed for both models, virtual and live conferences. The aim of the regression analysis was to examine the influence of the independent variables - conference environment and memorable conference experience on the dependent variable - the behavioural intention of the conference participants.

3. RESULTS

Descriptive statistics were used to analyse the demographic characteristics of the respondents. The obtained results are presented in Table 1 below.

Table 1. Demographic characteristics of respondents

Characteristics		LIVE CONFERENCE (N=131)		VIRTUAL CONFERENCE (N=125)	
		Frequency	Percent	Frequency	Percent
Gender	Male	42	32.06	57	45.6
	Female	89	67.94	68	54.4
Age	Less than 20	2	1.53	6	4.58
	21-30	39	29.77	34	25.95
	31-40	45	34.35	30	22.90
	41-50	22	16.79	26	19.85
	More then 51	23	17.56	29	22.14
Marital status	Married	68	51.91	48	36.64
	Single	25	19.08	36	27.48
	In a relationship	38	29.01	41	31.30
Education	High school diploma	34	25.96	28	21.37
	Bachelor's degree	13	9.92	19	14.50
	Magister degree	66	50.38	49	37.40
	PhD	18	13.74	29	22.14
Working status	Employed	113	86.26	91	69.47
	Unemployed	3	2.29	5	3.82
	Student	15	11.45	26	19.85
	Retired	1	0.76	3	2.29
Frequency of participation in conferences	1 per year	103	78.63	77	61.60
	2 -3 per year	26	19.85	41	32.80
	3 and more	2	1.53	7	5.60

Source: Authors' research

As shown in Table 1, in both samples the representation of women was higher compared to men. Specifically, 67.94% of women participated in live conferences and 54.4% in virtual conferences. In terms of age, in the observed samples the largest number of respondents was between the ages of 21 and 30 (29.77% at live conferences and 25.95% at virtual conferences). In contrast, the lowest number of

respondents at live (1.53%) and virtual (4.58%) conferences were under 20 years of age. More than half of the participants in the live conference stated that they were married (51.91%) with a master's degree (50.38%). Also, the largest number of participants in virtual conferences are married (36.64%) with a master's degree (37.40%) and a doctoral degree (22.14%). In both cases, the majority of respondents are employed (79.69%) and attend conferences most often once a year (61.60%).

Descriptive statistics were applied to compute means (M) and standard deviations of conference attributes for virtual and live conferences. To compare the mean scores of conference attributes (conference environment, overall quality of memorable experience, behavioural intentions) between two independent groups (virtual vs. live) independent samples t-test was applied. Although the t-test assumes a normal distribution of data, the normality test has shown asymmetry among analysed data. However, statisticians have proven that the t-test is a robust method, and it can be used even when data does not show normal distribution (Raspor, 2012). Moreover, since in social sciences, the normal distribution is hard to realize, some authors (Opić, 2011) justify the use of parametric statistics with the "Central limit theorem" even if the normal distribution isn't achieved. According to Opić (2011), this is allowed since the standard error decreases as the sample size rises. Thus, the authors decided to proceed with a t-test to determine whether there is a statistically significant difference among mean scores for observed variables.

The results of descriptive and bivariate statistical analysis are presented below. Table 2 presents the significance of the difference in mean scores between live participants (N = 131) and online conferences (N = 125).

Both participants of live and virtual conferences graded "*Comprehensive characteristics*" with the highest average scores. Results also indicate that the dimension "Networking" had the lowest average score (3.65) among participants of virtual conferences. Moreover, it is noticeable that participants of live conferences better graded the majority of statements (15 out of 19), while participants of virtual conferences graded only the following four attributes higher: high expertise of keynote speakers (4.50), the relevance of topics for the transfer of new knowledge (4.63), easy availability of conference information (4.68), affordable conference price (4.64). Among participants of live conference values of standard deviation (SD) are higher than 1 in statements: "I plan to recommend this conference to my colleagues" (1.056) and "I plan to participate in this conference again" (1.021), and in three statements among participants of virtual conferences: "conference networking opportunities" (1.087), "opportunities to make new contacts" (1.139), "opportunities to talk to other conference participants" (1.114), indicating that the data are here more spread out in relation to the mean.

According to T-test results, there are some significant discrepancies between live and virtual conferences in their attributes. In the first dimension "*Comprehensive characteristics*" within the construct conference environment, all variables except one showed insignificant differences. Respondents' opinions only significantly differ in the variable "relevance of topics for the transfer of new knowledge, insights and current events to the participants" ($p=0.000$). Results show that participants of virtual conferences gave significantly higher scores for this attribute of the conference. For the second dimension "*Conference organization*", independent samples t-test results have shown significant differences in two variables "easy availability of conference information" ($p=0.020$) and "interactive workshops" ($p=0.000$). Namely, participants of a virtual conference gave higher scores for easy availability of conference information than those who participated in a live conference. In contrast, interactive workshop as an attribute was significantly better graded among participants of live conferences. In addition, the t-test

indicated differences for all networking variables (the third dimension of conference environment construct), where participants of live conferences significantly better-graded networking opportunities during the conference. Interesting results of the t-test are noticeable for the construct “*Memorable conference experience*”. For this construct, participants of the live conference had significantly better evaluated the quality of memorable conference experience compared to those who participated online. For the construct “*Behavioural intentions*”, participants of the live conference better graded all three variables, however, the t-test indicated a significant difference in only one variable – positive WOM (word of mouth) ($p=0.000$).

Table 2. The results comparison of MCE model attributes between virtual and live conferences participants

Attributes	Participants of live conference		Participants of virtual conference		t - tes	Sig. (2 tailed)
	M	SD	M	SD		
CONFERENCE ENVIRONMENT	4.32	-	4.10	-		
<i>Comprehensive characteristics</i>	4.42	-	4.43	-		
Timely topics.	4.53	0.599	4.42	0.732	1.316	0.189
High expertise of keynote speakers.	4.41	0.743	4.50	0.667	-1.038	0.300
Elaboration of specific and broader topics.	4.42	0.754	4.23	0.863	1.857	0.064
Combination of lecturers: scientists and practitioners.	4.37	0.748	4.36	0.797	0.145	0.884
Relevance of topics for the transfer of new knowledge, insights and current events to the participants.	4.36	0.657	4.63	0.532	-3.664	0.000*
<i>Conference organization</i>	4.29	-	4.22	-		
Easy availability of conference information.	4.50	0.661	4.68	0.590	-2.350	0.020*
Affordable conference price.	4.48	0.798	4.64	0.559	-1.854	0.065
Defined conference topic.	4.31	0.812	4.22	0.819	0.876	0.382
High quality introductory and closing sessions.	4.22	0.797	4.11	0.961	0.989	0.324
Interactive workshops.	3.97	0.992	3.45	0.954	4.283	0.000*
<i>Networking</i>	4.25	-	3.65	-		
Conference networking opportunities.	4.15	0.707	3.45	1.087	4.382	0.000*
Opportunities to make new contacts.	4.41	0.606	3.65	1.139	6.727	0.000*
Opportunities to talk to other conference participants.	4.19	0.860	3.66	1.114	4.221	0.000*
MEMORABLE CONFERENCE EXPERIENCE	4.24	-	3.91	-		
I have wonderful memories of this conference.	4.23	0.891	3.97	0.813	0.092	0.015*
I will not forget my experience from the conference.	4.22	0.862	3.89	0.854	0.867	0.002*
I will remember many positive things from the conference.	4.27	0.823	3.89	0.854	0.487	0.000*
BEHAVIOURAL INTENTIONS	4.17	-	3.98	-		
I plan to participate in this conference again.	3.98	1.056	3.94	0.910	0.268	0.789
I plan to recommend this conference to my colleagues.	4.16	1.021	4.06	0.821	0.833	0.405
I will say positive things about this conference.	4.37	0.896	3.92	0.829	4.132	0.000*

* $p<0.05$

Source: Authors’ research

To test internal consistency and the reliability of each construct/dimension, the authors conducted a reliability analysis (Cronbach’s alpha). The α coefficient ranged from 0.714 to 0.925. The highest value of α coefficient was for the “Networking” 0.925, following “Memorable experience” 0.922, “Behavioural intentions” 0.822, “Comprehensive characteristics” 0.763, and “Conference organization” 0.714. All values were greater than the cut-off value of 0.70 (Baggio & Klobas, 2011), hence, all factors and their variables were kept for further analysis.

Regression analysis is conducted on a sample of 131 respondents of live conferences, and 125 respondents of virtual conferences, which satisfies recommended criteria of 100 respondents in a sample, and the smallest proposed ratio of the number of elements in a sample and the number of independent variables (5:1) (Raspor, 2012). In particular for *Model 1*, the ratio is 9:1 (134 respondents and 15 independent variables), and for *Model 2* ratio is 8:1 (125 respondents and 15 independent variables).

In the first model (*Live conference*), the OLS results showed that only one variable is a significant predictor of the participants' behaviour intentions to live conferences. Results imply that respondents who remember many positive things from the conference are most likely to come again and recommend their memorable conference experience to friends and colleagues ($p=0.000$). In other words, it is a variable that is part of the construct of a "*Memorable conference experience*" (abbreviation MCE) for the participants. The obtained results show that in this virtual model, the VIF coefficients range from 1.2706 to 3.701. Therefore, the VIF coefficients for all regressors are less than 10 and very close to 1, which means that there is no serious problem of multicollinearity among regressors.

When it comes to regression results of the second model (Virtual conferences), results showed that 5 out of 15 variables turn out to be significant predictors of the behavioural intentions of virtual conferences. The results confirm that participants of virtual conferences who are most likely to have behavioural intentions are those who believe that interactive workshops and the relevance of topics for the transfer of new knowledge, insights and current events ($p=0.024$) are important in creating memorable conference experience. Hence, of the five possible variables within the "*Conference characteristic*" (CC) dimension, only the aforementioned variable showed a predictor relationship with the behavioural intentions of conference participants. Also, within the "*Conference organizers*" (CO) dimension, only one variable, more precisely the "affordable conference price" ($p = 0.043$), showed a significant correlation with the behavioural intentions of the participants. Furthermore, within the conference environment construct, none of the "Networking" (N) variables proved to be a statistically significant predictor of the virtual participants' behavioural intentions. Additionally, the results also imply that participants who had wonderful memories ($p=0.000$) and will not forget ($p=0.002$) the recalled conference are the ones who will come again and recommend their memorable conference experience to friends and colleagues. Thus, two of the three variables within the construct "*Memorable conference experience*" showed a significant predictor of the participant's behavioural intentions. In this virtual model, all values of the VIF coefficient are also within the given frames, which means that the regressors do not have multicollinearity issues.

Although, this is the first study that tests the relationships between MCE and behavioural intentions, there are some previous results on memorable experiences and behavioural intentions comparable with current ones. Namely, our results agree with results reported by Coudounaris & Sthapit (2017) who noted that hedonism (enjoying the trip, being thrilled with experience, exciting experience) had a positive effect on tourist behavioural intention toward the destination. Similarly, Yu et al. (2019) reported that memorable experience such as hedonism (thrilled about having new experiences, excitement, enjoyment in tourism experience etc.) positively influence revisit intentions. Moreover, current study results align with Sthapit et al. (2019) findings who reported that memorability is a significant predictor of tourists' behavioural intentions.

Table 3. Behavioural intentions predictors: Virtual vs. Live

Model 1: Live (n=131)

Independent variable	B	S.E.	sig.	Tolerance	VIF
Constant	0.468	0.638	0.464		
CC1: Timely topics.	0.102	0.095	0.285	0.737	1.357
CC2: High expertise of keynote speakers.	0.016	0.084	0.852	0.620	1.614
CC3: Elaboration of specific and broader topics.	-0.108	0.088	0.224	0.543	1.843
CC4: Combination of lecturers: scientists and practitioners.	0.055	0.074	0.456	0.784	1.276
CC5: Relevance of topics for the transfer of new knowledge, insights and current events to the participants.	0.065	0.087	0.459	0.733	1.365
CO1: Easy availability of conference information.	-0.046	0.101	0.647	0.540	1.851
CO2: Affordable conference price.	0.102	0.091	0.266	0.450	2.220
CO3: Defined conference topic.	0.008	0.085	0.927	0.499	2.003
CO4: High quality introductory and closing sessions.	-0.019	0.082	0.819	0.557	1.794
CO5: Interactive workshops.	0.005	0.064	0.933	0.594	1.684
N1: Conference networking opportunities.	0.020	0.104	0.850	0.440	2.270
N2: Opportunities to make new contacts.	-0.046	0.129	0.723	0.389	2.568
N3: Opportunities to talk to other conference participants.	-0.082	0.088	0.350	0.421	2.375
MCE1: I have wonderful memories of this conference.	0.064	0.091	0.482	0.366	2.730
MCE2: I will not forget my experience from the conference.	0.023	0.105	0.825	0.291	3.441
MCE3: I will remember many positive things from the conference.	0.699	0.114	0.000	0.270	3.701

$R^2=0.604$; ($F=10.849$), $p<0.05$

Model 2: Virtual (n=125)

Independent variable	B	S.E.	sig.	Tolerance	VIF
Constant	0.498	0.473	0.294		
CC1: Timely topics.	-0.112	0.101	0.272	0.305	3.278
CC2: High expertise of keynote speakers.	-0.074	0.101	0.465	0.373	2.679
CC3: Elaboration of specific and broader topics.	-0.055	0.092	0.547	0.269	3.714
CC4: Combination of lecturers: scientists and practitioners.	-0.123	0.091	0.179	0.322	3.108
CC5: Relevance of topics for the transfer of new knowledge, insights and current events to the participants.	0.236	0.103	0.024	0.557	1.796
CO1: Easy availability of conference information.	0.001	0.102	0.996	0.461	2.169
CO2: Affordable conference price.	0.218	0.106	0.043	0.477	2.098
CO3: Defined conference topic.	-0.109	0.084	0.196	0.359	2.788
CO4: High quality introductory and closing sessions.	0.024	0.076	0.753	0.315	3.178
CO5: Interactive workshops.	0.285	0.091	0.002	0.223	4.493
N1: Conference networking opportunities.	0.172	0.109	0.116	0.121	8.284
N2: Opportunities to make new contacts.	-0.082	0.113	0.469	0.102	9.829
N3: Opportunities to talk to other conference participants.	-0.056	0.115	0.630	0.102	9.809
MCE1: I have wonderful memories of this conference.	0.455	0.116	0.000	0.189	5.301
MCE2: I will not forget my experience from the conference.	0.361	0.115	0.002	0.175	5.729
MCE3: I will remember many positive things from the conference.	-0.254	0.137	0.066	0.123	8.109

$R^2=0.690$; ($F=15.025$), $p<0.05$

Source: Authors' research

4. CONCLUSION

The COVID-19 crisis has affected the changes in the functioning of society as a whole. This can be seen in the suspension of a large number of events, and this decision made by the National board has affected the need to create new ways of conducting events. For that reason, conference organisers had to ensure alternative ways of conducting conferences for its participants, introducing the possibility of online participation. Regardless of this fact, the conference's organising board still aims to ensure a high-quality memorable experience for its participants. Therefore, the

contribution of this research is of exceptional importance because it represents the first research in literature dealing with the comparison of the virtual and live memorable conference experience. At the same time, it offers mite from the managerial aspect, to be precise for the conference organisers who can based on the analysed data, determine the differences in wants and needs of participants who take part in the virtual and live conference with the goal of determining the strengths and weaknesses in the existing elements of the offer. The obtained findings indicate that there are statistically significant differences between live and virtual conferences in 10 of the 19 possible variables. Comparing both models, virtual and live, there are also differences in the prediction of participants' behavioural intentions. In live conferences, only one variable shows a predictor relationship with the behavioural intentions of conference participants, while in the case of virtual conferences, there were five variables. On the basis of the above findings, they will be able to adapt organisational elements regarding the way the conference is held (virtual or live).

Despite the fact that this paper provides insight into the current state of memorable conference experiences in virtual and live environments, it also has some drawbacks. The overall number of examinees in this research is 256, but if we look at the samples based on the groups of virtual (N=125) and live (N=131) participants, it is possible to see that we have small representative samples. Subsequently, future research should include a higher number of participants in order to get a more representative sample, where research should be conducted before, during and after the conference. Since most of the examinees are the authors' private contacts, future research should include other conference participants. In addition, this research was conducted in a small geographical area, in the Republic of Croatia to be precise, so the suggestion is to conduct the research in other countries around the world. With the goal of achieving as much detailed insight into the wishes and wants of participants, it would be desirable to apply the MCE model in the future to examine the memorable conference experience from the professional aspect.


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Typology of Social Paradigm: Literature Review of Tourist's Gastronomic Experience

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Received: June 18, 2022

Revised: November 24, 2022

Accepted: December 28, 2022

Published: December 30, 2022

Keywords:

Experience economy;
Gastronomic experience;
Paradigm;
Content analysis



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Abstract: *In an examination of the tourist's gastronomic experience, scientific experts approach it in different ways, depending on the research paradigm to which they belong. In scientific literature, there are paradigms such as positivism, constructivism, criticism, postmodernism, and transmodernism. The purpose of this study was to analyze 55 scientific articles on the tourist's gastronomic experience according to key terms (ontology, epistemology, and methodology) and thus determine their affiliation to the appropriate paradigm. The empirical research results indicate that there are no studies of postmodernism and transmodernism, but there are studies of positivist (70.91%), critical (18.18%), and constructivist (10.91%) research views. Therefore, in future research, scientists should direct their gaze precisely in the direction of these paradigms. Further research findings indicate that the largest number of analyzed studies published in the last three years is in Asia (40%), North America (34.55%), and Europe (18.18%) where the authors predominantly apply a quantitative research approach (69.09%). The contribution of this research is reflected in the improved theoretical knowledge of the researched issues as well as the application of the same in determining the papers with regard to the type of paradigm to which the authors of selected papers belong. Also, this study is the first in conducting a paradigmatic analysis of gastronomic tourism studies.*

1. INTRODUCTION

The experience of consuming food is a key behavior that can complement the sensory, cultural, social, and epistemic motivation of tourists (Correia et al., 2020). Tourist pleasure is actually his/her experience based on a product or service that has provided him/her with an unexpected level of value or satisfaction (Crotts & Magnini, 2011), and this satisfaction will depend on his/her perspective on how to look at things and situations around him/her. In other words, two gastro tourists travelling together may have different perspectives depending on their position. In this context, the position represents the ideology of each person, more precisely, the paradigm to which they belong. A paradigm denotes a worldview or set of related assumptions common to a particular group of scientists exploring the world (Deshpande, 1983), asking ontological, epistemological, and methodological questions. Ontology implies a view of the nature of reality (Taylor & Medina, 2011), while epistemology deals with the question "What is the nature of the relationship between researchers and what is already known in the literature?" (Guba, 1990). Ontological and epistemological assumptions directly influence the methodological approach of researchers. The methodology is a part of a structure (Guba, 1990) that includes theoretical principles for providing guidance on how research is conducted in the context of a particular paradigm (Sarantakos, 2005).

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Although scholars have argued sharply over the 20th century about the superiority of their paradigms, at the beginning of the 21st century these wars finally came to an end as scientists come to realize that no research paradigm is superior to another (Taylor & Medina, 2011). It is important to emphasize that each scientific expert applies a different approach to research depending on the paradigm to which they belong. The following scientific paradigms are most often distinguished in scientific literature: (1) positivism, (2) constructivism, (3) criticism, (4) postmodern, and (5) transmodern. Based on the above, the main goal of this research was based on the theoretical knowledge of scientific paradigms (described in Chapter 2) to analyze in detail the scientific papers on the tourist's gastronomic experience according to key terms (ontology, epistemology, and methodology) and thus determine the scientific paradigm. The specific objectives of this research are to conduct a paradigmatic: (a) frequency analysis by year, (b) geographical analysis, and (c) analysis by research type. The qualitative approach in this research is extremely important because paradigmatic analysis of current scientific literature on the tourist's gastronomic experience allows not only a better understanding of this topic but also to determine the representation of each of these paradigms. Such an approach will ensure the reduction of current gaps in the literature and contribute to the improvement of knowledge and understanding of the researched issues. This research can be considered unique because so far there is no research in the literature that has dealt with the paradigmatic analysis of papers in the field of gastronomic tourism. This study is structured in such a way that the introduction is followed by a theoretical framework, analysis, conclusion, and references.

2. THEORETICAL BACKGROUND

The positivist paradigm prevails in science starting from the assumption of a single comprehensible reality of independent facts for which quantitative measurements are made (Tsoukas, 1989). In other words, scientists study the world through a one-way mirror (Guba & Lincoln, 1994). Such an approach is inappropriate especially in the context of the social sciences because research involves people and their real-life experiences (Healy & Perry, 2000). This research paradigm seeks to investigate, validate, and predict patterns of behavior and is commonly used in research to test a theory or hypothesis (Taylor & Medina, 2011). It is strictly focused on the objectivity of the process (Creswell, 2012) which is the main reason why the researcher of this ideology is only the controller of the research process outside the research site (Taylor & Medina, 2011). If we look at the assumptions of the paradigm, we can say that ontology represents realism, which tells us that society is predictable. So, it is possible to test and measure human behavior (Taylor & Medina, 2011). Positivists skillfully avoid theorizing about the topic they are researching but are already focused on measuring instrumental variables (Lougen, 2009). On the other hand, epistemology represents an objective relationship between researchers and respondents where the researcher cannot and does not influence the obtained results (Ponterotto, 2005). The methodological approach used by positivists is quantitative (deductive) research that uses mathematical-statistical methods to test hypotheses (Guba & Lincoln, 1994). What distinguishes positivists from other researchers is the application of quantitative research methods, while other ideologies have mostly used a qualitative approach. Likewise, the fundamental discrepancy between positivism and other paradigms lies in the fact that positivists separate themselves from the world they study, while researchers from other paradigms recognize that to some extent, they must participate in real-world life to better understand and express its apparent features and characteristics (Tsoukas, 1989).

The opposite of the positivist paradigm is the constructivist (interpretive) paradigm, in which researchers change their approach to research. They turn to the ideologies and values behind the findings, so they believe that reality actually consists of the relativistic multiple complex

realities that people have in their minds (Healy & Perry, 2000). So, there is not just one real truth. Exploring this constructed reality depends on the interactions between interviewers and respondents. Specifically, the researcher must be a passionate participant during his/her field-work (Guba & Lincoln, 1994). Ontologically speaking, there is no access to one real world, but the goal is to step into people's skin, that is, to see the world through their eyes (Josselson, 2007). Thus, the epistemology of this paradigm is inter-subjectivism based on understanding and knowing about the other through an extended process of interaction such as interviewing and observing participants with the aim of presenting them as credibly and authentically as possible (Healy & Perry, 2000). An interpretive researcher asks himself questions such as (Taylor & Medina, 2011): (1) What is the impact of my own (past and present) values and beliefs in interpreting the thoughts and feelings of others? and (2) What hidden assumptions are limiting the way we understand others? Finally, from a methodological point of view, various inductive interpretive research methods are applied, such as narrative research, observation, interview, and autobiographical and autoethnographic methods (Ellis & Bochner, 2000; Richardson, 2000; Taylor & Settlemarier, 2003).

On the other hand, critical theory is at odds with traditional theory, which explores and confirms the status quo (Asghar, 2013), while critical theory challenges it and strives for a balanced and democratic society. Unlike the positivist paradigm, proponents of the critical paradigm assume that social science can never be truly objective or worthless and believe that scientific research should be conducted with the explicit goal of social change as the ultimate priority (Scotland, 2012). Critical paradigm researchers advocate system bias, and this bias is particularly visible in a negative context through the social position of women and marginalized ethnic groups (Scotland, 2012). Also, their research projects aim to encourage positive change in the research participants and the systems being studied, as well as in the collection of important data (DeCarlo, 2018). The critical paradigm not only studies power imbalances but also seeks to change them (DeCarlo, 2018). Critical researchers are not particularly tied to either method, so they use qualitative, quantitative, or a combination of both (Asghar, 2013). The ontological position of the critical paradigm is historical realism, where reality is considered to be shaped by social, political, cultural, economic, ethnic, and gender values. Realities are socially constructed entities that are under the constant internal influence (Scotland, 2012). Accordingly, epistemology is subjectivism based on real-world phenomena and associated with social ideologies. Knowledge is both socially constructed and influenced by power relations within society, more specifically what is considered knowledge is determined by the social and positional power of the proponents of that knowledge (Cohen et al., 2017).

Postmodernism is a paradigm that questions almost every mode of cognition, which many social scientists take for granted (Ghasarian et al., 1996). The postmodern has inherent problems with previous paradigms because the truth is always bound within a historical and cultural context, where there are no universally true explanations (DeCarlo, 2018). Absolute truths, identities, and major human values are criticized. Postmodernism can be defined as a comprehensive paradigm, which refers to a set of assumptions about ontology (realities are created), epistemology (knowledge is fluid and temporary), methodology (interpretive and critical methods are more appropriate to study plural society), and axiology (study of values: no set of values is by definition better than another) (Kroeze, 2012). We can define this scientific paradigm as a widespread and deeply incised cultural movement that changes people's perception of the existence and knowledge of the whole world (Watson, 2012). The combination of philosophy, art policy with changes in the economy, and technological changes are one of the most important

features of postmodernism, and it was brought to the fore by feminist movements (Bačić, 2013). In the era of postmodernism, cultural changes are emphasized, where new forms of production are present, such as 'lean production', 'concept team', and 'just-in-time' production with the use of modern information technologies (Wood, 1997). The presence of skepticism towards certainty and great explanations in the social sciences is characteristic (DeCarlo, 2018).

The last paradigm, transmodernism, is structurally opposed to modernism and postmodernism, where it criticizes them on the one hand and takes the best of them on the other. Thus, it represents a synthesis of modernist (positivism, constructivism, and criticism) and postmodernist paradigms. It is completely future-oriented with the goal of moral liberation of all mankind with the establishment of moral liberal norms, and pragmatic and pluralistic principles (Cojocaru & Sandu, 2011). This paradigm has brought a shift in the value system, and new reflections in global consciousness, which from a historical point of view has not been experienced since the Renaissance. If we look at the assumptions of the transmodernist paradigm, it is possible to notice that the ontology is based on the equality of materials, and experience in creating new visions, where the center of truth is open to all with the existence of the so-called authentic "I". On the other hand, the epistemology of transmodernism says that current knowledge creates new knowledge, reconstructing reality in order to achieve idealism (Ivanović, 2015). This epoch addresses four core values (Pritchard et al., 2011): gender equality, global culture and ethnic equality, sustainability and survival of humanity, individuality, globalism, and interconnectedness. Transmodernism gives us the necessary political and epistemological position to overcome contradictions and treatments of diversity, providing theorizing that can provide a foundation for coexistence and existence without domination over each other (Ateljević, 2013).

3. METHODOLOGY

Relevant scientific literature was searched on the online databases Google Scholar and Emerald insight by keywords: "gastronomic experience", "restaurant experience" and "food experience". The following elimination criteria were used in the selection of publications: (a) papers written in English, (b) papers published only in the period from 2008 to 2021, and (c) papers examining the tourist's gastronomic experience. In addition to respecting the elimination criteria, 59 papers were downloaded from the aforementioned online databases into Mendeley software (available for free at: <https://mendeley.en.softonic.com/>) for reference management. In the further process of selecting papers in the Mendeley software, all abstracts of the downloaded papers were read, in order to determine the correspondence with the researched problems. Out of a total of 59 papers taken, 55 were selected for the final sample. After the sample was established, data on its publication year, geographical scope, and research type were collected for each paper, which was later analyzed by descriptive statistical methods in Excel. In the analysis of papers according to the appropriate paradigm, content analysis was used as a scientific research method (Tkalac Verčić et al., 2010). After pragmatic selection, the papers are presented in tabular absolute and relative frequencies.

4. RESEARCH RESULTS

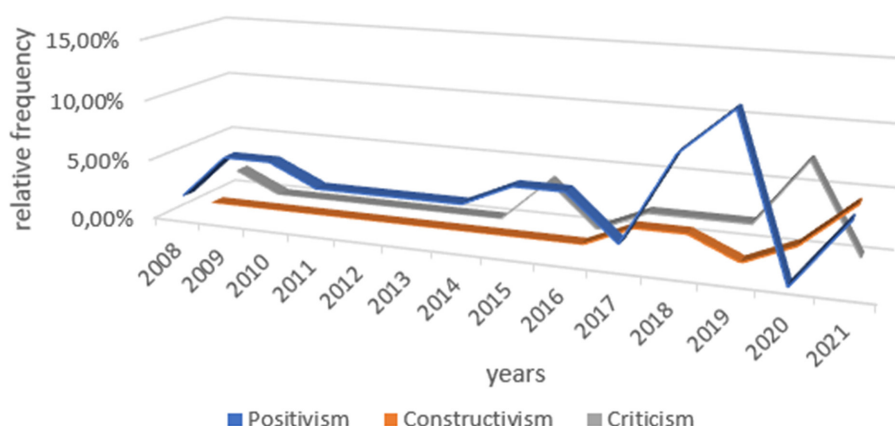
For the purposes of this research, descriptive statistics methods were applied, based on which results were obtained for paradigmatic analysis (Table 1), frequency analysis by year (Figure 1), geographical analysis (Figure 2), and analysis by research type (Table 2).

Table 1. Paradigmatic article analysis on tourist's gastronomic experience

Type of paradigms	Source	<i>f</i>	%
(Post) positivism	(Bekar, 2017; Björk & Kauppinen-Räsänen, 2015; Campbell & DiPietro, 2014; Canny, 2014; Cao et al., 2019; Chen et al., 2021; Githiri, 2016; Gracia et al., 2011; Ha & Jang, 2012; Ha & (Shawn) Jang, 2010; Hanks & Line, 2018; Horng et al., 2013; Horng & Hsu, 2021; Hyun & Han, 2012; Kiatkawsin & Han, 2019; Kim & Moon, 2009; Lee et al., 2015; Lee et al., 2016; Lee, 2015; Liao & Fang, 2019; Liu & Tse, 2018; Liu & Jang, 2009; Mahalingam et al., 2016; Marković et al., 2021c; Namkung & Jang, 2010; Ouyang et al., 2018; Richardson et al., 2019; Ryu et al., 2012; Ryu & Shawn Jang, 2008; Sipe & Testa, 2018; Sthapit et al., 2019; Sulaiman & Haron, 2013; Sunghyup Sean Hyun, 2010; Tang & Bougoure, 2011; Wardono et al., 2012; Wu & Liang, 2009; Yaris, 2019; Yoon & Chung, 2018; Zhang et al., 2019)	39	70,91%
Constructivism	(Marković et al., 2021a, 2021b; Park et al., 2021; Sthapit, 2017; Stone et al., 2018; Tsaor & Lo, 2020)	6	10,91%
Criticism	(Ding & Lee, 2017; Horng & Hsu, 2020; Hussein, 2018; Kala, 2020; Moon et al., 2020; Paakki et al., 2019; Ryu et al., 2008; Tsaor et al., 2015; Wen et al., 2020; Wu & Mohi, 2015)	10	18,18%
Postmodern	-	-	-
Transmodern	-	-	-
In total	-	55	100%

Source: Authors' research

With a paradigmatic analysis of 55 papers, it was determined that almost three-quarters of the papers are (post) positivist (70.91%). The authors in these post (positivist) articles turn to realism, an objectivist view, applying a quantitative deductive research approach. On the other hand, induction was used in the articles of the constructivist view which is represented in the sample with 10.91%. Constructivist research is relativistic and subjectively oriented, nurturing a qualitative research approach. Furthermore, although the critical paradigm is focused on power relations in society, no research of such applicative value has been present in this study. However, in 18.18% of the research, a mix of inductive and deductive research approaches was used, which seeks to see a broader picture in examining the perception of gastro tourists. For this reason, these 10 studies are categorized into a critical realism worldview. Postmodernism and transmodernism were not represented in any of the studies in the sample. In order to understand the research topic in more detail, several more analyzes were presented, and the analysis of the article by year follows below (Figure 1). Since the paradigmatic analysis established that the study of postmodernism and transmodernism was not represented in the sample, further analyzes will be performed exclusively for the modern period.


Figure 1. Articles analysis by year

Source: Authors' research

Articles analysis by year, it was determined that the largest number of studies of (post) positivism was published in 2019 (12.73%) and 2018 (9.09%). Constructivism studies are represented in only four years (2017, 2018, 2020, 2021), of which the largest number of studies were published in 2021 (5.45%). Criticism stands out the most in 2020 when 7.27% of studies on the tourists' gastronomic experience were published. The following is a geographical article analysis according to the paradigm to which they belong.

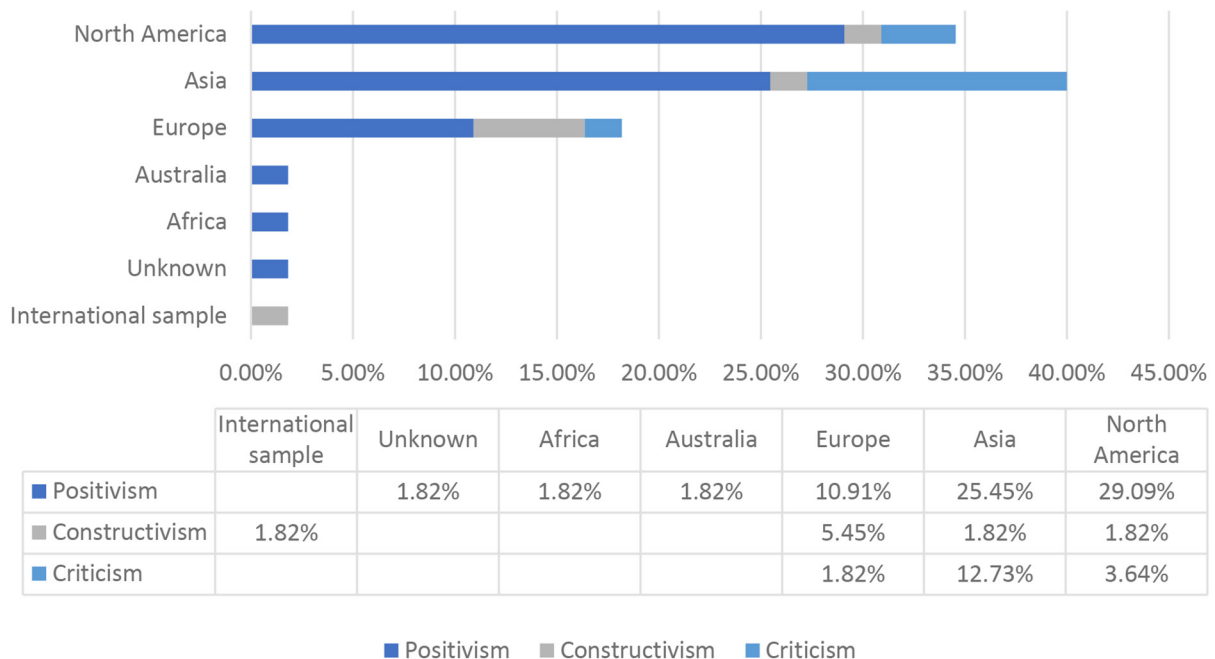


Figure 2. Geographical article analysis

Source: Authors' research

The geographical analysis of articles on the tourist's gastronomic experience was conducted according to the types of research paradigms - positivism, constructivism, and criticism. The analysis found that the largest number of positivist authors are from North America, specified from the USA (29.09%). This is followed by positivist authors from Asia (25.45%), and from countries such as Taiwan, Korea, Indonesia, Vietnam, India, Japan, and Malaysia. In Europe, a total of 10.91% of positivist research were conducted in Turkey, Finland, Spain, and Croatia. In Kenya on the African continent, 1.82% of research was conducted, and the same amount of research was conducted in New Zealand. An unknown location of the study was present only in the Sulaiman & Haron study (2013). On the other hand, as far as constructivist authors are concerned, the largest number of studies was conducted in Europe (5.45%), more precisely in Croatia and Finland, while only one study was conducted in Taiwan and the USA. An in-depth interview at the international level in an online environment was conducted by the constructivists Stone et al (2018). The critical approach was most applied in Asia in the following countries: Taiwan, Indonesia; China, India, and Korea. Asia is followed by critical research in North America (3.45%), while only 1.82% of studies have been published in Europe, Australia, and Africa. The graph also shows that the summation of the obtained values by continents for all three paradigms is led by Asia with 40%, followed by North America with 34.55% and Europe with 18.18%. After the conducted geographical analysis, the following is an article analysis on the tourist's gastronomic experience according to the research type.

Table 2. Article analysis by research type

Type of research approach	Source	f	%
Positivism paradigm			
Quantitative approach			
<i>Survey research</i>	(Bekar, 2017; Björk & Kauppinen-Räsänen, 2015; Campbell & DiPietro, 2014; Canny, 2014; Cao et al., 2019; Chen et al., 2021; Githiri, 2016; Gracia et al., 2011; Ha & Jang, 2012; Ha & (Shawn) Jang, 2010; Hanks & Line, 2018; Horng et al., 2013; Horng & Hsu, 2021; Hyun & Han, 2012; Kiatkawsin & Han, 2019; Kim & Moon, 2009; Lee et al., 2015; Lee et al., 2016; Lee, 2015; Liao & Fang, 2019; Liu & Tse, 2018; Liu & Jang, 2009; Mahalingam et al., 2016; Marković et al., 2021c; Namkung & Jang, 2010; Ouyang et al., 2018; Richardson et al., 2019; Ryu et al., 2012; Ryu & Shawn Jang, 2008; Sipe & Testa, 2018; Sthapit et al., 2019; Sulaiman & Haron, 2013; Sunghyup Sean Hyun, 2010; Tang & Bougoure, 2011; Wu & Liang, 2009; Yaris, 2019; Yoon & Chung, 2018; Zhang et al., 2019)	38	69,09%
<i>Experimental research</i>	(Wardono et al., 2012)	1	1,82%
Constructivism paradigm			
Qualitative approach			
<i>In-depth interview</i>	(Sthapit, 2017; Stone et al., 2018; Tsaur & Lo, 2020)	3	5,45%
<i>Content analysis</i>	(Marković et al., 2021a, 2021b; Park et al., 2021)	3	5,45%
Criticism paradigm			
Mixed approach			
<i>In-depth interview and survey</i>	(Ding & Lee, 2017; Horng & Hsu, 2020; Moon et al., 2020; Paakki et al., 2019; Tsaur et al., 2015; Wen et al., 2020)	6	10,91%
<i>Focus groups and survey</i>	(Hussein, 2018; Kala, 2020; Ryu et al., 2008; Wu & Mohi, 2015)	4	7,27%

Source: Authors' research

The paradigmatic analysis by research type is shown in the previous table. The obtained results of the analysis indicate that only one of the positivist researchers used the experimental quantitative approach (1.82%), while in the remaining studies, the survey was used (67.27%). Of the constructivist researchers, 5.45% conducted an in-depth interview, while the same number applied content analysis (5.45%). A mixed research approach was observed in 18.18% of studies on the tourist's gastronomic experience, led by a mix of tourist's in-depth interviews and surveys (10.91%), followed by a mix of focus groups and surveys (7.27%). Thus, from the methodological point of view, the quantitative approach, more precisely the examination of tourists using the questionnaire as a measuring instrument, definitely prevails in the literature on the gastronomic experience of tourists.

5. CONCLUSION

Understanding different types of paradigms is extremely important for scientific experts, especially in the context of research terms - ontology, epistemology, and methodology. It is the knowledge of ontology and epistemology that directly influences the choice of methodological approach to research. Considering the importance of gastronomy in the development of tourist destinations, gastronomic tourism was chosen as the topic of this research. Therefore, for the purposes of this research, 55 scientific articles on the gastronomic experience of tourists belonging to different types of paradigms were analyzed. A detailed analysis found that each of the authors of selected scientific papers has its own research position that serves as a basis for categorizing the type of paradigm to which it belongs. The results of this research indicate that most of the papers are represented from the positivist, followed by a critical and constructivist scientific research point of view. No research belonging to the postmodern and transmodern was represented in the sample, so further

analyses were conducted only on the example of positivism, constructivism, and criticism. Although this study includes studies in the period from 2008 to 2021, the results of frequency analysis by year indicate that the largest number of studies on the observed topic was published in the last three years. The geographical analysis found that the largest number of studies was conducted in Asia and North America, where the authors mainly apply a quantitative research approach.

Despite the fact that this review provided insight into the current state of representation of paradigms in research on the tourist's gastronomic experience, it also has certain limitations. Given that only papers published in English in the period from 2008 to 2021 have been considered in this literature review, future research should include articles in other languages in the sample, covering a longer period of time. In order to achieve greater representativeness of the results, the proposal for future studies is to use other relevant databases in finding papers, in addition to Google Scholar and Emerald Insight. Furthermore, to gain a more detailed insight into previous research on the tourist's gastronomic experience, it would be desirable to apply a bibliographic analysis according to the journal in the future. Definitely, the biggest limitation in this research is the lack of studies belonging to the postmodern and transmodern paradigm, so it is suggested that researchers direct their future research precisely in the direction of these two research ideologies. The contribution of this research is extremely important for academic experts because based on the analyzed data, one can gain insight into the current paradigmatic structure of articles on the tourist's gastronomic experience. It is different research approaches that can deepen knowledge and insights into the needs of tourists, and the data obtained from different perspectives can serve the management of gastronomic products and services in the long-term improvement of current elements of the gastronomic offer.

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