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IN THE CHANGING BUSINESS ENVIRONMENT**

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18 – 19 May 2023



## **Prague University of Economics and Business**

Faculty of International Relations, Department of International Business  
Faculty of Business Administration, Department of Marketing

and

## **University of Economics in Bratislava**

Faculty of Commerce

23rd International Joint Conference

## **Central and Eastern Europe in the Changing Business Environment**

Proceedings

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Prague, Czech Republic – Bratislava, Slovakia

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The conference is jointly organized by the Prague University of Economics and Business (namely the Department of International Business of the Faculty of International Relations and the Department of Marketing of the Faculty of Business Administration) and the University of Economics in Bratislava. The conference focuses on the whole region of the Central and Eastern Europe, since this region plays an increasingly important role within the economic development of the whole European continent. The main objectives of the conference are to identify and analyse the ways and strategies whereby globally operating businesses can maintain and foster their competitiveness regarding their foreign competitors.

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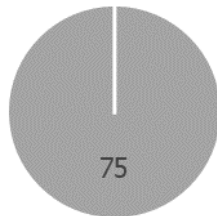
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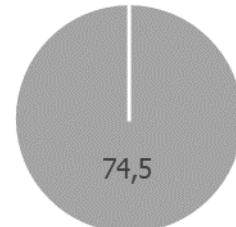
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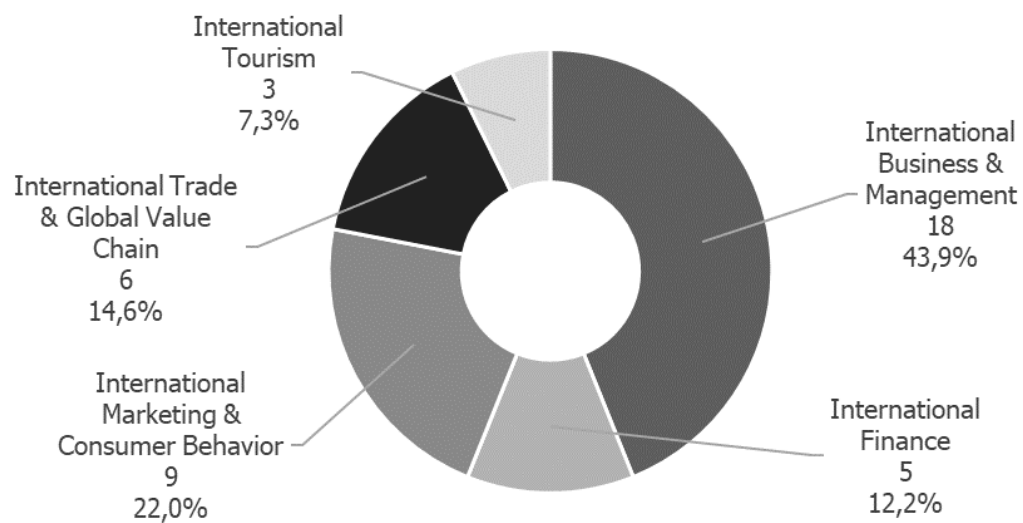
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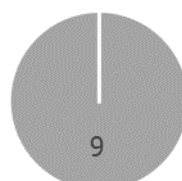
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# Collaborative market-driving strategy in destination tourism: A systematic literature review

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**Abstract:** This article presents a systematic literature review of studies on collaborative destination tourism marketing strategy and the implementation of market-driven and market-driving strategies related to market orientation. The review considered 104 selected articles published between 2007 and 2022 in 20 leading journals across the tourism and marketing/management categories, out of a pool of 879 articles. The review uncovered that markets are constantly evolving, and effective strategies are necessary, particularly in industries facing intense competition such as destination tourism. Collaborative strategies are crucial for destination tourism since different stakeholders possess varying resources and capabilities and are better suited for adapting to changing markets and enhancing performance. Further review shows that while collaborative destination tourism marketing has gained attention, the lack of emphasis on maximizing collaborative advantage, stakeholder growth, and destination competitiveness is notable. The review also reveals that market orientation has been adopted but broadly uses market-driven approaches. This overemphasis on market-driven approaches leads to increased zero-sum competition, underutilization of the destination's potential, and a lack of market-driving approaches to attain collaborative growth. Additionally, the review discusses another limitation of a market-driven approach, which assumes stable markets and predictable consumer demand, and emphasizes the drawback of applying this approach to changing market conditions in which destination tourism operates.

**Keywords:** destination market-driving strategy, destination market-driven strategy, destination market orientation, destination tourism, collaborative destination marketing

**JEL Classification codes:** M3, M31, M310

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## INTRODUCTION

Tourism is a significant industry that provides employment and foreign currency earnings. Pre-pandemic, it was a major sector, accounting for 10.3% of global GDP and 1 in 4 new jobs worldwide. In 2019, international visitor spending reached USD 1.8 trillion, supporting socio-economic development, job creation, and poverty reduction (World Travel & Tourism Council, 2022).

The behavior of markets has changed over the last few decades from relatively constant and stable to dynamic and progressing. In markets characterized by dynamic conditions and frequent changes, market-driving becomes particularly relevant for organizations seeking to succeed (Flaig et al., 2021). This entails creating new markets and stimulating customer demand by identifying unmet or latent customer needs, developing innovative solutions, and establishing a dominant position in the new market space (Carpenter et al., 2001). Scholars

such as Humphreys et al. (2018) and Jaworski and Arrigoni (2009) have emphasized the growing significance of market-driving in response to a dynamic environment. In such circumstances, collaborative market-driving, a strategy that involves pooling resources, sharing knowledge, and cooperating with other market actors (including peer competitors) to achieve long-term growth and gain a competitive advantage that would be difficult to attain alone, can be particularly effective (Maciel et al., 2020).

Certain industries are more favorable to market-driving and would benefit from its application to a greater extent. For example, the very nature of the destination tourism industry requires collaboration and innovation not only from the business organization's perspective but also from tourist perspective (Murray et al., 2016). Due to its specific nature, the need for the application of market-driving strategy in the field of destination tourism is greater as this industry consists of small to medium-scale firms that have limited resources but are wealthy with unique capabilities and strengths from different stakeholders (Naipaul et al., 2009; Wang et al., 2008).

However, even though the relevance and need of application of market-driving strategy in the domain of destination tourism has increased, the application of collaborative market-driving has not been discussed thus far for the benefit of destination tourism. This is a puzzle.

Previous research papers have investigated the idea of market-driving with a narrower focus on specific topics within a limited number of industries, resulting in significant contributions to the field. For instance, Maciel et al. (2020) have explored collaborative market-driving in the U.S. craft brewery industry, while Humphreys et al. (2018) have studied the use of social influence and status games in market-driving within the U.S. wine industry. Stathakopoulos et al. (2019) explored the collaboration and alignment between top and middle management for the effectiveness of a market-driving strategy implementation. Additionally, Ghauri (2016) has discussed market-driving strategies beyond localization. These papers provide insights into the processes, techniques, and challenges associated with market driving. However, there is a lack of research on how market-driving can be integrated into collaborative destination strategies.

Therefore, the objective of this study is to conduct a systematic literature review to gain a deeper understanding of how collaborative destination tourism strategies have incorporated market-driving approaches in their marketing strategies. The findings of this study will contribute to the existing literature on collaborative market-driving and provide insights for destination tourism practitioners and policymakers to develop effective marketing strategies that drive growth and competitiveness in the tourism industry.

In answering the research question "how have collaborative destination tourism strategies integrated market-driving approaches in the development of their marketing strategies?", the researcher conducted a detailed examination of collaborative marketing strategy application in destination tourism, through the adoption of a collaborative marketing strategy-based market orientation framework. Thus, this provides useful insights into emerging market-driving behavior and practices between collaborative market-driving strategy approach and destination tourism that could successfully meet the challenges of the current dynamic market changing environment.

In summary, this study aims to provide a systematic literature review of collaborative destination tourism strategies and their integration with market-driving approaches in marketing. The objective is to gain a deeper understanding of how market-driving can be effectively applied to destination tourism marketing through collaboration, and to provide insights for tourism practitioners and policymakers. This review examines 104 selected articles from 20 leading journals in tourism and marketing/management published over a 15-year period.

## 1. APPROACH AND METHODOLOGY TO THE REVIEW

This study reviewed articles published between 2007 and 2022 on collaborative market-driving strategies in the destination tourism industry. The review methodology comprised three steps: 1) selection of journals and literature, 2) identification of categories and framework, and 3) selection of relevant articles using the SCOPUS database. The methodology and framework used in this study were adopted by modifying a previous approach developed by Bocconcelli et al. (2016), with modifications made to address the specific research question and objectives of this study, as well as to suit the domain of the collaborative destination tourism industry.

In the first step, the selection of journals and literature for this systematic review was based on the assessment of two key research areas: (1) destination tourism and (2) marketing/management. To ensure the relevance of the selected journals for the systematic literature review, a careful identification process was carried out, considering both research areas, the research question, research objectives and scholarly contributions. In total, 20 journals were identified that were specifically related to tourism and marketing/management (table 1).

**Table 1**

### **Tourism Management Journals**

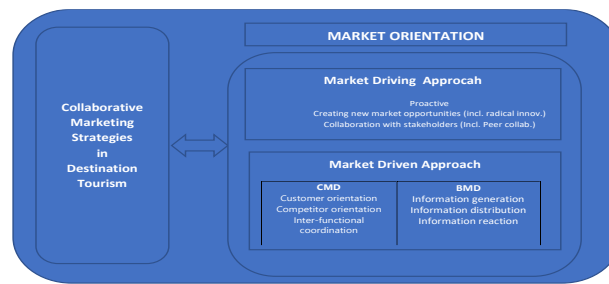
*Tourism Management*  
*Journal of Travel Research*  
*Journal of Destination Marketing & Management*  
*Current Issues in Tourism*  
*Journal of Travel and Tourism Marketing*  
*Journal of Hospitality and Tourism Management*  
*International Journal of Hospitality Management*  
*Tourism and Hospitality Research*  
*Journal of Hospitality Marketing and Management*  
*Event Management*

### **Marketing and Management Journals**

*Journal of Marketing*  
*Journal of Business Research*  
*Industrial Marketing Management*  
*European Journal of Marketing*  
*Journal of Business and Industrial Marketing*  
*Journal of Marketing Management*  
*International Marketing Review*  
*Journal of Strategic Marketing*  
*Marketing Intelligence and Planning*  
*Qualitative Market Research*

In step two, a framework (Figure 1) was developed to address the research question of how collaborative destination tourism strategies have integrated market-driving approaches into their marketing strategies. This framework comprises three dimensions: collaborative marketing strategies in destination tourism and two approaches to market orientation, namely market-driving and market-driven (Slater and Narver 1994). The theoretical lens used is the concept of market orientation, with the inclusion of collaboration to determine whether collaborative destination tourism strategies have applied a market-driving or market-driven approach.

**Figure 1 Framework of analysis**



In step three, the researcher conducted a search of the SCOPUS database for articles related to destination tourism and marketing/management, with a specific focus on market orientation, market driving, and market driven strategies. A total of 429 articles were found in destination tourism, and 450 in marketing/management categories. From these initial results, the researchers narrowed down the selection to 134 articles in the destination tourism category and 400 in the marketing/management category that specifically discussed collaborative marketing strategies and related topics. These articles were carefully reviewed to ensure their relevance to the research question and alignment with the framework of analysis. This resulted in a final set of 104 articles that met the criteria for inclusion in the review. To analyse these articles, the researcher used a set of pre-defined key themes or constructs that were relevant to the research question and the framework of analysis. These key themes were summarized in Table 2 and were used to verify the presence of specific constructs within the selected articles.

**Table 2 Summary of the data set**

	Constructs of the framework	Papers selected	Key References
<b>Collaborative destination marketing strategies</b>			
1	Collaboration in destination marketing strategies	21	Naipaul, et al. (2009), Flaig et al. (2021), Murray et al. (2016), Wang (2008), Fyall et al. (2012) Carlsen and Charters (2007) Werner et al. (2015) Line and Runyan (2014) Morgan et al. (2012), Tasci et al. (2014),Buhalis and Foerste (2015), Garrod and Fyall (2016), Sainaghi & Baggio (2019), Fernandes et al. (2019), González-Campos & Rodríguez-Escudero (2017).
2	Collaboration in destination marketing strategies and performance	16	Fernandes (2019), Sigala (2014), Naipaul et al. (2009), Vega-Vázquez et al. (2016), Pike and Mason (2011), Pike et al. (2010), Line and Wang (2017a), Cacciolatti and Lee (2016).
<b>Application of MO in the collaborative destinations</b>			
3	Market orientation in collaborative destination strategies	8	Nordbo et al. (2014), Line and Wang (2017a), Kumar et al. (2011), Gotteland et al. (2020), Bicen and Hunt (2012), Mu et al. (2017).
5	Marker-driven approach in collaborative destination strategies	47	Jiang et al. (2016) , Line and Wang (2017b), Nordbo et al. (2014), Kaurav et al. (2017), Gupta et al. (2013), Reed et al. (2016), Giovanardi (2022) ,Im et al. (2008), Tasci et al. (2014), Hristov and Petrova (2013),Foley et al. (2013), Naipaul et al. (2009), Pike et al. (2018), Hankinson (2012),Bašan et al. (2021), Kansal and Walia (2018), Frleta, (2018), Hankinson (2012), Pike and Mason (2011), Bašan et al. (2021), Wang and Pizam (2011).
6	Market-driving approach in collaborative destination strategies:	12	Humphreys et al. (2018), Jaworski and Arrigoni (2009), Granville et al. (2016), Abou-Shouk (2018), Bicen and Hunt (2012), Park et al. (2008), Jaworski and Arrigoni (2009), Maciel et al. (2020).
	Total	104	

## **2. SYSTEMATIC LITERATURE REVIEW**

This study conducted a comprehensive literature review of 104 articles to explore how collaborative destination tourism strategy studies have incorporated market-driving approaches into their marketing strategies, through the identification of impact of market-driven and market-driving components of market orientation on these collaborative tourism marketing strategies.

### **2.1 Collaboration in destination marketing strategies**

A total of 37 papers were analyzed with a focus on collaboration in destination marketing strategies, considering essential features in both practice and theory of destination tourism. Five main topics were identified within this group. The first topic explores collaborative destination marketing in the context of changing market conditions. The second topic emphasizes the significance of a collaborative approach in the tourism industry. The third topic examines the complex nature of destination collaboration. The fourth topic examines the relationship of collaboration in destination marketing strategies and performance (see 2.1.1).

Collaborative destination marketing strategy involves the cooperation of various stakeholders in promoting a destination to potential tourists. This marketing approach can boost revenue and competitiveness, while also addressing the challenges and limitations of traditional destination marketing by bringing together different strengths and resources to work cohesively (Wang, 2008; Naipaul et al., 2009).

Recent articles suggest that in today's rapidly evolving market environment, firms need to adopt new marketing and strategy approaches to remain competitive, rather than relying solely on market analysis and customer feedback. For example, Flaig et al. (2021) state that firms must take an active role in shaping the market itself to achieve desired outcomes. In other words, businesses must proactively identify market opportunities and create demand for their products or services, rather than just responding to existing demand. Similarly, Murray et al. (2016) stress the importance of sensing capability in tourism destination marketing. This entails being able to quickly detect changes in the market and effectively respond to them to maintain competitiveness. As suggested by Flaig et al. (2021) and Murray et al. (2016) in their studies, it was noted that firms not only need to detect changes in the market but also adjust their strategies accordingly to reduce their exposure to risk and remain competitive.

Several studies have demonstrated the effectiveness and significance of collaboration in the tourism industry. Wang (2008), Naipaul et al. (2009), Baggio (2011), Cehan (2021), Werner et al. (2015), Perkins (2021) and Fyall et al. (2012) emphasized the feasibility and potential of collaboration in destination marketing and competitiveness. Carlsen and Charters (2007) found that collaborative strategies in wine tourism led to effective marketing. Pike & Mason (2011), Line and Runyan (2014), and Morgan et al. (2012) also highlighted the importance of collaboration in enhancing brand positioning, service-dominant logic framework, and marketing evaluation frameworks respectively.

It was also revealed that some scholars such as Tasci et al. (2014) and Buhalis and Foerste (2015) argued that destination marketing organizations (DMOs) should work together, as a collaboration or partners, with other stakeholders, such as local businesses, government agencies, and community groups and private sector organizations, to enhance a destination's attractiveness and competitiveness and to develop and implement effective marketing strategies. Garrod and Fyall (2016) argue that local tourism associations can play a crucial role in facilitating collaboration between stakeholders and in bundling tourism products and services to create more attractive and competitive destination packages.

As some articles show, while there has been a significant increase in literature on collaborative destination marketing that examines the reasons, motivations, modes of marketing alliances, and factors affecting the success of such collaborations, limited attention has been paid to the potential for collaboration strategies to enhance destination competitiveness and achieve shared goals (Sainaghi and Baggio, 2019; Fyall et al., 2012). Researchers have identified gaps and limitations in existing research and called for more rigorous and innovative studies in this area (Fernandes et al., 2019; Sainaghi & Baggio, 2019).

Furthermore, collaborative destination marketing has been characterized as a multifaceted and complex phenomenon and involves multiple stakeholders with different goals and interests. Fyall et al. (2012) and Sainaghi & Baggio (2019) have noted that collaboration can be challenging and may lead to conflicts and competition among stakeholders. This can result in a zero-sum competition, where the gain of one stakeholder comes at the expense of another, ultimately hindering the realization of a destination's full potential in terms of economic, social, and environmental sustainability (Werner et al., 2015; Fyall et al., 2012; Sainaghi & Baggio, 2019).

### **2.1.1 Collaboration in destination marketing strategies and performance**

Regarding the relationship between collaborative destination tourism marketing strategies and performance, studies have demonstrated that such strategies offer a range of benefits. These include improvements in marketing strategies, enhanced product offerings, better destination management practices, increased revenue and competitiveness, reduced conflicts, and improved marketing outcomes and performance (Sigala, 2014; Naipaul et al., 2009; Vega-Vázquez et al., 2016). Moreover, further research indicates that these strategies have positive associations with various performance measures, including destination awareness, visitor satisfaction, and economic benefits (Pike and Mason, 2011; Pike et al., 2010).

## **2.2 Market orientation in collaborative destination**

The study analyzed 67 papers on market orientation in collaborative destinations, considering their importance, relationship to competitive advantage, and exploring two approaches: market-driven, which focuses on meeting customers' desires, and market-driving, which involves identifying and addressing opportunities through cooperation.

Market orientation in collaborative destination tourism strategies refers to the approach taken by destinations to align their marketing strategies with the needs and preferences of the target market. Some papers argue that this approach is important for developing tourism destinations, as it involves collaborative work with stakeholders, including tourists, to identify and meet their needs by using targeted and customized marketing strategies (Nordbo et al., 2014; Line and Wang, 2017a).

The reviewed studies have identified that only a few studies have explicitly stated the positive impact of market orientation on enhancing firm performance and competitiveness in destination marketing. For example, Line and Wang (2017a), Cacciolatti and Lee (2016) and Fernandes have found that market orientation can improve the responsiveness of destinations to the needs and preferences of tourists, leading to improved performance and competitiveness. Kumar et al. (2011) suggested that market orientation can provide a sustainable competitive advantage by enabling destinations to identify and respond to changing customer needs and preferences, as well as anticipate and respond to competitive threats. Furthermore, Gotteland et al. (2020) demonstrated that market orientation is positively related to strategic flexibility, which can help firms adapt to changes in the market environment and collaborate more effectively with partners.



Several articles have emphasized the importance of adopting a collaborative approach to market orientation and product development. For example, Bicen and Hunt (2012) and Mu et al. (2017) highlighted that alliance market orientation could enable stakeholders to collaborate and pool resources to create innovative offerings that meet tourists' needs.

### **2.2.1 Market-driven approach in collaborative destination**

Many articles deal widely explicitly or implicitly with market-driven approach, reflecting increased interest in finding methods to enhance corporate performance and strategy formulation. The review deals with the topic of relationship between market-driven approach with destination marketing strategy creation.

Conceptually, market-driven approach in collaborative destination can be analyzed through two perspectives: culturally based market-driven (CMD) and behavioral based market-driven (BMD). The CMD approach identifies customer orientation, competitor orientation, and inter-functional operations as its key components, while the BMD approach considers information generation, dissemination, and reaction (Kumar et al. 2011).

According to the articles viewed, Jiang et al. (2016) emphasized the importance of customer orientation in destination marketing, which involves developing appropriate products and services that meet tourists' needs and preferences. Competitor orientation has also been discussed in several studies, with Line and Wang (2017b) operationalizing this approach by emphasizing the importance of analyzing the competitive environment, and Nordbo et al. (2014) cautioning against competitive threats posed by other destinations. Line and Wang (2017a) proposed a multi-stakeholder market-oriented approach, which can be an effective means of achieving inter-functional coordination in destination marketing, aligning the interests of stakeholders and ensuring that all parties work towards the same goals.

Behavioral-based market driven (BMD) approach in implementing it in destination tourism strategies identified three key components: Information (intelligence) generation, dissemination of information and intelligence and information reaction.

According to the articles reviewed, Gupta et al. (2013) proposed a theory of constraints-based framework that focuses on identifying and overcoming constraints in generating intelligence. Efficient dissemination of information and intelligence is crucial in destination marketing. Reed et al. (2016) propose a listening-in and listening-out approach to information dissemination, involving listening to both customers and employees to strengthen an integrated market-oriented system. Effective dissemination of information helps destinations to improve their market intelligence, understand the needs and preferences of tourists, and develop successful strategies. Additionally, information reaction is a critical aspect of destination marketing. Giovanardi (2022) emphasizes the significance of place and space in craft practice, while Im et al. (2008) explore the interaction effects of market orientation dimensions on marketing program creativity, highlighting the importance of information reaction in a market-driven approach.

With reference to the market-driven approach application in destination tourism, several studies have implicitly or explicitly used a market-driven approach in their research regarding the application of the market-driven approach in destination tourism. For instance, Tasci et al. (2014) highlighted the importance of market-driven approaches in community-based tourism to enhance economic benefits. Murray et al. (2016) used sensing capability to collect data and understand the needs and preferences of tourists. Hristov and Petrova (2013) emphasized the use of public sector alliances to promote successful marketing of heritage tourism destinations. Foley et al. (2013) and Naipaul et al. (2009) explored market-driven approaches in the context of business events and regional destination marketing, respectively, to increase tourism revenue. Pike et al. (2018) suggested the use of market-driven approaches to track brand

positioning for emerging destinations. Collaboration between stakeholders for destination branding has also been identified as a market-driven approach, with leadership playing a key role in promoting collaboration, as stated by Hankinson (2012) and Bašan et al. (2021).

Additionally, several studies have interpreted the identification of key factors influencing tourist satisfaction (Kansal and Walia, 2018), understanding tourist preferences to enhance overall destination performance (Frleta, 2018), and measuring brand orientation and its performance impact as examples of market-driven approaches (Hankinson, 2012). Pike and Mason (2011) also identified that collaborative destination marketing strategies positively impact destination competitiveness, visitor expenditure, and visitor numbers. They have also observed a positive relationship between collaboration and destination marketing effectiveness, visitor satisfaction, and destination loyalty. Furthermore, Bašan et al. (2021) highlighted the importance of tourist satisfaction as a driver of destination marketing improvements.

However, notably, Wang and Pizam (2011) have emphasized the limitations of the market-driven approach, which assumes stable markets, in the dynamic tourism market. While this approach has been widely adopted by destinations to develop effective marketing strategies, it may not be suitable for a constantly changing market. Therefore, it is crucial for destinations to adopt a flexible approach that is responsive to market changes, such as a market-driving approach.

## **2.2.2 Market-driving approach in collaborative destination**

In terms of market-driving approaches in destination tourism, it has been noted that effort has mostly been directed at conceptualizing the construct, while less attention has been devoted to its application in the destination tourism (Granville et al., 2016). Abou-Shouk (2018) suggested that DMOs can adopt e-portals' business model to engage travel agents, which can lead to new market opportunities. Additionally, Bicen and Hunt (2012) found that alliance market orientation, involving seeking out and collaborating with partners to develop new products and services, can lead to a resource advantage. Park et al. (2008) highlighted the significance of collaboration with stakeholders in developing shared goals, building trust, and leveraging the resources of multiple partners to enhance the destination's competitiveness.

The literature review has also shown that although market-driving approaches have the potential to bring significant benefits to destinations, there has been limited attention given to their application in collaborative destination strategy development and implementation. Specifically, there has been little focus on the concept of peer collaboration in destination tourism. However, Maciel et al. (2020) proposed that collaborative market-driving, which involves peer firms working together to develop new markets through collective action, can be a powerful approach.

By considering the interrelationship between these studies, it becomes apparent that a market-driving approach that emphasizes collaboration with stakeholders to develop shared goals and enhance competitiveness can help destinations to be more responsive to market changes and improve tourist satisfaction, leading to overall destination marketing improvements (Humphreys et al., 2018; Jaworski and Arrigoni, 2009).

### **3. DISCUSSION OF KEY RESULTS OF LITERATURE REVIEW**

This section presents a discussion of the key findings of the literature review from both theoretical and practical perspectives.

Numerous studies have explored that collaborative destination marketing strategies offer various benefits, including improved marketing strategies, product offerings, increased revenue, destination awareness, visitor satisfaction, competitiveness and enhanced financial performance (Sigala, 2014; Naipaul et al., 2009; Line and Wang, 2017a; Kumar et al., 2011; Gotteland et al., 2020; Carlsen and Charters, 2007).

However, studies on destination tourism have also identified changing market conditions and resource limitations as key contextual factors driving the search for better strategies (Line and Runyan, 2014; Naipaul et al., 2009). To minimize risk, Flaig et al. (2021) and Murray et al. (2016) argue that firms must sense market changes and adjust their strategies to fitting changing market conditions. Therefore, collaborative destination tourism strategies should integrate market-driving approaches into their marketing strategies in order to effectively respond to changing market conditions, minimize risk, and improve their chances of success.

It was also revealed that collaborative destination marketing is increasingly recognized as a more effective approach than individual marketing efforts in today's rapidly changing market. Researchers such as Vega-Vázquez et al. (2016), Line and Wang (2017a), Cacciolatti and Lee (2016), Bicen and Hunt (2012), Line and Runyan (2014), Morgan et al. (2012), and Gotteland et al. (2020) have emphasized the importance of market orientation and collaboration in destination tourism, which can lead to benefits such as increased visibility, better resource allocation, and enhanced market positioning. It was further revealed that collaboration is widely recognized as crucial for achieving successful tourism outcomes (Naipaul et al., 2009) and it enables destination management organizations (DMOs) to establish trust, develop shared goals, and leverage resources from multiple partners to enhance the destination's competitiveness (Park et al., 2008).

Researchers including Carlsen and Charters (2007), Wang (2008), and Fyall et al. (2012) have emphasized the benefits of collaboration among stakeholders in destination tourism. However, the success of collaborative destination tourism approaches depends on building partnerships with various stakeholders, such as governments, local communities, and private sector organizations, as they all play a crucial role in enhancing the destination's attractiveness, impact, and competitiveness (Tasci et al., 2014). Therefore, businesses in the tourism industry must prioritize building strong relationships with stakeholders to achieve successful collaboration, which can, in turn, enhance the attractiveness, impact, and competitiveness of the destination.

The literature review exposed, despite a significant increase in research examining the reasons, motivations, modes of marketing alliances, and factors affecting the success of collaborative strategies for individual growth, there has been limited attention paid to the potential for collaboration strategies to maximize collaborative advantage and enhance destination competitiveness. This gap in the literature has been highlighted by researchers such as Sainaghi and Baggio (2019) and Fyall et al. (2012), who call for more rigorous and innovative studies in this area. They further emphasize the need for a comprehensive theoretical perspective to fully understand the multifaceted nature of collaborative destination marketing, including how it can lead to collaborative growth for stakeholders.

The literature review underscores the challenges of destination tourism marketing, particularly in relation to collaboration. Fyall et al. (2012), Sainaghi & Baggio (2019) and Werner et al. (2015) have identified the challenges of destination collaboration and the negative impact of

zero-sum competition. These scholars argue that competition can hinder the achievement of collaborative advantage, as stakeholders may prioritize short-term gains over long-term sustainability. Moreover, Fyall et al. (2012) note that the competitive nature of the tourism industry can create power struggles and resistance to collaboration among stakeholders, especially in destinations where stakeholders have divergent interests and priorities. To overcome these challenges, scholars such as Fyall et al. (2012) and Sainaghi & Baggio (2019) point out the importance of a collaborative or cooperative approach to destination marketing. This involves stakeholders working together towards mutual benefits and long-term growth, rather than focusing solely on individual gains. Therefore, achieving successful collaboration in destination marketing requires a shift away from zero-sum competition and towards collaborative and mutual benefits.

Another notable finding from the literature review is that the majority of research on collaborative destination marketing has centered around a market-driven approach, which aims to meet the existing needs and preferences of consumers in the market. Various scholars, including Tasci et al. (2014), Naipaul et al. (2009), Pike et al. (2018), Bašan et al. (2021), Frleta (2018), and Hankinson (2012), have shown the application of this approach. Nonetheless, the literature review indicates a relative lack of attention given to alternative marketing approaches, such as collaborative market-driving, which involves proactively identifying and responding to changing market conditions and collaborations extending up to peer competitors (Maciel et al., 2020). This gap in research may be attributed to insufficient literature and exploration of the application of market-driving approaches in the tourism industry's destination context.

Another significant finding of the literature review is that the market-driven approach, as noted by Wang and Pizam (2011), assumes stable markets and predictable consumer demand. This approach focuses on meeting the existing needs and preferences of consumers in the market. However, the assumption of stable markets and predictable consumer demand may not always be accurate, as consumer preferences can change over time, and external factors can impact demand. Therefore, while the market-driven approach has its advantages, it may not be sufficient in addressing the challenges that arise from changing market conditions and evolving consumer preferences. It indicates that it is essential to consider this factor when developing marketing strategies to ensure their effectiveness in a constantly evolving tourism landscape to harness full potential.

#### **4. FUTURE RESEARCH DIRECTION**

This section examines possible avenues for further research on collaborative market-driving strategies in destination tourism, based on the main findings of the literature review.

The reviewed contributions highlight that destination tourism has traditionally relied on a market-driven approach, either explicitly or implicitly. However, recent research has identified that this approach may not align with the ever-changing nature of the market, leading to a potential mismatch and limiting the industry's full potential. Despite this, new research suggests that a market-driving approach could offer a more effective solution for destination marketing as it focuses on creating and shaping consumer needs and preferences through proactive strategies (Flaig et al., 2021; Maciel et al., 2020). Therefore, future research in collaborative destination tourism marketing should explore the application of a market-driving approach to destination tourism alliances.

Future research could also focus on the development and implementation of market-driving strategies in destination tourism to achieve collaborative growth (Maciel et al., 2020). It is important to identify the critical drivers and obstacles involved in the creation of successful

collaborative marketing-driving strategies in destination tourism. By understanding these factors, destination tourism marketers can work together to shape consumer preferences and needs, creating a more effective and sustainable marketing strategy.

Future research should also focus on exploring the benefits of market-driving approaches in destination tourism. Specifically, studies could investigate the impact of market-driving strategies on destination competitiveness, destination brand image, and tourist satisfaction. Additionally, more research is needed to examine the application of collaborative market-driving for the benefit of stakeholders in the destination. For instance, studies could explore how collaborative market-driving can contribute to the economic, social, and environmental sustainability of destinations.

Furthermore, future research could investigate the role of leadership in promoting collaboration and market-driving strategies in destination tourism. Studies could examine how destination managers can foster a culture of collaboration among stakeholders and develop leadership capabilities that promote innovation and market-driving.

## **CONCLUSION**

This systematic literature review examined 104 articles selected from a pool of 879 publications across a 15-year period, from 20 prominent tourism, marketing, and management journals. The articles focused on the use of collaborative marketing strategies in destination tourism, as well as the application of market-driven and market-driving approaches to market orientation.

This literature review has shed light on the effectiveness of collaborative destination marketing strategies and the role of market orientation in shaping such strategies. The findings suggest that a collaborative approach is more effective than individual marketing efforts for enhancing performance and improving destination competitiveness. Furthermore, the review highlights the need for a comprehensive theoretical perspective to fully understand the multifaceted nature of collaborative destination marketing and the potential of collaboration strategies to maximize collaborative advantage (Sainaghi and Baggio 2019; Fyall et al., 2012).

The review also suggests that the market-driven approach, which has dominated research on market orientation and led to zero-sum competition, may not always be suitable for addressing the challenges posed by the constantly evolving tourism landscape (Sainaghi and Baggio 2019; Fyall et al., 2012; Werner et al., 2015). This approach has weakened the overall effectiveness and efficiency in reaching the full potential of destinations. Literature review also shows that overemphasis on market-driven approach has weakened the overall effectiveness and efficiency in reaching the full potential of destinations and it has led to overlook collaborative growth achievement (Werner et al., 2015; Fyall et al., 2012). Thus, alternative approaches, such as the market-driving approach that emphasizes innovation and creating new consumer needs, may need to be explored to develop effective marketing strategies in the tourism industry (Maciel et al., 2020).

The implications of these findings for future research and practice are significant. Future research could explore the potential of the market-driving approach in the context of collaborative destination marketing and investigate how such an approach can be effectively implemented. Additionally, research could examine the factors that facilitate or hinder the adoption of collaborative marketing strategies among diverse stakeholders.

For practitioners, the findings highlight the importance of collaboration and innovation in destination marketing. Destination marketing organizations, governments, local communities, and private sector organizations need to work together to create new tourism products and

experiences that meet the evolving needs and preferences of consumers (Line and Runyan 2014; Naipaul et al., 2009; Flaig et al., 2021).

The study has some limitations, such as the exclusion of relevant publications from other fields and the period under review, which may not reflect the most recent developments. Despite these limitations, the primary objective of this paper is to offer an initial overview of collaborative destination marketing approaches and practices during the period under review.

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# Greenwashing knowledge as a determinant of consumer engagement in greenwashed word of mouth

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**Abstract:** With the growth of green marketing, greenwashing practices have emerged. These practices cause green scepticism among consumers, who may share information on these misleading pro-environmental marketing practices with others. Such informal communication has been called greenwashed word of mouth (WOM). The study extends the understanding of greenwashed WOM by adding the concept of greenwashed electronic word-of-mouth (eWOM) opinion-seeking and giving. The role of this phenomenon in shaping green consumer behaviour and its determinants remains unexplored. The article aims to examine consumers' knowledge of greenwashing as a determinant of their engagement in greenwashed WOM and eWOM. An online survey among 230 adult Poles was conducted. The results showed a low level of greenwashing knowledge among the respondents. The ANOVA tests revealed a significant difference in the greenwashed WOM and greenwashed eWOM opinion giving depending on greenwashing knowledge. The study enriches information about consumers' behaviour in the situation in which they recognize greenwashing practices.

**Keywords:** greenwashing, green WOM, greenwashed WOM, customer green behaviour, green scepticism

**JEL Classification codes:** M31, Q01, Q56

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## INTRODUCTION

Today, consumers and organisations are more and more interested in sustainability. It has led to both an increase in research on sustainable consumption and the expansion of green marketing. Unfortunately, with increasing consumer interest in green products, some companies have begun to introduce greenwashing practices (Gatti et al., 2019). Greenwashing refers to vague, exaggerated or even false environment-friendly claims targeted at consumers about the nature of products (Pendse et al., 2022; Volschenk et al., 2022). This marketing strategy contributes to the confusion about green products. Consumers are not always aware of greenwashing and do not have sufficient knowledge of the practices involved. They need knowledge of greenwashing to properly recognise this misleading information. This is particularly important as only consumers who have knowledge of greenwashing can penalise such unethical marketing practices (Volschenk et al., 2022).

The effects of greenwashing practices on consumer green behaviour have not received enough attention in the literature. In contrast to many studies on green marketing (e.g. Ali, 2021; Jaiswal et al., 2022; Lisowski et al., 2022; Pendse et al., 2022;), only a few studies focused on

consumer reactions to greenwashing and its consequences (e.g. Chen et al., 2014; Singh et al., 2022). Greenwashing practices can increase green scepticism among consumers (Sarairoh, 2023). If consumers are able to identify greenwashing, it can negatively affect their intentions to buy green products (L. Zhang et al., 2018; Volschenk et al., 2022). Consequently, consumers with green scepticism may be reluctant to value green information (Sarairoh, 2023). Moreover, they may improve their awareness of greenwashing and develop a tendency to inform other consumers of such risks by engaging in word of mouth (WOM) communications. Although word of mouth or electronic word of mouth (eWOM) has been widely explored (Budzanowska-Drzewiecka, 2020), research on that phenomenon in the greenwashing context is scarce. Researchers mainly focus on consumer green WOM. Green WOM is defined as informal communication with friends, relatives and colleagues about positive environmental messages associated with a product or a brand (Söderlund, 1998, p. 179). It refers to positive recommendations made by other consumers about the environment-friendly nature of products or companies. Previous studies showed that greenwashing practices reduce green WOM communications (Chen et al., 2014). On the other hand, such unethical marketing practices can enhance greenwashed word of mouth (greenwashed WOM, GWWOM)(Singh et al., 2022). Greenwashed WOM is a new concept in the marketing literature. It involves consumers sharing negative recommendations about products, brands, or companies which convey false or misleading information about their environment-friendly nature. Due to the novelty of the construct, the role of greenwashed WOM (negative in nature) in consumer green behaviour remains unexplored. Making informed green purchase decisions requires an active search for information not only about green products but also about greenwashing. Word of mouth communications is one of the most influential information sources for consumers (Bartschat et al., 2022). Greenwashed WOM can serve as a potential source of information about misleading claims regarding false green products. However, more research is needed on the propensity to search and give information on greenwashing in that source as well as on the determinants of this process.

One of the determinants of the information-seeking process is consumer knowledge (Carlson et al., 2009; Karimi et al., 2015; Kumar et al., 2021). Consumer knowledge may explain consumers' engagement in searching for information and their reaction to recommendations from others (e.g. opinions about products in online reviews)(Park & Kim, 2008). However, to the best of the authors' knowledge, these relationships in the context of greenwashed WOM and eWOM need to be determined.

The article focuses on greenwashing knowledge as a determinant of engagement in greenwashed WOM and eWOM, defined as communications between consumers about misleading pro-environmental marketing practices. The aim of the study is threefold. Firstly, it examines the engagement of Polish respondents in the greenwashed WOM, including face-to-face interaction, as well as opinion seeking and giving on the Internet (eWOM). Secondly, the study measures consumer knowledge about greenwashing and the propensity to look for information about greenwashing. Thirdly, it determines the relationship between consumer knowledge of greenwashing and engagement in greenwashed WOM and eWOM. In general, the study was expected to establish differences regarding greenwashed word of mouth depending on the level of knowledge on consumers' part. It was decided to conduct a survey among adult Poles.

## **1 LITERATURE REVIEW**

Environment-friendly products attract consumer attention. According to de Freitas Netto et al. (2020), more than two-thirds of consumers are willing to pay more for more environment-friendly products. Research shows that including pro-environmental information in a product

description helps it conquer the market faster than it is in the case of a product not accompanied by such information (Anwar Abdou et al., 2022). In response to consumer interest, companies emphasise their pro-environmental characteristics involving green marketing activities (Chiu et al., 2019).

Some companies go a step further and modify the information provided to customers to make products appear greener than they really are. This phenomenon is called greenwashing (Gatti et al., 2019). The term "greenwashing" was coined Jay Westervelt in 1980 (Braga Junior et al., 2019; Romero, 2008). It came into common use after 1996 (Greer & Bruno, 1996). There are three stages in the development of this phenomenon: ground setting (2003–2010), trail-blazing (2011–2015) and remarkable growth (2016–2020) (Montero-Navarro et al., 2021). Prior systematic literature reviews (e.g. Montero-Navarro et al., 2021; Yang et al., 2020) show an increase in the number of studies on greenwashing. This concept has attracted the interest of researchers from different scientific disciplines including marketing, public policies and environmental management, environmental issues and business ethics (Gatti et al., 2019). This interest has contributed to a general and intuitive definition of the phenomenon. For example, according to (Delmas & Burbano, 2011, p. 65) greenwashing refers to poor environmental performance with very positive communication about it.

Defining greenwashing is approached in two ways (de Freitas Netto et al., 2020). The first approach refers to greenwashing as a selective disclosure related to the visibility of pro-environmental practises sought after by recipients of the message (Delmas & Burbano, 2011; Tateishi, 2018). The second approach defines greenwashing as decoupling behaviour, i.e. action undertaken to divert attention from a company's non-environment-friendly activities (Walker & Wan, 2012). In this study, greenwashing is understood as selective communication of positive information about a company's environmental (or social) activities which does not fully disclose negative information, thus creating an overly positive image of the company (Lyon & Maxwell, 2011; Z. Yang et al., 2020, p. 1493).

Greenwashing can be analysed in many different dimensions (Jog & Singhal, 2019). One area of interest is the influence of greenwashing practices on consumer behaviour. Greenwashing obstructs the potential purchase of more sustainable products and undermines overall trust in green claims (Naderer & Oprea, 2021). Companies that employ greenwashing can face negative consequences when consumers become aware of their practices. These consequences stem from the importance of green customer satisfaction in building long-term customer relationships with brands (Issack Issack et al., 2020). For example, greenwashing can result in lower trust in green products (Y.-S. Chen & Chang, 2013), negative attitudes towards advertising and the brand (Gallicano, 2011), or less inclination to buy green products (Golob et al., 2018). According to Braga Jr et al. (2016), greenwashing leads to a more sceptical attitude among customers towards green product consumption, especially in purchase behaviour (or purchase intention). It is less intense when customers are familiar with the products a given company has to offer. In such circumstances, there is no visible drop in sales, but customers signal confusion (Hsu & Huang, 2016; Wu & Chen, 2014). The impact of greenwashing practices of one company can affect not only the intention to buy a particular product but also the demand for green products in general (Wang et al., 2020). Interestingly, green scepticism may have the opposite effect. For example, it may be manifested in an increased interest in green advertisements and a more intensive analysis of the information about green products (Silva et al., 2020).

The development of greenwashing practices confuses consumers when making purchase decisions in the case of green products. Consumers report lack of knowledge about sustainable and pro-environmental activity of companies (Byrd & Su, 2021). Moreover, research has shown that consumers do not recognise greenwashing practices (Fernandes et al., 2020). They have problems distinguishing between acceptable and deceptive environmental claims and need a

greenwashing literacy intervention (Eng et al., 2021). In some cases, they can interpret the reduced information on the green activities of a company as greenwashing (Rahman et al., 2015), which may lead to green scepticism. Scepticism increases when the inconsistency between marketing claims and company's activities can be observed and when these claims are difficult to verify (Ford et al., 1990). For this reason, consumers need reliable information to be able to verify the actual features of green products and make sustainable decisions.

In both the linear (Engel et al., 1968, p. 45) and the circular (Hankins, 2021) models of the purchasing decision process, information about the offer is a critical factor for market participants. In the digital era, consumers can choose among various types of online and offline sources when looking for information about a product. Among the sources, other consumers' recommendations are often of the utmost importance (Bartschat et al., 2022). Traditionally, consumer-to-consumer recommendations are defined as word of mouth (WOM) communications (Ngarmwongnoi et al., 2020). Dissemination of the Internet brought about the spread of the so called electronic word of mouth (eWOM) communications (Budzanowska-Drzewiecka, 2020). In contrast to traditional face-to-face communication i.e. WOM, eWOM is generally agreed to be informal communication between private parties on the Internet during which goods are evaluated (Hennig-Thurau et al., 2004; Babić Rosario et al., 2020). Consumers trust and rely on WOM or eWOM communications to know more about the real quality of products (Fileri et al., 2021). It is becoming more and more natural for customers not only to search for information in WOM and eWOM but also to engage in eWOM giving (Chan & Ngai, 2011; T. (Christina) Zhang et al., 2017).

The literature on WOM and eWOM contributes to expanding knowledge about customer green behaviour (Rahim et al., 2015; Singh et al., 2022). WOM communication indirectly influences green consumption as it plays a mediating role in green purchase intention (L. Zhang et al., 2018; Al-Gasawneh & Al-Adamat, 2020). Consumers look for information about environment-friendly offers in WOM and eWOM sources during the decision-making process. Such environmentally framed eWOM messages have different valence: positive and negative (Fileri et al., 2021). Positive word of mouth about environment-friendly products, services or companies is called green WOM (Issock Issock et al., 2020). To date green WOM has attracted the attention of most of the researchers in that area (e.g. Chen et al., 2014; Allen & Spialek, 2018; L. Zhang et al., 2018; Hameed et al., 2022). Since it is a result of green marketing practices and green brand image (Mehdikhani & Valmohammadi, 2022) green WOM can be improved through reducing greenwashing practices (Chen et al., 2014). It should be noted that greenwashing practices can lead to negative eWOM regarding false environment-friendly practices of brands or companies. Then it is called greenwashed WOM (Singh et al., 2022). Greenwashed WOM can be treated as a counterpoint to green WOM or as a form of green WOM which refers to communication about the risk of greenwashing claims and to negative statements about the offer. Greenwashed WOM is a new concept in the marketing literature. In one of the first studies on that phenomenon, Singh et al. (2022) showed a mediating role of GWWOM in customer green purchase behaviour. They found that consumers who are sceptical are likely to spread negative information about greenwashing practices. Singh et al. (2022) conclude, however, that research on greenwashing and greenwashed WOM is in its infancy. Therefore they suggest further investigating this phenomenon in diverse cultural backgrounds while taking into consideration other constructs. One of them may be consumer knowledge of greenwashing.

## **2 METHODOLOGY**

Due to the novelty of the greenwashed WOM construct, the study was exploratory and descriptive. Having done the literature review, the authors formulated the following research questions:

RQ1: To what extent are Polish respondents engaged in greenwashed WOM and eWOM, including opinion seeking and giving?

RQ2: What is the knowledge of Polish respondents about greenwashing and their propensity to look for information about greenwashing?

RQ3: What is the relationship between respondent knowledge of greenwashing and engagement in greenwashed WOM and eWOM?

### *Data collection and sample*

The data was collected through an online survey among adult Poles. A convenience sampling procedure was used. Although it has limitations, the convenience sampling method is often used in studies on green consumption (Kumar et al., 2021). Respondents were recruited on a voluntary basis, without additional incentives. The link to the questionnaire was shared on social media for one week. The data was collected between January and February 2023. A total of 230 completed questionnaires were obtained, 5 of which did not meet the criteria. Finally, 225 were used for analysis.

The sample was predominantly female (74%). The average age of respondents was 30 years old (SD = 11.83). The participants were well-educated: 44% had a Bachelor's degree and 29% had a post-graduate degree (e.g., Master's and Ph.D. degree). Most of the participants (51%) were residents of big cities. The sample characteristics are presented in Table 1.

**Tab. 1 Sample demographic profile (n = 225)**

	<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>	Female	166	74
	Male	56	26
<b>Age (years)</b>	18-29	148	66
	30-39	21	9
	40-49	36	16
	50-59	16	7
	Over 60	4	2
<b>Place of residence</b>	Town with 500,000 residents and more	115	51
	Town from 100,000 up to 500,000 residents	37	17
	Town from 20,000 up to 100,000 residents	13	6
	Town with up to 20,000 residents	19	8
	Village	41	18
<b>Education</b>	Primary school	1	0
	Secondary school	60	27
	Bachelor's degree	99	44
	Master's degree	42	19
	Ph.D.	23	10

Source: own elaboration.

### *Measures*

The self-administered online questionnaire included measures for the main constructs and demographic questions. It was divided into several sections. The first was related to the independent variable, which was subjective greenwashing knowledge. The next sections referred to the dependent variables: information-seeking intentions about greenwashing,

greenwashed WOM, greenwashed eWOM seeking intentions and greenwashed eWOM giving intentions. The scales used in the study were adapted from the relevant literature. Subjective knowledge of greenwashing was measured using a five-item Likert-type scale (Flynn & Goldsmith, 1999; Eng et al., 2021), ranging from strongly agree (7) to strongly disagree (1). All dependent variables were measured on four-item scales, ranging from strongly agree (7) to strongly disagree (1).

All measures and items are reported in Table 2.

**Tab. 2 Reliability of the measures used in the study**

Constructs	Items	Source	Cronbach's Alpha
<b>Subjective greenwashing knowledge</b>	GK1: I know pretty much about greenwashing. GK2: I don't feel I'm knowledgeable about greenwashing (reverse scored) ( <i>rejected</i> ) GK3: Among my friends, I'm one of the "experts" on greenwashing. GK4: Compared to other people, I feel I am an expert on greenwashing. GK5: When it comes to greenwashing, I don't really know a lot. (reverse scored)	(Flynn & Goldsmith, 1999); (Eng et al., 2021)	0.8538
<b>Information-seeking intentions about greenwashing</b>	GSI1: I'll try to search for information about greenwashing in the near future. GSI2: I intend to find more information about greenwashing soon. GSI3: I intend to look for information about greenwashing in the near future. GSI4: I'll look for information related to greenwashing in the near future.	(Z. J. Yang et al., 2014)	0.9031
<b>Greenwashed WOM</b>	GWWOM1 I treat seriously negative word of mouth about a product/company which misleads through wrong environment advertorial claims. GWWOM2 I give due consideration to negative reviews left by users on social media after they have used bogus green products. GWWOM3 I am influenced by campaigns run by individuals and NGOs against marketing practices of greenwashed organisations/brands. ( <i>rejected</i> ) GWWOM4 I will ensure that people around me do not buy a product/brand that has misled me or someone else through false green claims.	(Singh et al., 2022)	0.7627
<b>Greenwashed eWOM seeking intentions (opinion-seeking)</b>	GeWOM_S1: I search the Internet for negative opinions of other consumers about a product/company that misleads someone through false environmental claims. GeWOM_S2: When I find negative word of mouth about a product/company which misleads consumers through false environmental claims, I use the "like" function to illustrate my appreciation. GeWOM_S3: When I see negative word of mouth about a product/company which misleads consumers through false environmental claims, I use the 'dislike' function to share my opinion. GeWOM_S4: In the future, I will continue to look for negative opinions on the Internet about a	(ALNefae et al., 2019)	0.7411

	product/company which misleads consumers through false environmental claims.		
<b>Greenwashed eWOM giving intentions (opinion-giving)</b>	GeWOM_G1: I share with my friends opinions about products/companies that engage in greenwashing practices. GeWOM_G2: I intend to speak out loud in social media about the dangers related to greenwashing. GeWOM_G3: I am willing to spread negative opinions on my social media about products/companies that engage in greenwashing practices. GeWOM_G4: I intend to speak/write to my closest friends about the use of greenwashing.	combined scale (Lee et al., 2020); (Eng et al., 2021)	0. 8357

Notes: Scale: from 1 to 7; 1 – the lowest rating.

Source: own elaboration.

The measures were translated into Polish by the authors. The questionnaire was developed using Google Forms software. Before it was administered, a pilot study had been conducted among 10 individuals to ensure the validity and reliability of the questionnaire. Respondents were asked to assess all items in terms of clarity and to evaluate the questionnaire in terms of structure and language. Some modifications to the items were made. This helped to improve their intelligibility. Furthermore, the internal consistency of the measures was checked. Due to the novelty of the greenwashed word of mouth construct and the need to adjust the scales for other constructs to the research subject, the loading factors were analysed. As a result, some items were rejected. Cronbach's alpha (Barbera et al., 2021) was used to assess the construct reliabilities. The scales reflected reasonable reliability scores based on Cronbach's alpha coefficients (all coefficients were greater than 0.7). The scales had adequate measurement properties and were suitable for further analysis.

To test the relationships among the variables, a quantitative analysis was performed. Before the analysis of variance (ANOVA), descriptive statistics had been calculated. Data was analysed using the STATISTICA software.

### 3 RESULTS AND DISCUSSION

The study aims to establish the engagement of Polish respondents in greenwashed WOM and eWOM (RQ1). For this purpose, the greenwashed WOM scale developed by Singh et al. (2022) was used. Moreover, due to the proliferation of social media, the construct was extended to include greenwashed opinion seeking and giving on the Internet, as a form of greenwashed eWOM. The descriptive characteristics of variables are presented in Table 3.



**Tab. 3 Descriptive characteristics of dependent variables (n = 225)**

<b>Construct – dependent variable</b>	<b>Items</b>	<b>Mean</b>	<b>Standard deviation</b>
<b>Greenwashed WOM</b>	GWWOM1	3.9644	1.6308
	GWWOM2	3.7556	1.8244
	GWWOM4	4.1333	1.9594
	<b>Total GWWOM</b>	3.9511	1.4904
<b>Greenwashed eWOM seeking intentions (opinion-seeking)</b>	GeWOM_S1	3.7778	1.7358
	GeWOM_S2	3.6578	1.9760
	GeWOM_S3	3.3733	1.9692
	GeWOM_S4	3.9511	1.7684
	<b>Total GeWOM_S</b>	3.6900	1.3994
<b>Greenwashed eWOM giving intentions (opinion-giving)</b>	GeWOM_G1	3.7422	1.8164
	GeWOM_G2	3.0267	1.7650
	GeWOM_G3	3.0267	1.6309
	GeWOM_G4	3.4800	1.7271
	<b>Total GeWOM_G</b>	3.3189	1.4209

Notes: Scale: from 1 to 7; 1 – the lowest rating.

Source: own elaboration.

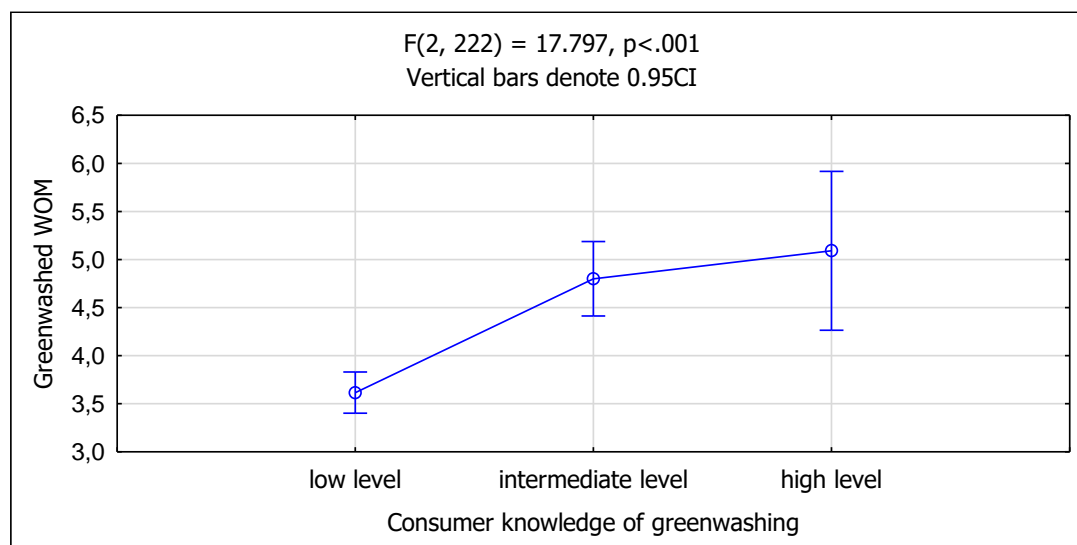
The results show a relatively positive attitude of the participants towards greenwashed WOM. The scale score was at the average level. The participants' engagement in greenwashed eWOM seeking and giving is rather ambivalent. However, the respondents are more engaged in greenwashed eWOM seeking than in greenwashed eWOM giving (t-test value = 2.79;  $p < .05$ ).

The ANOVA test did not reveal significant differences in greenwashed WOM depending on gender ( $F(1, 223) = 2.8210$ ,  $p > .05$ ). Similarly, greenwashed eWOM seeking ( $F(1, 223) = 0.32719$ ,  $p > .05$ ) and greenwashed giving ( $F(1, 223) = 1.2115$ ,  $p > .05$ ) are not related to respondents' gender. Surprisingly, women are more interested in greenwashed WOM than greenwashed eWOM seeking.

The study was also intended to explore the knowledge of the respondents about greenwashing (RQ2). Subjective knowledge about greenwashing was measured. Overall, the results obtained show a low level of expertise in this field ( $m = 2.7733$ ;  $SD = 1.3880$ ). Consumer knowledge about greenwashing is not related to gender ( $F(1, 223) = .03142$ ,  $p > .05$ ). Taking into consideration the level of knowledge about greenwashing, the participants can be divided into three groups: low, intermediate and high level of knowledge. Only 5%, i.e. 11 individuals, are experts. Most of them (73%; 164 individuals) are novices. However, participants declare a propensity to expand their knowledge by searching for information about greenwashing ( $m = 4.9456$ ;  $SD = 1.3636$ ), especially the respondents with an intermediate level of expertise ( $m = 5.4400$ ;  $SD = 1.1667$ ). In general, interest in searching for information on greenwashing depends on consumer knowledge ( $F(2, 222) = 5.1733$ ,  $p < .001$ ). Additionally, the intention to seek information about greenwashing is stronger among females ( $F(1, 223) = 10.681$ ,  $p < .001$ ).

The levels of consumer knowledge were used to test the relationships between consumer knowledge of greenwashing and greenwashed WOM and eWOM (RQ3). ANOVA was performed to evaluate whether greenwashing WOM and greenwashed eWOM opinion seeking and giving were affected by subjective knowledge of greenwashing. The ANOVA-tests revealed a significant difference in greenwashed WOM ( $F(2, 222) = 17.797$ ,  $p < .001$ ) (Figure1) and greenwashed eWOM opinion giving ( $F(2, 222) = 12.305$ ,  $p < .001$ ). No significant differences were established in terms of greenwashed eWOM opinion search.

**Fig. 1 Greenwashed WOM in relation to the level of consumer knowledge**



Notes: Scale: from 1 to 7; 1 – the lowest rating.  
Source: own elaboration.

In both the relation between the consumer knowledge of greenwashing and greenwashed WOM as well as the relation between the consumer knowledge of greenwashing and greenwashed eWOM opinion giving the same pattern can be noticed. Respondents with low knowledge of greenwashing are more sceptical about their engagement in greenwashed WOM and eWOM activities. In their case, the post-hoc test revealed significant differences compared to those with intermediate ( $p < .001$ ) and high levels of greenwashing expertise ( $p < .001$ ). It is worth noting that respondents with intermediate and high levels of knowledge had similar perceptions of their engagement in greenwashed eWOM.

When it comes to greenwashed eWOM opinion searching, respondents with a high level of expertise show less interest ( $m = 3.2272$ ,  $SD = 0.9647$ ) in this kind of search. In contrast, those with low and intermediate knowledge declare more engagement ( $m = 3.6921$ ,  $SD = 1.4739$ ;  $m = 3.7850$ ,  $SD = 1.2174$ ; for low and intermediate knowledge respectively). However, the differences are not statistically significant.

Summing up, the respondents, particularly those with an intermediate level of expertise, declare a proactive approach to seeking information about greenwashing. This pattern of searching for information, namely the inverted U-shaped pattern, is well-known in the literature. Both novices and experts are less interested in gathering information. The aforementioned pattern is less visible in the case of greenwashed eWOM opinion seeking. It stems from the attitude on novices' part who declare using eWOM as the source of information about greenwashing. This finding is consistent with previous research on eWOM. Consumers tend to use eWOM as an influential information source in the decision-making process (Bartschat et al., 2022).

## CONCLUSIONS

The study is one of the first to examine greenwashed WOM and eWOM. It aimed to explore the engagement of Polish respondents in greenwashed WOM and eWOM and their knowledge about greenwashing. Additionally, the aim of the study was to determine the relationship between consumer knowledge of greenwashing and greenwashed WOM/eWOM. On the basis of the results, it can be concluded that the engagement of participants in greenwashed WOM

and eWOM is on the average level. They are interested in greenwashed WOM, but less in greenwashed eWOM opinion giving. Moreover, as expected, the engagement of respondents in greenwashed WOM and eWOM depends on their knowledge. Taking into consideration the general low level of greenwashing knowledge, the results may improve our understanding of the attitude-behaviour gap in sustainable consumption. The study revealed a low level of consumer knowledge about greenwashing. The score obtained raises doubts whether consumers can recognise greenwashing practises. Lack of knowledge of greenwashing, and consequently, the ability to properly evaluate green products may lead to making decisions which are not sustainable (Kumar et al., 2021). This conclusion points to the need for continuous education about sustainability with special emphasis on marketing strategies related to environmental issues (Jog & Singhal, 2019). Greenwashing always hurts society, even if it benefits selected stakeholder groups (Z. Yang et al., 2020).

Due to the ubiquity of greenwashing (Gallicano, 2011; Miller et al., 2020), research into this phenomenon is important for corporate green communication efforts. A decrease in interest in a company's offer can have many negative effects. Therefore, companies should carefully plan advertising campaigns that reduce greenwashed WOM and eWOM.

The study has some limitations. First, they are the consequence of the selected sampling procedure. The sample was not representative, and the results should not be generalised for the whole population of Poland. Although convenience sampling is common and the sample was not a student sample, the distribution of characteristics does not reflect the structure of Polish population. Second, the limitations are related to the adopted measures. While WOM or eWOM have been widely researched, greenwashed WOM is a novel concept in the marketing literature (Singh et al., 2022). Singh et al. (2022) established the scale to measure greenwashed word of mouth, however, its consistency needs to be reviewed in an additional properties analysis.

Notwithstanding the limitations, the study contributes to the knowledge of consumers' ability to identify greenwashing as well as consumers' engagement in searching and giving information about greenwashing. It proves that greenwashed WOM is a promising concept. Due to its inherent properties, namely specific content and negative valence, greenwashed WOM and eWOM may play an important role in shaping consumer green behaviour. Therefore, this topic requires further investigation.

The article paves the way for future research integrating consumer knowledge of greenwashing and greenwashed WOM and eWOM in the context of sustainable consumption. The study is the first attempt to investigate the relationship between greenwashed WOM/eWOM and knowledge of greenwashing. However, the results require further verification. Future research should be conducted among representative and demographically diverse Polish consumers and in other cultural settings. Additionally, future research could investigate the moderating effect of greenwashed WOM and eWOM in consumer purchase decisions. Furthermore, researchers could examine the persuasiveness of greenwashed WOM and eWOM and the uniqueness of these constructs in comparison with negative WOM and eWOM messages about green products. Moreover, future research could explore the level and determinants of greenwashing knowledge in the context of different products.

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# Assessment of the Slovak business environment in the Doing Business Index

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**Abstract:** The state of the business environment reflects several factors that influence entrepreneurship in the country. A positive assessment of the environment should have a positive impact on the condition and development of businesses. The growth of enterprises A business environment is one way to compare whether a positive assessment of the business environment also affects enterprises in a country. The aim of the paper is to find out whether the positive rating of the Doing Business Index reflects the growth of businesses in the Slovak Republic. Several scientific methods (analysis, synthesis, and abstraction) were used in the paper. The method of comparison was used to determine whether the growth rate of the dBi score reflects the growth rate of the number of businesses in the Slovak Republic. It was found that the growth rates of the observed data were reflected together, identifying periods when the difference in the growth rate was a multiple. The results can be used for future comparisons of the analysis of the business environment, but especially to prove the objectivity of the assessment of the business environment in the Doing Business Index.

**Keywords:** business environment, business enabling environment, Doing Business Index, DBI, Slovak Republic

**JEL Classification codes:** L25, L26, M20

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## INTRODUCTION

A good and positive business environment has an important role to play in influencing business success and growth, influencing the decision-making process of entrepreneurs, determining the availability of business resources and market opportunities, and influencing the competitive environment. The biggest influence on the level and state of the business environment in a country is the state administration. Political decisions fundamentally influence the state and direction of business in the country. The assessment of the business environment is one of the tools for harmonizing business conditions on a global scale. In general, we know of several evaluations, each with a different methodology, and the outputs from them, in the form of indices, describe different assessment parameters of the business environment. A positive assessment of the business environment should reflect the current positive conditions for the establishment, operation and growth of the business in the state economy. It is assumed that a positive rating in the indices should result in a growth of business in the state economy, since the better the rating the better the business conditions.

The topic of the impact of business environment assessment is very actual, as some index evaluations have reported that the high score of some countries is linked to bribery and manipulation of results. It is for this reason that it is necessary to examine whether such an

assessment has an impact on the growth and disappearance of businesses in the countries assessed by these indices.

## 1 LITERATURE REVIEW

The business environment can generally be defined as everything that surrounds an enterprise and reflects the quality of the economic conditions and assumptions of the economic activity of the enterprise (Juríčková, 2006; Belanová, 2014). Eliášová et al. (2017) divide the business environment into micro and macro environments. The business's internal and external relations include suppliers, customers, employees, and competition (Cherunilam, 2016; Kováč et al., 2003). The business's macro-environment consists of several environments, but mainly of a political, economic, social, and demographic, but also of a natural and technological, environment (Slávik, 2005). All these factors have an impact on the state of the business environment in the country, which ultimately influences the business behaviour of enterprises. At a minimum, entrepreneurs may intervene in the business environment. According to Belanová (2013), the company's ability to influence the business environment is diminishing as it moves from the local environment to the international one, but entrepreneurs have the greatest ability to influence their internal environment.

The quality of the business environment, which creates the conditions for sustained and stable growth, is the basis for increasing the country's international competitiveness. (Karel, 2016; SBA, 2021) The quality of the business environment is determined by a wide range of external and internal factors, which tend to operate with varying intensity and interplay. (Belás et al., 2015) The quality of the business environment is mainly influenced by factors such as political stability, economic stability and growth, the level of legislation and actual enforcement. (Krošláková et al., 2017) The measurement of the quality of the business environment is carried out in several global but also domestic indices using different methodologies, different data sources as well as different variables (Kuzmisin, 2009). *The Doing Business Index (DBI)*, *the Global Competitiveness Index (GCI)* and *the Corruption Percepriion Index (CPI)* (Jenčík, 2006) are among the world's best known quality assessments of the business environment. The business environment in the Slovak Republic is also monitored by the Slovak Business Alliance (PAS), which publishes the *Index Podnikateľského prostredia (IPP)* and, until 2015, has also published the *Superindex*, which aims to combine the estimates of selected world indices into one.

The Doing Business report was first published in 2003 with five sets of indicators for 133 economies. However, the team that created Doing Business had been formed three years earlier, during the writing of the *World Development Report 2002: Building Institutions for Markets* (World Bank 2001). The preparing of methodology and the start of Doing business was an opportunity for several experts such as Djankov, La Porta, de Silanes, Shleifer and Vishny. These authors are behind the launch of the Doing Business Review. Djankov and Shleifer jointly compiled several documents for the World Development Report, which subsequently served as a starting point for the methodology being developed for Doing Business. (Djankov, 2016) The World Bank has highlighted the importance of the business environment and has therefore created a metric framework that classifies 190 countries of the world based on their level of business regulation of entrepreneurs as measured by the Doing Business Index (DBI). (Maričić et al., 2019) The methodology followed for each of the topic in Doing Business has six standard featurures (Djankov et al., 2004):

1. The team, with academic advisers, collects and analyzes the law and regulation in force
2. The analysis yields an assessment instrument or questionnaire that is designed for local professionals experienced in their fields.

3. The questionnaire is structured around a hypothetical case to ensure comparability across countries and over time.
4. The local experts engage in several rounds of interaction.
5. The preliminary results are presented to both academic and practitioners.
6. The data are subjected to numerous tests for robustness, which frequently lead to revisions or expansions of the collected informations.

The Doing Business Index was assessment produced by the World Bank, which assessed 12 parameters of the business environment in 190 countries worldwide, and such an assessment was produced annually. (World Bank, 2020; Russell, 2021) The review of the areas assessed in the Doing Business Index is presented in the following table. 1.

**Tab. 1: Assessed areas of Doing Business Index**

Indicator	What is measured
Starting a business	procedures, time, cost, and paid-in minimum capital to start a limited liability company for men and women
Dealing with construction permits	Procedures, time and cost to complete all formalities to build a warehouse and the quality control and safety mechanism in the construction permitting system
Getting electricity	Procedures, time and cost to get connected to the electrical grid, the reliability of the electricity supply, the transparency of tariffs
Registering property	Procedures, time and cost to transfer a property and the quality of the land administration system for men and women
Getting credit	Movable collateral laws and credit information systems
Protecting minority investors	Minority shareholders' rights in related-party transactions and in corporate governance
Paying taxes	Payments, time and total tax and contribution rate for firm to comply with all tax regulation as well as post filing processes
Trading across borders	Time and cost to export the product of comparative advantage and to import auto parts
Enforcing contracts	Time and cost to resolve a commercial dispute and the quality of judicial processes for men and women
Resolving insolvency	Time, cost, outcome and recovery rate for a commercial insolvency and the strength of the legal framework for insolvency
Employing workers	Flexibility in employment regulation
Contracting with the government	Procedures and time to participate in and win a works contract through public procurement and the public procurement regulatory framework

Source: World Bank, Doing Business Index, 2020, p. 19

According to Djankov (2009), the inclusion of the Starting Business assessment criterion in Doing Business has contributed to several reforms, noting that 193 reforms were implemented in 116 countries in 2003-2008. The Starting and Business assessment criterion has a long-term positive assessment in the Slovak Republic, mainly because of the time needed to start a business. In Slovakia's circumstances, starting a business is very simple, as it does not last longer than 30 days, and in the simplest forms of business such as business, from the point of view of obligations towards the state administration, the business is very fast, and you only have to announce the start of the business at the competent authority.

The Doing Business Review was a highly controversial issue in the 2018-2020 period as the World Bank issued a dB report showing evidence of a change in results. According to Glock (2021), we cannot rely very confidentially on the Doing Business Report in these years. An audit of the 2018 and 2020 reports showed that some of the people responsible for producing

the report succumbed to political pressure and improved China's rating for fear that a bad rating would endanger the subsequent funding from Beijing.

It is for this reason that the World Bank has decided to discontinue publishing the Doing Business Report in 2021. An internal investigation uncovered discrepancies in the data that undermined the reforms leading to the downgrading of China, Saudi Arabia and Azerbaijan's scores in the 2018 and 2020 reports. (The Business Standard, 2021) The World Bank has decided to completely change its methodology for assessing the business environment, and the newly created concept is called Business Enabling Environment (BEE). (World Bank, 2021)

## 2 METHODOLOGY

The main aim of the paper is to identify whether the assessment of the business environment of Doing Business of the Slovak Republic reflects the actual state of growth / disappearance of the business in the Slovak Republic. To meet the main aim, the following partial targets have been set:

- summarise the assessment of the Slovak Republic and its percentage change,
- summarise the number of business operators in the Slovak Republic and their annual percentage changes over the reference period,
- Compare the growth of the DBI rating and the growth of the number of business entities.

Based on the above, we have identified the following research questions and hypotheses:

RQ<sub>1</sub>: What growth is being achieved by the Slovak Republic in the Doing Business Index?

RQ<sub>2</sub>: What growth is achieved by the number of businesses in the Slovak Republic?

H<sub>0</sub>: We assume that the growth / decline of the business does not reflect the growth / decline of the business environment assessment of the Slovak Republic

H<sub>1</sub>: We assume that the growth / decline of business operators reflects the growth / decline in the assessment of the business environment of the Slovak Republic

We have used several scientific methods in preparing this paper, but in particular analysis, synthesis and abstraction. All these methods have been used to obtain and process the information obtained mainly from Internet sources and scientific and technical publications relevant to the subject of the contribution. The method of comparison was used in the final part of the contribution, but when comparing the data obtained from DBI and the number of businesses. Basic mathematical and statistical methods in the form of a growth rate and a base index were also used.

In calculating the rate of growth, we assumed the following relationship:

$$TVP = \frac{P_{n+1}}{P_n} \times 100$$

where:

TVP – growth rate

P<sub>n</sub> – previous reference period

$P_{n+1}$  – current reference period

In calculating the base index, we assumed the following relationship:

$$I_t = \frac{p_t}{p_o} \times 100$$

where:

$I_t$  – base index

$p_t$  – year compared

$p_o$  – year designed to the base

The first step was to identify the country in which we examined the relationship between Doing Business evaluation and the number of companies. Since the Slovak Republic is considered to be a rapidly growing post-industrial economy, it is a suitable adept for examining the reflection of the parameters examined. The contribution is based on secondary data mainly from the Doing Business Index 2010-2020 evaluations and the number of business entities obtained from the SR Statistical Office in the sample concerned. In the framework of obtaining data on the assessment of the Slovak business environment from the Doing Business Reports 2010-2020, we have identified inconsistencies between the various reports, as they include in the annual report an indication of the assessment of the previous period and, in most cases, the assessment of the previous period in the subsequent period did not match the assessment in the report of the current period. Based on the above, for the examination of the issue, we only considered the current assessment in the given year. The businesses identified for this contribution from the Statistic of Slovak republic include all natural and legal persons as well as free enterprise and other businesses considered as entrepreneurs by the legislation of the Slovak Republic.

One of the other tools used to analyse the data regarding the evaluation of Doing Business Slovakia and the number of businesses was correlation analysis. Since the data analyzed in this paper are time series, it is necessary to use a methodology and tools exclusively applicable to time series. Firstly, it was necessary to analyse the distribution of the data and this to perform a normality test on the data. To begin statistical testing, it is necessary to create an OLS model on which further testing is based. If it is possible, the next testing is necessary used the correlation analysis, the aim of which is to establish the interdependence between the variables under study.

### 3 RESULTS AND DISCUSSION

#### 3.1 Assessment of Slovak Business Environment in DBI

*RQ<sub>1</sub>: What growth is being achieved by the Slovak Republic in the Doing Business Index?*

The Slovak Republic shows a moderate growth rate in the Doing Business Index over the assessment period. Since 2010, when SR was awarded 69,9 points, the assessment has increased each year to reach a level of 75,6 points (2020). Slovakia's business environment is subject to constant growth, as we can assess that EU membership, changes and support of the SR government in the field of entrepreneurship as well as business development prospects

contribute to the positive development of the business environment in the SR. An overview of the assessment of the business environment is summarized in the following table.

**Tab. 2 Assessment of Slovak Business Environment in Doing Business Index**

Year	Assessment DBI	Growth rate, %	Base Index, % (Base-2010)
<b>2010</b>	69,9	-	-
<b>2011</b>	70,6	+1,00 %	+1,00 %
<b>2012</b>	70,7	+0,14 %	+1,14 %
<b>2013</b>	71,4	+0,99 %	+2,14 %
<b>2014</b>	71	-0,56 %	+1,57 %
<b>2015</b>	70,7	-0,42 %	+1,14 %
<b>2016</b>	74,8	+5,80 %	+7,01 %
<b>2017</b>	75	+0,26 %	+7,30 %
<b>2018</b>	75,2	+0,27 %	+7,58 %
<b>2019</b>	75,4	+0,27 %	+7,87 %
<b>2020</b>	75,6	+0,27 %	+8,15 %

Source: own processing based on World Bank - Doing Business Reports 2010-2020

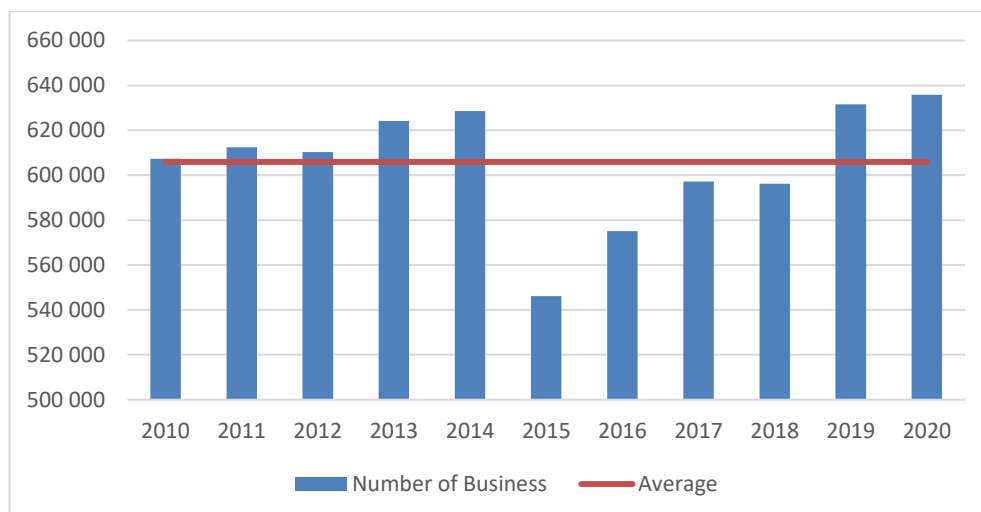
In the table 2 we can see the annual assessment of the Slovak business environment in 2010-2020. Slovakia achieved its best score in 2020, with an annual improvement of 0.27% over the last three years, with an increase of 8.15% since the beginning of the reporting period. One of the best-evaluated areas of Slovakia's business environment in DBI (2020) is "starting a business", with the World Bank stating that Slovakia has easier conditions for starting a business when dealing with other countries of the world. In the Doing Business Report 2020, the World Bank also positively highlighted the approved pay increases during weekend and night work in relation to human capital working in the territory of the Slovak Republic.

### **3.2 Number of Businesses in Slovak republic in 2010-2020**

*RQ2: What growth is achieved by the number of businesses in the Slovak Republic?*

The economy of the Slovak Republic has a long-standing and growing trend. Several factors have a positive impact on business activity over the long term, among which the *Slovak Business Agency* classifies a stable monetary situation and simple business start-up conditions. The number of businesses in the economy of a country shall be reflected in all factors affecting the business and the business environment. The number of businesses in the Slovak Republic presents the following graph.

**Graph 1 Number of Businesses in Slovak Republic, 2010-2020, in thousands**



Source: own processing based on Data Cube SR

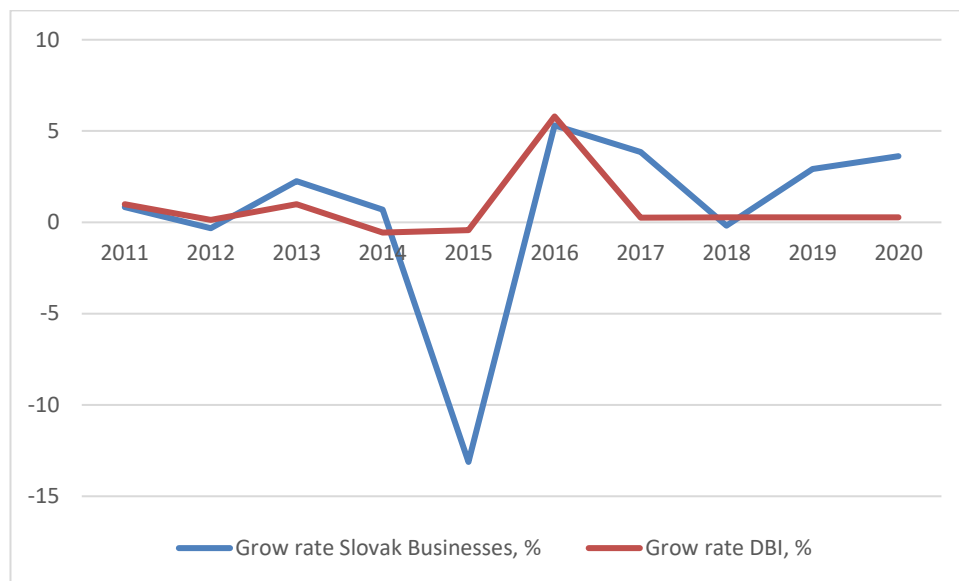
From this graph, we can see the growth of businesses from 2016 to 2020. Since the beginning of the reporting period, the growth of business entities has been observed over the reporting period, except for 2015, which, according to the available data, saw a decrease in the number of business entities in the Slovak Republic. This may have resulted from the economic crisis of 2009-2011. A year ago. We can see year-on-year growth in 2015, but still below the average of business entities in the SR. In the last two years, following the decline in the number of business entities in the Slovak Republic, there has been an increase above the level of the average of enterprises.

### **3.3 Comparison between DBI assessment and Number of Businesses in Slovak republic**

*H<sub>0</sub>: We assume that the growth / decline of the business does not reflect the growth / decline of the business environment assessment of the Slovak Republic*

The growth and loss of businesses is due to a whole range of factors that need to be assessed. One way of evaluating the factors affecting these businesses is to evaluate the business environment. In general, we could argue that improving the assessment of the business environment and better assessing the factors affecting businesses also reflects the situation of the number of businesses, or their growth or decline. The rate of growth of the assessment of the business environment of the Slovak Republic and the rate of growth of the number of enterprises in the Slovak Republic are presented in the following graph 2.

**Graph 2 Grow Rate of Number of Businesses and Assessment of DBI in Slovak republic, 2011-2020, in %**



Source: own processing

From the data presented in the chart above, it can be concluded that the rate of growth of business entities and the rate of growth of the Slovak Republic's DBI rating tend to be similar to each other. To summarize, in 2011-2013 as well as in 2016-2020, both curves in the graph behave similarly. The only difference is the observed rebound in the years 2014-2016, when the growth rate of the number of enterprises fell by several times higher than that of the DBI-rating.

### 3.4 Statistic testing of data

In the statistical analysis of the presented data, it is necessary first to determine the distribution of the data and its normality. In testing the normality of the data, we establish the following hypotheses:

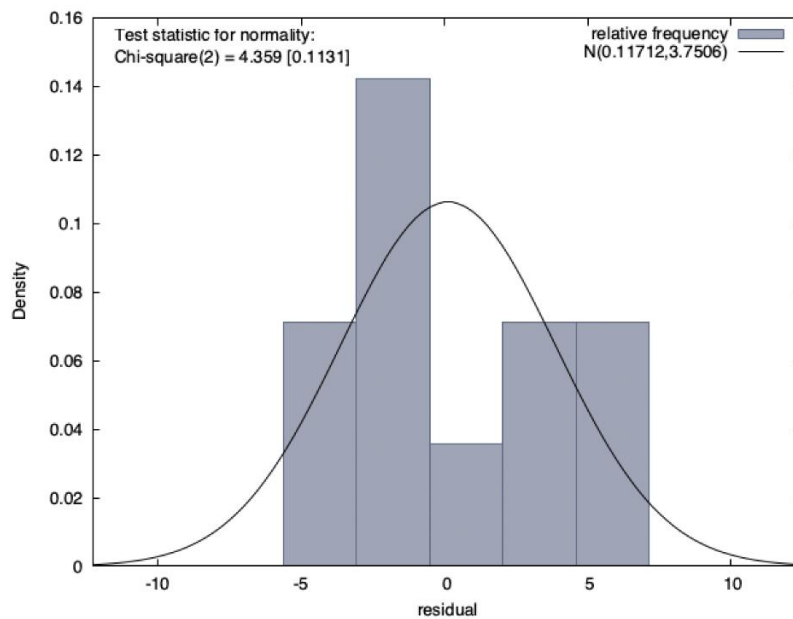
*H0= data are of non-normal distribution of residuals*

*H1= data are of normal distribution of residuals*

According to the normality test performed, the data processed in this paper achieves normality. This statement is confirmed by mathematical and statistical testing of p-value. In general, if  $p\text{-value} > \alpha$  normality is not rejected. In the case of testing these data, the p-value came out to be 0.11 with  $\alpha$  being determined as a value of 0.05, which means that normality is not ruled out. Based on the foregoing, we reject the null hypothesis in favor of the alternative hypothesis. The normality test is presented by the following histogram.



## Graph 2 Histogram normality of residuals



Source: own processing in Gretl

The next step of statistical testing is to create an OLS model, which forms the basis of the following testing. In the case of the OLS model of the data under study, the values of the OLS model came out as presented in Table 3.

**Tab. 3 Values of OLS Model**

t-ratio	0,3711
R square	0,015
p-value	0,7191
Adjusted R square	-0,094

Source: own processing in Gretl

Since the OLS model yielded an R-squared value of 0.015, and the data set is not expected to be suitable for statistical testing when the R-squared = 0 or the closer it is to 0, we can conclude that the analyzed data are not suitable for statistical testing in this case because the R-squared value is significantly close to 0. Another indicator that speaks for the insignificance of the statistical tests is the p-value, which in this case was 0.7191. Since we chose a significance level of  $\alpha = 0.05$ , we can conclude that the tested data have no statistical significance.

Based on the above, we can summarize that the selected data set of the Doing Business Index of Slovakia and the number of businesses in Slovakia does not meet the requirements we chose for further statistical tests, which are also correlation analysis.

## 3.5 Discussion

Based on the statistical tests performed, it can be summarized that the selected data, the DBI rating of Slovakia and the number of businesses in Slovakia in the selected period, are not suitable for statistical tests. This means that the selected data do not have statistical

significance that could objectively represent the results of the further analyses, especially the correlation analysis. For future investigations, we recommend selecting a different data set that could be assumed to be objectively evaluated by statistical testing.

The state of the business environment in the Slovak Republic in the long term presents in this contribution (10 years) maintains a growing character. From the available results of the comparison of the growth rate of the variables we monitor, we can select  $H_0$ : It is assumed that the growth / decline of the business entities does not reflect the growth / decrease in the assessment of the business environment of the Slovak Republic to reject and adopt alternative  $H_1$ , that the growth / decrease of the business entities reflects the growth / decrease in the assessment of the business environment of the Slovak Republic. By way of exception to the reflection, the data we analyze show precisely in the 2014-2016 period, when the growth rate of the number of enterprises is very negative, whereas the rating of DBI well by only a few percentage points, creating an anomaly where the negative growth rate of DBI translates into negative growth of the number of enterprises only in the following period. This may be due to the late impact of negative factors assessed by DBI in the current year and in the following period.

According to the above information on the negative perception of the assessment of the DBI based on the change in the results in the 2018 and 2020 reports, we can predict that the assessment of the DBI of the Slovak Republic in relation to the actual development of the number of businesses is relevant and objective, as the assessment reflects the situation of the businesses in the country, based on growth rate. The intensity of the demonstration of the relevance of the assessment of DBI in relation to business entities may be questionable, which is explained by the fact that the assessment of the business environment of DBI aims to assess the conditions of business leading to the growth and development of business in the country under assessment.

As the World Bank has decided to discontinue publication of the Doing Business Index in 2021 based on the findings of 2018 and 2020 and to hold those affected accountable, and has taken the decision to publish a new assessment under the title Business Enabling Environment (World Bank, 2021; World Bank 2022), we direct our recommendations to the newly emerging assessment methodology and the ethics associated with it, namely:

- Transparent and Ethical Access to Information,
- Accuracy of the data reported in the annual reports,
- Selection of experts and assessment of their ethical standing.

In our opinion, the implementation of the above recommendations would avoid any further doubts about the accuracy and objectivity of the assessment of the business environment of the world's countries.

As the World Bank is working intensively on a new methodology for assessing the business environment, we recommend starting from the Doing Business Index range of assessment criteria, as the base of the data range is appropriate in our view. However, we propose to add another criterion, namely the assessment of corruption and its impact on the business environment, as it is one of the important factors for the development of the business environment. We also recommend considering changing the evaluation criterion "Contracting with government" to "Government" and to also assess the impact of the legal framework in general on the business environment.

The limits of the data we analyze are primarily the volume of data available. The evaluation of DBI is available only from 2003, but the evaluation in the form of a point evaluation based on availability and complexity is from 2010. According outlined in this paper, we recommend future research on the subject, especially in hindsight, as results from the new Business

Enabling Environment model are not yet available. Here, the authors see space for future investigation of similar dependencies, but especially in the possibility of a different choice of the parameter being compared with the BEE assessment.

## CONCLUSION

The business environment reflects the state of play of the factors affecting business in the country. Its condition is assessed by means of indices using a unique methodology for each index separately. The main objective of the contribution was to identify the assessment of the state of the business environment of the Slovak Republic in the Doing Business index and to establish whether the number of business entities reflected the assessment of the Doing Business Index in the Slovak Republic.

The assessment of the Slovak Republic's DBI shows a growing trend in the survey. This may be due to government support measures implemented at the level of business creation as well as its promotion and reduction of red tape. The World Bank assesses the business start-up approach as an unambiguously positive factor affecting the business environment in Slovakia. In addition, recent reports on the evaluation of the DBI highlighted steps towards a pay assessment of work during weekends, holidays and at night towards employees working in the territory of the Slovak Republic.

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# Domestic versus foreign franchising gastronomic brand in the context of brand trust

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**Abstract:** The presented article deals with Brand trust issues in the context of the difference between domestic and foreign franchising brands. The aim of the presented article is to (1) measure the trustworthiness of a selected domestic (Pizza Mizza) and foreign franchising brand (McDonald's) and (2) identify differences in the context of the country of origin. The article is supported by a primary survey, the basis of which was 506 respondents from Slovakia. Brand trust was measured using a simple scale model. The measuring tool achieves a high degree of reliability. The results show an average to below-average level of brand trust in the investigated brands. Differences can be observed within the individual dimensions of brand trust. In general, it can be concluded that there is no significant difference between domestic and foreign franchising brands in terms of brand trust. The results can be applied in marketing, strategic marketing as well as in brand management.

**Keywords:** brand trust, country of origin, brand origin, franchising brands, Slovakia

**JEL Classification codes:** M31, D10, D91

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## INTRODUCTION

A good brand strategy is an important asset and a source of comparative and sustainable advantage. Its connection from the aspect of loyalty to franchising is a determinant for the origin and existence of franchising because only a well-known brand in the field of franchising can establish itself on the market and address the customer with its portfolio of products or services. Franchising includes various systems and industries, from fast-food retailing to homecare. There are some familiar names, such as McDonald's, Kentucky Fried Chicken, 7-Eleven, Body Shop, Tie-Rack, Pizza Hut, and Service Master (Inma, 2005). The business sectors experiencing the most franchising growth are retail and restaurants (Hoffman & Preble, 2004).

Brand trust is important in brand management. The level of brand trust can be one of the key factors of brand success. In the context of brand trust, we rarely focus on franchising brands, but it is necessary to realize that it is franchising brands that need to maintain brand trust, since the brand represents the entire business concept.

In the context of the country of origin, it is possible to expect that ethnocentric customers and customers subject to the country of origin effect will prefer domestic or foreign brands.

The aim of the presented article is to (1) measure the brand trust of a selected domestic (Pizza Mizza) and foreign franchising brand (McDonald's) and (2) identify differences in the context of the country of origin.

## **1 LITERATURE REVIEW**

Kotler and Keller (2012, p. 241) defined a brand as "a name, term, sign, symbol, or design, or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors". Farhana et al. (2012) similarly sees a brand as a combination of name, symbol, or design, which creates a distinctive identity to consumers within a crowd of choices through its different brand elements. To sustain a competitive advantage, companies have to develop and build brands that meet real needs and are differentiated in the minds of customers (Chahal & Bala, 2010). The value of the brand continues very closely with the trust of the brand (Shubhapriya & Byoungho, 2017; Garbarino & Johnson, 1999). These theses are confirmed and developed interdisciplinarity with the enterprise management system by Pizar and Bilkova (2019). Authors Chaudhuri & Holbrook (2001) and So et al. (2013) agree when customers possess a high level of trust in a brand and confidently demonstrate an expectation of the brand's reliability and intentions.

As some authors have recognized (Jeon et al., 2014; Shin, et al., 2016; Nyadzayo et al., 2011; Pitt et al., 2003; Zachary et al., 2011) a franchising brand should be managed with care given the shared brand name within the franchising chain. A reputable brand name is highly sought after by franchisees when choosing a franchisor (Gauzente, 2003; Hodge et al., 2013). Bobek et al. (2019) state that for franchisees, before entering franchising and acquiring a new brand, it is crucial that the brand is already known and successful. Jeon et al. (2014) claim that customers have contrasting perceptions toward franchising and non-franchising brands. A team of authors led by Shin (Shin et al., 2016) found that while a franchising brand is viewed as generating higher service tangibility, convenience, and perceived risk than a non-franchising brand, a non-franchising brand is regarded as signaling higher service reliability and perceived security than a franchising brand. Gensler et al. (2013) add that although the nationally recognized franchising brand name is a valuable intangible asset of the franchising system, it can be in jeopardy when the franchising brand is poorly managed. As reported by some sources (e.g., Frazer et al., 2012; Nyadzayo et al., 2011), franchise relationship management increases positive franchisees' results, such as brand trust, brand commitment, and brand satisfaction in favour of the brand.

Zamazalová et al. (2010) points out that consumers may be subject to the brand's country of origin when choosing a brand. The theoretical basis that connects country of origin with brands can be found in the studies of Thakor and Kohli (1996), who created a new theory of the so-called Brand origin. However, this concept is not considered in terms of franchising brands.

## **2 METHODOLOGY**

The aim of the presented article is to (1) measure the trustworthiness of a selected domestic (Pizza Mizza) and foreign franchising brand (McDonald's) and (2) identify differences in the context of the country of origin.

Based on the objective and the presented literature review, we formulated the following research questions:

RQ1: What is the level of McDonald's brand trust perception?

RQ2: What is the level of Pizza Mizza's brand trust perception?

RQ3: How can the differences in the perception of domestic and foreign franchising brands be interpreted in the context of brand trust?

H1: *There are significant differences between the average trustworthiness ratings of the selected brands based on the survey.*

In the article, we focus on two companies - Pizza Mizza (domestic brand - Slovakia) and McDonald's (foreign brand - USA). From the point of view of the domestic or foreign brands, the most famous franchising brands. At the same time, McDonald's represents one of the most famous brands, which is currently (in 2022) the most recommended franchise brand in the context of sales, image, brand awareness, support, etc. (Hart, 2022).

## **Sample**

The present study is based on a primary survey. The research was carried out using electronic and printed questionnaires. The basic population was defined as "Slovak consumers older than 15 years". The reason for the age limit is both ethical and at the same time a simple analogy, with consumers over the age of 15 developing their shopping habits and already having their funds. As the definition of population implies, we have two key factors: age and nationality. The reason for defining the age is due to the ethics of the research, as well as due to the assumption that respondents over 15 years of age will already have some money of their own and also formed primary purchasing decisions as well as general knowledge. In the primary survey, we use non-probability sampling, specifically convenience sampling. The choice of sampling has significant disadvantages but is suitable for pilot testing. This type of sampling has significant advantages, but it should be added that the results cannot be completely generalized. For a sample of 506 respondents (54 % was women and 46 % was men), the maximum statistical error (with a 95 % confidence probability) is about 4,36 %.

## **Research tool**

The main topic of the article is the brand trust of selected gastronomic franchising brands. To measure brand trust (quantitative component), we decided to use (as a base) the tool "Perceived Brand Trust" developed by Hess (1995). The tool takes the form of eleven statements, to which the respondent responds by expressing the degree of his/her agreement on a 5-point Likert scale. Hess (1995) states that brand trust is based on altruistic, reliable, honest, and competent aspects and that the consumer knows what to expect from a brand. Of these aspects, the brand trust scale assesses brand honesty, altruism, and reliability. The scale achieved high inter-dimensional correlation and high reliability. It is important to note that modern tools for measuring brand trust are also created and modified on a given dimensional basis (e. g. Munuera-Aleman et al., 2003).

As we use a significantly modified scale, it is necessary to verify its reliability. Cronbach's alpha is used to investigate the reliability (accuracy and reliability of a research tool) within the internal consistency of the selected scale, while the value of Cronbach's alpha should be in the range of 0.750 – 0.950 (Tavakol & Dennick, 2011). The standard deviation shows to what extent the individual measured values are around the mean value. The smaller the standard deviation, the closer the measured values are to the mean value. If the variance is smaller, it can be understood that the statement was rated similarly by all respondents.



In this work, we use basic statistical indicators such as average and indicators of the mean value of the position. From the point of view of practice, the arithmetic mean (simple mean) is most often used. The arithmetic mean represents the sum of all character values divided by their number. We know two mean values of position, mode and median. The mode represents the value of the character that occurs most frequently in the file. The median represents a value that divides an ordered set into two equally numerous parts. The advantage of the median over the arithmetic mean is that the extreme values in the set will not significantly affect it. To calculate the median, the values of the statistical file are arranged in ascending order of variation.

In general, it can be stated that each interviewee responded to 22 statements (2 selected brands of 11 questions). Mean scores, standard deviations, and Cronbach's alphas for the modified Brand Trust Scale for selected gastronomic franchising brands are presented in Tab. 1 (for McDonald's) and Tab. 2 (for Pizza Mizza).

**Table 1 Modified Brand Trust scale for McDonald's**

Statements for McDonald's*	Mean	St. dev.	Cronbach's alpha***
1. McDonald's is interested in more than just selling me a product and making a profit.	3.46	1.17	0.839
2. I believe that McDonald's would respond respectfully and, in my favour, when the problem arises.	3.78	0.90	0.825
3. McDonald's is genuinely committed to my satisfaction.	3.88	0.91	0.821
4. McDonald's will do whatever it takes to make me happy.	3.56	0.99	0.829
5. When I see McDonald's advertisement, I believe the information in it is accurate.	2.63	1.12	0.817
6. Most of what McDonald's says about its products is true.	2.98	1.03	0.809
7. I think that some of McDonald's claims about its products are puffed up to make them seem better than they really are**	2.21	0.99	0.829
8. If McDonald's makes a claim or promise about its product, it's probably true.	3.32	0.91	0.819
9. McDonald's has quality products.	2.81	1.18	0.812
10. I feel like I know what to expect from McDonald's.	4.16	0.76	0.842
11. McDonald's always offers perfect products.	2.97	1.13	0.810

Notes: \* Used 5-degree Likert scale (1 = strong disagreement, 5 = strong agreement).

\*\* Negative / opposite evaluation.

\*\*\* Overall Cronbach's alpha = 0.845

Source: Own calculation.

Based on the results shown in Tab. 1, it can be stated that the total value of the research tool reaches a high value of reliability (Cronbach's alpha = 0.845). Regarding the partial values of Cronbach's alpha belonging to the individual statements, it can be stated that the statements are set correctly (none of the statements needs to be omitted or updated). From the point of view of the standard deviation, it can be stated that the perception of the respondents is relatively consistent. The lowest value of the standard deviation was found in statement No. 10 (with the highest average value of 4.16 points), which clearly indicates to us that the respondents know what to expect from McDonald's.

**Tab. 2 Modified Brand Trust scale for Pizza Mizza**

Statements for Pizza Mizza*	Mean scores	St. dev.	Cronbach's alpha***
1. Pizza Mizza is interested in more than just selling me a product and making a profit.	3.06	0.78	0.862
2. I believe that Pizza Mizza would respond respectfully and in my favour when the problem arises.	3.26	0.71	0.852
3. Pizza Mizza is genuinely committed to my satisfaction.	3.32	0.71	0.842
4. Pizza Mizza will do whatever it takes to make me happy.	3.16	0.76	0.846
5. When I see Pizza Mizza advertisement, I believe the information in it is accurate.	3.17	0.68	0.851
6. Most of what Pizza Mizza says about its products is true.	3.19	0.65	0.847
7. I think that some of Pizza Mizza claims about its products are puffed up to make them seem better than they really are.**	2.88	0.69	0.875
8. If Pizza Mizza makes a claim or promise about its product, it's probably true.	3.23	0.64	0.849
9. Pizza Mizza has quality products.	3.33	0.80	0.839
10. I feel like I know what to expect from Pizza Mizza.	3.39	0.83	0.854
11. Pizza Mizza always offers perfect products.	3.14	0.77	0.844

Notes: \* Used 5-degree Likert scale (1 = strong disagreement, 5 = strong agreement).

\*\* Negative / opposite evaluation.

\*\*\* Overall Cronbach's alpha = 0.863

Source: Own calculation.

As shown in Tab. 2, the application of the modified Brand Trust scale on the Pizza Mizza label reached a high value of total Cronbach's alpha (0.863), indicating rather high reliability of the research tool. Based on a selective examination of the reliability of individual statements, it can be stated that the exclusion of statement No.7, would increase the overall reliability of the instrument. As we can see, the standard deviation reaches a low value (in all cases the value is up to 0.83), which indicates a relatively strong agreement of the respondents' assessment of the statements.

The modified scale retains the dimensions of the original scale, and thus contains three dimensions: altruism (items 1 – 4), honesty (items 5 – 8) and reliability (items 9 – 11). We used correlation analysis to examine the relationships of individual components of the scale. Of course, given the two companies examined, we calculated the interconnection in both companies. We recorded the results in Tab. 3.

**Tab. 3 Correlations among the dimensions (factors)**

	altruism		honesty		reliability
altruism	1				
honesty	0.529*	0.607**	1		
reliability	0.479*	0.645**	0.641*	0.688**	1

Notes:

\* for McDonald's

\*\* for Pizza Mizza

Source: Own calculations.

Based on Tab. 3, a strong interconnection of dimensions can be stated in all three applications of the scale. It can be stated that the dimensions form a logical sequence and were chosen correctly.

### 3 RESULTS AND DISCUSSION

In the survey, we used a quantitative method to collect data. We conducted a standardized query using a questionnaire. The research was attended by 506 respondents. All respondents come from Slovakia. To achieve the main goal, we focused on solving partial goals, based on which we formulated hypotheses and research questions. In the next section, we focus on answering research questions and verifying hypotheses.

*RQ1: What is the level of McDonald's brand trust perception?*

To measure the perception of brand trust, we used a modified scale, which consisted of eleven statements on a 5-point Likert scale (1 – strong disagreement, 5 – strong agreement). From the above, it can be stated that the measured values can be doubted in the range from 11 to 55 points. The mean measured value when applying the scale to McDonald's was 35.76 points with a standard deviation of 6.88, which represents an average to slightly above average value (the mean value of the scale is 33 points). The minimum measured value was 16 points, and the maximum measured value was 55 points, which represents the maximum possible value of the scale. The median value was 36 points and the mode value were 31 points. Overall, we rate McDonald's brand trust as average to slightly above average.

*RQ2: What is the level of Pizza Mizza's brand trust perception?*

To measure the perception of brand trust, we used a modified scale, which consisted of eleven statements on a 5-point Likert scale (1 – strong disagreement, 5 – strong agreement). From the above, it can be stated that the measured values can be doubted in the range from 11 to 55 points. In the case of Pizza Mizza the average measured value was 35.13 points with a standard deviation of 5.23 points. The median and modus reached the same value, namely 33 points. The lowest measured value was 17 points, and the maximum value was 52 points. Overall, we interpret the measured value as average.

*RQ3: How can the differences in the perception of domestic and foreign franchising brands be interpreted in the context of brand trust?*

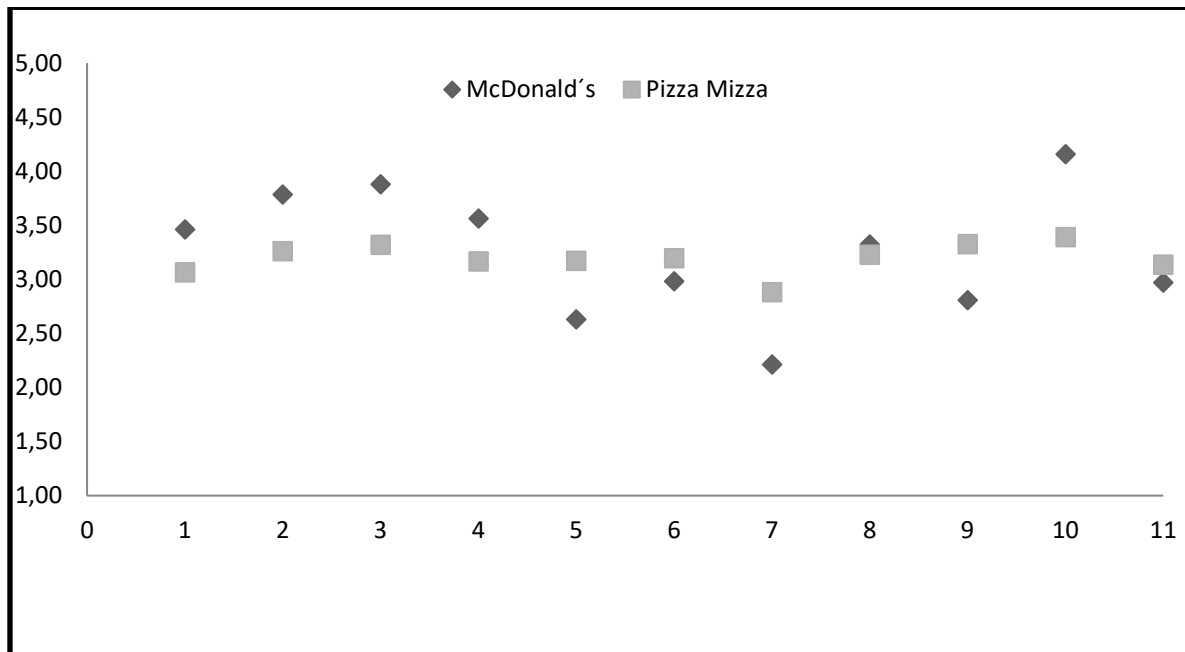
*H1: There are significant differences between the average trustworthiness ratings of the selected brands based on the survey.*

From the initial analysis focused on the total average value of the Brand trust, it can be stated that there are no significant differences (McDonald's – 35.76; Pizza Mizza – 35.13). Overall, it can be stated that there are no significant differences from the point of view of the country of origin as we might expect (concerning the effect of ethnocentrism, the effect of the country of origin, etc.). As we can observe, the domestic gastronomic company (brand) achieves an overall lower average brand trust. From the point of view of accuracy, it should be noted that these results are only indications. To know the existence of a differences between the perception of brand trust of selected brands (H1), we used the ANOVA test, based on which it can be stated that we do not have enough evidence to reject the null hypothesis, therefore we can expect that the mean brand trust ratings will not have significant differences (P-value = 0.103; alpha = 0.05).

If we focus on specific statements and specific dimensions, we can observe certain differences (see Graph 1). As can be seen from Graph 1, in terms of dimensions, McDonald's reaches the better level in the dimension of altruism. On the contrary, McDonald's has significant

shortcomings in the dimension of honesty. McDonald's has significant fluctuations in the reliability dimension, while Pizza Mizza maintain above-average levels of perception.

**Graph 1 Difference of individual statements**



Note: The X-axis represents the individual statements of the instrument and the Y-axis represents the average measured values.

Source: Own processing.

### 3.1 Discussion

The article provides an overview of franchising brands in the gastronomy industry. The set goals of the work were fulfilled based on the results. Based on the results of the primary survey, it can be stated that consumers perceive the brand trust of selected companies in approximately the same way. However, we find significant differences in the closer analysis of the elements of the research tool. In the dimension of altruism, McDonald's achieved the best score. There may be several reasons. One reason may be the wide range of activities that a company (under its own brand) carries out in favour of social and environmental responsibility. From the findings of the primary survey, consumers are also satisfied with the service that the company offers, and this satisfaction is transformed into happiness. Pizza Mizza brand was second but it should be noted that brand achieved above-average results in the given dimension. From the point of view of the country of origin, it can be stated that foreign companies achieved equal placements. We also consider it important to state that the subject of our research was franchising brands. In this context, it can be stated that a high level of brand trust can be caused by this business model. It can be stated that this is a highly competitive advantage, which is also reflected in brand trust. Of course, if low values were measured, this could be explained as a risk for potential franchisees. McDonald's performed badly in the honest dimension. Respondents perceive McDonald's as a company that is not honest and even misleading. It follows from the above that the company should refine its branding strategies and especially communication. In terms of reliability and quality, McDonald's achieved a low score, but in terms of expectations, it can be clearly stated that

consumers know what to expect from the brand. The results provide essential findings for determining branding strategies, marketing mix applications and managerial decision-making.

## CONCLUSION

The aim of the presented article was to (1) measure the trustworthiness of a selected domestic (Pizza Mizza) and foreign franchising brand (McDonald's) and (2) identify differences in the context of the country of origin. This goal can be considered fulfilled.

The research focused on selected franchising gastronomic brands: McDonald's and Pizza Mizza. Although these brands each offer different products, from a marketing point of view, they satisfy the same primary needs of customers. They can therefore be considered as competing brands.

The measurement of brand trust was performed using the modified Perceived Brand Trust scale proposed by Hess (1995). The scale had to be modified to a large degree, as it focused on the automotive industry (but the dimensions were retained). The modified scale achieved high reliability in all applications (Cronbach's alpha for individual brands were 0.845 – McDonald's, 0.863 – Pizza Mizza). Based on the results, it can be stated that the brands reached roughly the same level of brand trust. However, it should be noted that there were significant differences in consumer perceptions in terms of the individual dimensions of the instrument (altruism, honesty, and reliability).

Pizza Mizza received the lower overall average score. Therefore, it would be prudent for the company to increase community engagement and outreach, which can lead to higher brand trust. Another possible factor that affected the overall score may be the limited number of years the company has been operating. Pizza Mizza also speaks against its strong geographical concentration (especially around the capital of Slovakia).

Our research also has its limits. We consider the selection of samples to be one of the most important. The selection of the sample limits us to interpretation only for the given sample, and therefore we understand consumers only in terms of consumers in our research sample. It is necessary to realize that although there are several surveys examining brand trust, these are not comparable in terms of methodology. It should also be noted that the research took place in only one country, and thus the results may be affected by regional variables not considered.

Future research should further validate and develop the theory of brand trust. We consider the international measurement of brand trust to be an option, whether in terms of franchise brands or other areas. We recommend for future research to eliminate possible sample limits, and to examine several brands based on a modified scale. By making an international comparison, it would be possible to examine other factors that could affect brand trust (e.g. cultural dimensions, demography).

The results of the brand trust scale can be used both in scientific work and in order to examine the brand trust of private labels. The results can then be applied in marketing campaigns, as well as in all elements of the marketing mix. At the same time, the results offer useful data for managerial decision-making.

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# Challenges and opportunities of heritage tourism for European youth - The role of memorial houses in promoting European destinations

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**Abstract:** This research focuses on youth interest in an underexploited niche of heritage tourism, namely memorial houses. A memorial house is a small museum dedicated to a personality who lived or was created in that house or both. Thus, sometime after the departure of this person to eternity, the house was established to be visited for cultural, educational and tourist purposes. The study was aimed at young people between the ages of 18 and 26 and was conducted online between May 23 and 26, 2022. The 506 respondents were mainly students. The collected data were processed using SPSS and several statistical tests were performed. The main results showed that young people are interested in visiting memorial houses to enrich their level of general culture, learn new information in an attractive way, and better understand the past. From the results, some recommendations for action can be derived in order to raise awareness and encourage young people to visit memorial sites. These can be a link between youth communities in Europe and contribute to the consolidation of a European cultural identity.

**Keywords:** heritage tourism, memorial houses, young tourists, types of culture tourists, destination management organizations

**JEL Classification codes:** Z30, Z39, M30

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## INTRODUCTION

Cultural tourism is probably one of the oldest forms of tourism. Even in Roman times, people traveled for reasons that we now call cultural tourism, but at that time they were not recognized as a distinct group of tourists. Visiting historical sites, cultural landmarks, participating in festivals and special events or visiting museums have always been part of the overall tourist experience. So, it can be said that every trip contains a cultural element. By its very nature, the art of travel takes tourists away from their home culture and temporarily transports them to a different cultural environment, be it a big city or a village forgotten by the world.

In recent years, cultural tourists have attracted more and more research interest because of the social and cultural dimensions of cultural tourism. Attracting cultural tourists has become a common strategy for countries and regions seeking to preserve their traditional culture, develop new cultural resources, and create a cultural image. Much of the research on cultural



tourism now focuses on the quality of the experience and the impact of cultural tourism, both on the tourists themselves and on the places and communities they visit.

Growth in cultural tourism was also marked by fragmentation into a number of emerging niches, such as heritage tourism, arts tourism, gastronomic tourism, film tourism and creative tourism (Richards, 2018). One component of cultural tourism is heritage tourism, that constitutes a large share of cultural tourism (Seyfi et al., 2019). It is based on a nation's cultural heritage. The definition of cultural heritage has been revised and changed several times over time. Cultural heritage has a broad meaning that encompasses many forms of heritage. Cultural heritage consists of tangible forms such as monuments, building complexes, and sites of outstanding universal value from a historical, aesthetic, ethnological, or anthropological perspective. Over time, the concept of cultural heritage has expanded beyond its tangible content to its intangible forms, such as the knowledge, beliefs, and traditions of various communities that are a source of identity for them.

According to this understanding of heritage tourism, memorial houses are a component of this form of tourism. A memorial house is a small museum dedicated to a personality who lived or was created in that house or both. Thus, sometime after the departure of this person to eternity, the house was established to be visited for cultural, educational and tourist purposes.

The aim of this article is to study the interest of young Romanians in visiting memorial sites. This interest is examined through the prism of the cultural motivations that could be the basis for these visits and through the prism of the factors that could reinforce this interest. The paper continues with an examination of the literature, research methodology, and presentation of the main findings. Finally, there is a section dedicated to the conclusions and the main practical implications.

## **1 LITERATURE REVIEW**

Cultural tourism has its roots in the Grand Tour, which originated in Britain in the 17th century (Hibbert, 1969; Feifer, 1985). Although the Grand Tour is generally considered the origin of cultural tourism in Europe, there is much older evidence of travel that is now categorized as cultural tourism. For example, one of the oldest evidences of travel is the Diary of Egeria, which dates back to the 4th century, the oldest known pilgrim. Originally from Spain, Egeria describes a pilgrimage that she herself made to the Holy Places. Egeria made pilgrimages to Constantinople, and later to Syria, Palestine and Egypt. In the 15th century, Cyriacus of Ancona traveled in search of the classical past of the Mediterranean. He thus laid the foundation for the Grand Tour of the 17th century and the cultural celebrations of today (Belozerskaya, 2010). Cultural tourism was recognized as a distinct form of tourism product in the late 1970s, when marketers and tourism researchers recognized that some people travel specifically to gain a deeper understanding of a destination's culture or heritage (Tighe, 1986).

Cultural tourism - defined by the UNWTO as tourism that focuses on cultural attractions and products- is one of the fastest growing segments of the tourism industry, accounting for about 40% of total world tourism (UNESCO, n.d.). This figure is derived from applying an operational definition of cultural tourists as people who visit a cultural or cultural-historical attraction or museum or attend a performance during their trip (McKercher and Du Cros, 2012). Cultural tourism occurs at the intersection of heritage and religious sites, arts and crafts, performing arts, gastronomy, creative industries, festivals, special events, among others and vibrant cultures with their lifestyles, values, systems, beliefs, and traditions. Cultural tourism is a type of tourism activity in which the visitor's essential motivation is to learn, discover, experience and consume the tangible and intangible cultural attractions/products in a tourism destination (Richards, 2018). As part of cultural tourism, heritage tourism products and experiences can generate substantial economic and social contribution to local communities (Little et al., 2019).

From a policy perspective, countries around the world have used cultural tourism as a means to achieve a number of strategic goals. Cultural tourism can be used for cultural diplomacy as a form of *soft power* to build dialog between peoples and support foreign policy.

Cultural and historical resources attract more and more visitors every year. Cultural tourism is an increasingly consistent, widespread, and perhaps the fastest growing sector of today's tourism industry. In fact, cultural tourism appears to be growing much faster than any other form of tourism, especially in developing countries, and is therefore seen as a potentially important tool for poverty alleviation and community economic development (Timothy and Nyaupane, 2009).

McKercher and Du Cros (2002 and 2012) distinguish five types of tourists. These include (1) the intentional cultural tourist, the person usually associated with cultural tourism who travels for cultural tourism reasons and seeks an in-depth cultural tourism experience; (2) the visiting cultural tourist, who travels for cultural tourism reasons but seeks a superficial experience; (3) the casual cultural tourist, for whom cultural tourism is not a stated reason for visiting a destination but who has an in-depth cultural tourism experience; (4) the casual cultural tourist for whom cultural tourism is not a stated reason for visiting a destination but who visits heritage attractions; and (5) the casual cultural tourist who cites cultural tourism as a weak reason for visiting a destination and seeks a superficial experience.

Regarding gender, several studies have shown significant differences between women and men in terms of their behavior: Women can be more expressive (Hwang et al., 2015), interactive (Fournier, 1998), and emotional (Yelkur and Chakrabarty, 2006) than men; on the other hand, men can be more supportive (Milman and Pizam, 1988), benefit-oriented (Diep and Sweeney, 2008), and task-oriented (Eagly, 2013). Therefore, gender is not only an important variable to consider in terms of consumer behavior and decision making (Yoo et al., 2017), but also helps to understand that women as a group are becoming increasingly important in their capacity as consumers in general (D'Souza and Taghian, 2017) and in tourism products in particular (Jucan and Jucan, 2013). In this sense, Đeri et al.'s (2017) research related to travel decisions found that men make decisions faster and more intuitively, while women consider the opinions of their families and friends and, as Karatsoli and Nathanail (2020) point out, are influenced by social networks.

Regarding educational attainment, there is little controversy; most studies conclude that heritage site visitors generally have a college education (Silberberg, 1995; Huh et al., 2006; Correia et al., 2013; Remoaldo et al., 2014; Antón et al., 2017; Ramires et al., 2018). That is, as Adie and Hall (2016) and Remoaldo et al. (2014) conclude, the higher the educational level of people, the greater the motivation to visit a historic and heritage site, and therefore, the greater the lived experience is expected to be. It is also argued that heritage sites are attractive to students who visit them for educational purposes, and therefore this visitor group should be included in such analyzes (Chen and Huang, 2018).

In addition, previous research agrees that visitors to heritage destinations, with the exception of students, have middle to high income levels (Huh et al., 2006; Correia et al., 2013; Bright and Carter, 2016; Ramires et al., 2018; Chen and Huang, 2018).

Tourists seek the "real thing," in other words, an "authentic experience," but they also want proof that these things are authentic (Stiebel, 2004). Other concepts sought in the current literary scene besides authenticity are nostalgia and an emotional connection to the author. Nostalgia refers to emotional attachment to the past, the evocative power of objects, and the need to escape a less meaningful present (Gentile and Brown, 2015).

Cultural tourism is generally based on living and built elements of culture and refers to the use of the tangible and intangible past as a tourism resource (Timothy and Boyd 2006). People visit heritage sites to learn, satisfy their curiosity, feel nostalgia, develop spiritually, relax, get

away from home, spend time with loved ones, or "discover" themselves (Confer and Kerstetter, 2000; Krakover and Cohen, 2001; Timothy and Boyd, 2003). Nyaupane et al. (2006) divided cultural tourists into three types according to their motivation: culture-centered, culture-conscious, and culture-admiring.

Regardless of the environment in which it takes place (cultural or natural) or the location of the destination, cultural tourism refers only to the activities that result from visiting a particular place and experiencing it (Nguyen and Cheung, 2014). Places associated with a famous person are an important component of the cultural heritage sector (Smith, 2003). In particular, the actual places where authors were born, lived, and wrote famous literary works represent essential values of destinations as an element of cultural heritage.

## 2 METHODOLOGY

Based on the literature review, a questionnaire was developed to examine young people's interest in visiting memorial houses, motivations for visiting, and the importance of sociodemographic characteristics in developing such interest in visiting. It also examined the sources of information that young people use. The questionnaire that formed the basis for the study consisted of four sections: (i) a profile of tourists (gender, age, place of origin, and personal monthly income), (ii) sources of information used or of interest, (iii) motivations for visiting, and (iv) a background related to personal interest in culture, schooling, or family. The question on information sources was adapted from Björk and Kauppinen-Räsänen (2016) and identifies 16 different types of information sources. The identification of visit motivation is based on the work of Seyitoğlu (2020), Negruşa and Yolal (2012), and Šimková and Holzner (2014). Items were measured on a 5-point Likert scale ranging from 1 (not at all or strongly disagree) to 5 (very much, to the greatest extent, or strongly agree).

The survey was conducted online between May 23 and May 26, 2022. The 500 respondents were mainly students of the Faculty of Business and Tourism and some of their friends from outside the faculty. The structure of the sample is as follows:

**Tab. 1 The sample structure**

Characteristics		Frequency	Percentage (%)
Gender	Boys	254	50,3
	Girls	252	49,7
Age	Under 21	207	40,5
	Between 21- 23	219	43,3
	Between 23-26	80	16,2
Place of origin	Bucharest	217	42,7
	Another city	188	37,4
	Rural	101	19,9
Income	Less than 1500 lei (300€)	223	43,3
	Between 1500 – 2500 lei (300 - 500€)	112	22,2
	Between 2501 – 4000 lei (500 - 800€)	109	21,6
	More than 4000 lei (800€)	62	12,5

Source: authors own computation

The SPSS program was used for thorough data analysis. Data were coded according to the program's specifications and various tests were performed, including regressions, T-tests, and

chi-square tests with Spearman's rank correlation. For data analysis, the questions and response options in the questionnaire were coded so that they could be processed.

### 3 RESULTS AND DISCUSSION

The initial results showed that more than 90% of the respondents had visited a memorial house. The same result was obtained when the young people were asked if they had ever heard about memorial houses in the institutional context of school. An interesting finding was that 81% of respondents had heard about memorial houses within their family or circle of friends.

As for advertising such sites, 31% of young people had not encountered such campaigns. This fact may be due to several reasons, including campaigns that did not target the youth market or poorly executed campaigns. At the same time, young people's inattention could also be a cause.

The young respondents were asked what prompted them to visit such a memorial house. The answers received varied. The variant with the most answers (65%) is that it was included in the program of an excursion organized by the school. Thus, it can be said that the school and educational institutions, in general, are the main promoters of visits to such destinations.

The next variant with the most responses (39%) was that they visited it, but the visit was accidental, because the tourist destination was in the area where the young people were already vacationing. This fact shows that even if young people did not plan to visit such destinations in advance, they are eager to have new experiences and visit memorial houses.

On the other hand, about 22% of young people answered that visiting memorial houses was a personal desire, out of appreciation for the personality who lived there, and about 5% of respondents even answered that it was a family custom to visit such places. About 8.7% of the respondents said that they had never visited memorial houses.

**Tab. 2 The importance of information sources in the decision to visit memorial houses**

Website, blogs (e.g. Tripadvisor)	Travel guide	Internet	Family	Teachers	Friends, colleagues	Tourism brochures	Public tourist information	Newspapers	Websites of destinations
4.01	3.64	4.22	3.52	3.61	3.50	3.40	3.58	2.41	3.95
Travel agencies	Websites of local authorities	TV programs	Radio	Tourism fairs	TV advertising	Advertising on the Internet and social media			
3.70	3.17	3.35	2.97	3.46	3.33	3.90			

Source: authors own computation

Study participants were asked what sources of information they considered important when deciding to visit memorial houses (see Table 2). The given answers were processed and the average was calculated from them. Thus, young people believe that the most important source, in general, is the Internet (4.22), websites - blogs on tourism and websites of destinations in particular (4.01). It also showed that advertisements on the Internet and social networks are also considered very important. The least important were newspapers (2.41), radio (2.97), local government websites and even TV. These results can represent a real challenge for the

implementation of campaigns to attract the young target group to such cultural heritage destinations.

Regarding the achievements of famous people who lived or created in these memorial houses, young people indicate that they are most interested in "Famous people and their achievements in technology, science, medicine, etc." (3.8 on a 5-point Likert scale), in "Romanian artists and their creations" (3.56), and in "Romanian history and historical and political figures" (3.52). In last place was the interest in "Romanian literature and Romanian writers", with an average of 3.21. The results may indicate that young people's interest in reading in general and in Romanian literature in particular is decreasing.

As for the reasons for visiting memorial houses, as described in the academic literature, young respondents are most interested in the novelty and the learning experience they can have there. At the same time, such visits are seen as an opportunity for escape and relaxation. Young people are not so much of the view that visiting such sites is a good opportunity to socialize, nor do they see the experience as one from which they can grow personally.

There are many factors that drive young people to visit such heritage sites. Most of them would visit them if schools, faculties or student associations organized such visits. At the same time, respondents believe that the existence of tourist offers developed by travel agencies specifically for young people could be a good context that would make them want to visit memorial houses. The willingness of family or friends to visit such sites is also an important factor in the decision to have such an experience. A common factor in these responses is that young people want to have such experiences in a group, with family, friends, or colleagues. Participating in such activities with close people can be an important motivating factor.

Respondents cited "development of general culture" as the most important benefit of the visit, with an average of 4.26 on a 5-point Likert scale, followed by "acquisition of new information" (4.11) and "easier understanding of the past" (4.05). Not to be neglected is also the response showing that young people believe that by visiting such destinations "some lessons can be learned in an enjoyable way that might otherwise be more difficult to learn" (3.88) and that "the visit contributes to a better understanding of the works and lives of personalities" (3.87).

In order to deepen the analysis of the results, a T-test was performed to correlate the gender of the participants with their interest in the four areas indicated in the questionnaire, namely "Romanian literature and Romanian writers", "Romanian history and historical and political figures", "Romanian artists and their work (painters, musicians, etc.)", and "Famous figures and their achievements in areas other than those mentioned above (technology, science, medicine, etc.)". From the four tests, it appeared that there was a statistically significant difference between the two genders in three of the four possible areas of interest (Table 3).

**Tab. 3 Correlations between gender and respondents' areas of interest (T-test)**

	F	Sig.	Sig. (2-tailed)	p-value (Sig. 2-tailed<0.05)
<b>Romanian literature and Romanian writers</b>				
Equal variances assumed	1,783	.182	.001	
Equal variances not assumed			.001	
<b>Romanian artists and their work</b>				
Equal variances assumed	4,099	.043	.000	
Equal variances not assumed			.000	
<b>Famous figures and their achievements in other areas (technology, science, medicine...)</b>				
Equal variances assumed	3,314	.069	.025	
Equal variances not assumed			.025	

<b>Romanian history and historical and political figures</b>				
Equal variances assumed	,726	.395	.385	
Equal variances not assumed			.385	

Source: authors own computation

Thus, there is a statistically significant difference between boys and girls in terms of interest in "Romanian literature and Romanian writers" (Sig. (2-tailed) < 0.05), "Romanian artists and their work (painters, musicians, etc.)" (Sig. (2-tailed) < 0.05) and "Famous personalities and their achievements in other areas (technology, science, medicine...)" (Sig. (2-tailed) < 0.05). For interest in "History of Romania and historical and political figures" there was no statistically significant result in terms of gender differentiation, Sig. 2-tailed > 0.05.

Therefore, it can be said that there are significant differences between girls and boys in terms of areas of interest. These differences can lead to different motivations and eventually to different behaviors, so that a gender-differentiated approach to the promotion of memorial houses can be proposed.

After applying another set of T-tests, it was found that there were no gender differences in these motivations for visiting memorial houses: "novelty and learning," "socialization," and "personal development," Sig. 2-tailed > 0.05 was found in all cases.

Statistically significant tests were found for the main motives to visit memorial houses: "escape and relaxation", "cultural experience" and "personal rewards" (Sig. (2-tailed) < 0.05) (see Table 4).

**Tab. 4 Correlations between gender and types of visit motivations (T-test)**

	F	Sig.	Sig. (2-tailed)	p-value (Sig. 2-tailed<0.05)
<b>Escape and relaxation</b>				
Equal variances assumed	0,003	.985	.042	
Equal variances not assumed			.042	
<b>Cultural experience</b>				
Equal variances assumed	,289	.591	.018	
Equal variances not assumed			.018	
<b>Personal rewards</b>				
Equal variances assumed	,263	.608	.003	
Equal variances not assumed			.003	

Source: authors own computation

It can be concluded that boys and girls have the same motivations for visiting memorial houses, but that they also have some differences in their motivations. It is important to see how these motivations can be used to attract tourists.

A T-test was also performed to relate the gender of the respondents and their opinion on the impact of such visits on information gathering. The results were statistically significant, so it can be stated that boys and girls have different opinions about the impact of such a visit on a tourist (see Table 5).

**Tab. 5 T-test conducted to correlate gender and respondent's opinion on information gathering**

	F	Sig.	Sig. (2-tailed)	p-value (Sig. 2-tailed<0.05)
Equal variances assumed	1,379	.241	.007	
Equal variances not assumed			.007	

Source: authors own computation

Regression was performed, with the dependent variable being young people's intention to visit memorial houses (Table 6). The predictors were all 6 motivators mentioned above ("novelty and learning," "socialization," and "personal development", "escape and relaxation", "cultural experience" and "personal rewards").

**Tab. 6 Model summary (1)**

Model	R	R squared	Adjusted R squared	Standard Error of the Estimate
1	,774 <sup>a</sup>	,599	,595	,61578
a. Predictor: (Constant), Q4REWORD, Q4NOVELTY, Q4ESCAPE, Q4SOCIALIZATION, Q4EXPERIENCE_C, Q4DEVELOP_P				

Source: authors own computation

From Table 6, it can be seen that there is a strong correlation between the independent and dependent variables. The R<sup>2</sup> value indicates how much of the total variation in the dependent variable, youth intention, can be explained by the independent variables. In this case, 59.9% can be explained, which is a good value. There must be a minimum difference between R<sup>2</sup> and the adjusted R<sup>2</sup>. In this case, the value is .595, which is not far from .599 and thus a good value.

**Tab. 7 ANOVA (1)**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	283,067	6	47,178	124,419	,000 <sup>b</sup>
	Residual	189,214	499	,379		
	Total	472,281	505			
a. Dependent variable: Q5INTENTION_VIS						
b. Predictor: (Constant), Q4REWORD, Q4NOVELTY, Q4ESCAPE, Q4SOCIALIZATION, Q4EXPERIENCE C. O4DEVELOP P						

Source: authors own computation

It turns out that the regression model significantly predicts the dependent variable (Sig.<0.0001, which is less than 0.05).

Table 8 provides the information necessary to estimate intentions to visit such destinations that are correlated with respondents' motivations, as well as to determine whether (and which) motivations contribute statistically significant to the model by analyzing the "Sig." columns. Thus, the table shows the strength of the relationship, i.e., the significance of the variable in the model and the extent to which it influences the dependent variable.

**Tab. 8 Coefficients (1)**

Model		Unstable coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,012	,176		-,066	,947
	Q4NOVELTY	,249	,053	,153	4,692	,000
	Q4SOCIALIZATION	,078	,040	,091	1,959	,051
	Q4ESCAPE	,103	,044	,114	2,366	,018
	Q4DEVELOP_P	-,073	,044	-,088	-1,676	,094
	Q4EXPERIENCE_C	,506	,048	,513	10,471	,000
	Q4REWORD	,100	,042	,115	2,389	,017
a. Dependent variable: Q5INTENTION_VIS						

Source: authors own computation

The significant change in intention to visit by the motivations "Novelty and Learning," "Escape and Relaxation," "Cultural Experience," and "Personal Rewards" is statistically significant based on the Sig. values: ,000; ,018; ,000 and ,017, respectively, which are below the acceptable value of 0.05. Increasing by 1% each motivation increases the intention to visit by 0.249%, 0.103%, 0.506%, and 0.100%, respectively, values obtained from the analysis of column "B".

Thus, the analysis suggests that promoting the four motivations has a statistically significant positive relationship with intention to visit.

The second regression in which the dependent variable was represented by respondents' intention to visit memorial houses was performed. Predictors were all 4 areas of interest mentioned earlier in the paper (Q3A - "Romanian literature and Romanian writers", Q3B - "Romanian history and historical and political figures", Q3C - "Romanian artists and their work (painters, musicians, etc.)" and Q3D - "Famous figures and their achievements in fields other than those mentioned above (technology, science, medicine, etc.)").

**Tab. 9 Model summary (2)**

Model	R	R squared	Adjusted R squared	Standard Error of the Estimate
1	,609 <sup>a</sup>	,371	,366	,77022
a. Predictor: (Constant), Q3A, Q3B, Q3C, Q3D				

Source: authors own computation

From Table 9, it can be seen that there is a good correlation between the independent and dependent variables. The value  $R^2$  indicates how much of the total variation in the dependent variable, respondents' intention, can be explained by the independent variables (in this case, 37.1%, which is a value that does not indicate a complete relationship). There must be a minimum difference between the adjusted  $R^2$  and the  $R^2$ . In this case, the value is .366, which is not far from .371 and thus a good value.



**Tab. 10 ANOVA (2)**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	175,065	4	43,766	73,774	,000 <sup>b</sup>
	Residual	297,216	501	,593		
	Total	472,281	505			
a. Dependent variable: Q5INTENTION_VIS						
b. Predictor: (Constant), Q3D, Q3A, Q3B, Q3C						

Source: authors own computation

From the analysis of the Sig., it appears that the result is statistically significant.

**Tab. 11 Coefficients (2)**

Model		Unstable coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,883	,150		5,886	,000
	Q3A	,217	,037	,251	5,777	,000
	Q3B	,196	,036	,237	5,502	,000
	Q3C	,130	,040	,147	3,246	,001
	Q3D	,145	,040	,156	3,638	,000
a. Dependent variable: Q5INTENTION_VIS						

Source: authors own computation

The significant change in intention to visit the memorial houses in relation to the topics of interest ("Romanian literature and Romanian writers," "Romanian history and historical and political figures," "Romanian artists and their work (painters, musicians, etc.)," and "Famous figures and their achievements in fields other than those mentioned above (technology, science, medicine, etc.)") is statistically significant based on the Sig. values: .000; .000; .001; and .000, all of which are below the acceptable value of 0.05. Thus, for a 1% increase in young people's interest in each topic, intention to visit increases by 0.217%, 0.196%, 0.130%, and 0.145%, respectively, values obtained from the analysis of column "B."

In this way, all topics contribute to increasing young people's intention to visit memorial houses. Thus, the more the young people are interested in these areas, the more likely they are to be interested in visiting memorial houses of personalities who created in these areas. This result is a conclusion in itself, but it can be used for targeted social media campaigns.

## CONCLUSION AND PRACTICAL IMPLICATIONS

The definition of cultural heritage has been revised and changed several times over time. Cultural heritage has a broad meaning that encompasses many forms of heritage.

Considering the "McDonaldization" of destinations (Ritzer and Liska, 1997), cultural tourism could play an important role in the "dehomogenization" of destinations, as it also enriches the tourist experience. Therefore, cultural understanding can be enhanced through tourism.

The relationship between tourism and culture could also be beneficial for tourism. Several authors believe that this link is strategic for the development of tourism, as it can be the basis for a tourism strategy based on sustainability, authenticity, and a mix of traditional and modern

products, rather than a strategy that relies on a policy of low prices. Such a strategy could also help reduce seasonality.

Promoting memorial houses is an important way to increase the number of tourists and raise society's awareness of the existence of such an opportunity to visit. Ways to promote such goals can be developed at different administrative levels and time horizons. Within the framework of promotion for young people, some specific directions can be put into practice.

Local and central governments need to work with tourism operators to achieve coordinated and coherent promotion of memorial houses. First of all, local governments should properly signpost the routes to such tourist areas. Proper signage not only facilitates access, but also creates awareness of the existence of these places. Many young people said that they visited such places because they learned about this possibility on the spot.

In general, society tends to digitize, inform, and communicate online. Young people are the first to tend in this direction. Thus, the majority of respondents in the study cited the Internet and the various forms of advertising found there, such as websites and social networks, as the main sources of information for memorial houses tourism. They cited specialized travel websites, destination tourism websites, and Internet advertising and social media as the most important sources of information. A website allows a wider audience to access information and is also a mobile medium that can be accessed from anywhere.

Therefore, a very important advertising direction is for these tourist destinations to have their own website and social media pages. In order to attract as many visits and ultimately tourists as possible, the website must be adapted to today's requirements in terms of design and functionality. In addition to the form, the content of the site must be designed to present data about the destination itself, its history, but also data, information and stories from the life or work of the personality who lived in this place.

Such content could also be promoted on social networks and, finally, a coordinated campaign strategy could be created between the destination's digital platforms to raise awareness of what the tourist destination stands for, as well as the personality who lived there, with the ultimate goal of attracting tourists. The content of the posts can be both informative and cultural to meet the main tourist motives (novelty, learning and cultural experience) of young people. At the same time, campaigns and messages can be created to highlight that such a visit is an escape from everyday life and an opportunity to relax, through which one can also enrich oneself on a spiritual level. Messages can be created to point out that visiting such places with friends is an opportunity to socialize, find topics of conversation, and perhaps discover passions.

Many young people responded that they would go or have gone there with their family or friends. A small portion answered that it was even a habit in their family. So, messages and campaigns can be created to convey the message that these types of tourist attractions, memorial houses, are just a good place to practice tourism with family or friends. Since few would travel specifically for these destinations, advertising can be done zonally to attract tourists from the surrounding areas. The other motivations can only be achieved by visiting "locally". Of course, few young people responded that the purpose of a tourist trip is to visit such destinations, but through these promotional methods you can attract people from near the destinations that they can visit as part of a weekend tourism or vacation.

At another level of management, it is important for local governments, as well as private providers or associations in the field, to approach schools, faculties, or student associations with suggestions for trips and excursions for students to such places. Most respondents indicated that they visited memorial houses primarily as part of a school-organized field trip. This possibility of culturalization must be used because it is the main driver of this type of tourism among young people. Apart from motivating young people, these visits, if they start

at an appropriate age in school, can create a clearer and more inclusive view of students on the topics covered in class.

For students, this type of tourism could be promoted and practiced by student associations and help to satisfy the needs and desires of young people expressed in the above motives. More than 60% of the respondents indicated that the organization of visits to memorials by schools, faculties and student associations would make them want to visit.

More than 40% of young people responded that if travel agencies offered special packages for young people that included visits to memorial houses, this fact would prompt them to visit and take such trips. Travel agencies could take advantage of this untapped market of cultural tourism in general, and memorial houses tourism in particular, to increase the profitability of their businesses. This type of tourism could also reduce seasonality, benefiting all players in the industry.

Last but not least, the Ministry of Tourism, the Ministry of Culture and the future local and regional DMOs (Destination Management Organizations) as well as the national DMO have a very important role to play in promoting this type of tourism. The Ministry of Tourism and the Ministry of Culture play an essential role in creating a favourable framework for the development of this type of tourism, promoting it through the attention they can give it, but also through funding lines that can be allocated for the restoration of these tourist destinations in collaboration with local authorities. The restoration of these objects is crucial for attracting tourists and promoting Romanian culture and cultural-historical tourism. There are many examples of memorial houses that have been restored through private initiative. The restored memorial houses attract not only tourists, but also the organization of events in the houses, creating successful businesses.

DMOs, both local and regional, must take care of integrated and coordinated development of tourist destinations. They must create tourist routes and cultural routes, promote their development, and promote tourist attractions in their area, including memorial houses. DMOs must take care of strategic coordination of tourism development and investment needs related to memorial houses in their area of action. The implementation of measures to promote and attract tourists must also be the responsibility of these organizations. Websites and applications could be created to promote cultural destinations in general and memorial houses in particular, as well as websites and applications to find tourist routes and cultural routes in the region. A large number of tourist routes and cultural routes are already approved at the Ministry of Tourism level. DMOs could facilitate school trips to such destinations and partner with travel agencies to attract tourists.

The national DMO could address the creation of an inclusive vision for the development of cultural and heritage tourism. At the same time, private initiatives can and should be encouraged to create profile websites and platforms. Special applications with routes and audio information can also serve as guides for tourists. This format allows tourists to interact with the site without having to hire a guide or carry a map. Online maps are a popular online tool for providing content for cultural tourism. The development of digital maps as ubiquitous mapping tools has led to the creation of numerous tourism maps. These maps have been created in various places around the world by various stakeholders, such as private companies, tourism boards, community organizations, the media, and individuals. Thus, the role of DMOs is also to coordinate and guide all interested parties to create products that satisfy the needs and desires of tourists and allow anyone interested to obtain the information they want.

Even though the sample of this research cannot be considered representative of the whole population (all young people in Romania), the results have been statistically validated so that the conclusions can be considered when making decisions to promote heritage tourism among young people. And if we assume that cultural tourism in general is of interest to people with a certain level of education, then the current sample can be used as a benchmark. Further

research could find out whether the profile of higher education influences the motivation for cultural tourism, but the fact that the respondents are students suggests to us that they have an interest in visiting cultural destinations.

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# **The Belt and Road Initiative's impact on Poland in the period 2015-2022. International business implications**

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**Abstract:** The biggest Chinese investment initiative is named Belt and Road (BRI), which was launched by President Xi Jinping in September 2013 and involved directly more than 70 countries worldwide with a total investment above 1 Tn USD. This impacts business management not only in Poland but also in other countries involved in this initiative. The main objective of this article is to show the direct impact of BRI on Poland and to see its international implications. The paper discussed the impact of BRI on business management in Poland in 2015-2022 as the main "land bridge" between the European Union and Eurasian Economic Union (EEU). It discussed also the potential business threats and concerns regarding sovereignty and increasing indebtedness of the businesses. That is why international implications are important. The research methodology is based on the empirical research study based on the existing literature and existing research results using also the Mendeley.com platform.

**Keywords:** Global Business Management, BRI Index, Chinese Communist Party cell (CCP), COVID-19, BRI SC risk, The Belt and Road Initiative International Green Development Coalition (BRIGC), Eurasian Economic Union (EEU)

**JEL Classification codes:** M00, M10, M19, M20

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## **INTRODUCTION**

In 2013 The Chinese government decided upon a new initiative which was enshrined into the Chinese constitution and was supposed to make the world better developed in an economic sense and also helped to promote socio-economic cooperation among the countries. This initiative was named The Belt and Road Initiative (BRI). The Belt symbolises the investments made along the land road and the Road was representing the maritime route into Asia, the Middle East, Europe and Africa. The entire concept was involving then both land and sea trade transportation roads. It helped China impact different economies through the power of international organizations such as The World Bank, and the International Monetary Fund. In the analysed period, China invested 1 Tn USD in more than 70 countries including Poland, Hungary, Slovakia, Slovenia, The Czech Republic, and The Baltic States countries. According to some studies Poland, Austria and The Czech Republic are perceived by China as the „gateway“ countries for BRI to EU (Cameron et al, 2021). That is why the entire initiative has strong international implications (the famous phrase „made in China“ seemed to be the most known phrase in the world). According to some authors, there is no clear answer to the question regarding how Poland perceives the BRI and what the state government plans to achieve by participating in the project. Part of the Polish political scene regards BRI as a threat, and the other part as an opportunity (Pendrakowska, 2018; Tomaszewska and Pohl, 2019).

Other authors raised the concern that in the case of Poland, there was no clarity on the specification of which projects were directly related to this initiative (Choroś-Mrozowska, 2019). The main focus of this article is the impact of the Chinese investment (BRI) strategy on Poland with the international business implications in the period of 2015-2022. This period covers the moment when Poland accessed this initiative by signing The Memorandum of Understanding in November 2015 between Polish President Andrzej Duda and Chinese President Xi Jinping. During this period also main investment projects were planned. COVID-19 which erupted at the end of 2019 and the intensified war in Ukraine (it was started in 2014) made Poland head into a new geopolitical situation with BRI and impacted the implementation of the infrastructure projects.

The BRI was not the first such concept that focuses on the initiatives of economic dominance in the world. There are examples of Russian Initiatives from Mikhail Gorbachev's "Common European Home" in the 1980s with its new vision proposed by Boris Yeltsin of "Greater Europe from Vladivostok to Lisbon" in 1997. As China is Russia's key partner, such an initiative makes BRI more interesting (Menkiszak, 2013). The war in Ukraine complicated Russia's plans to be the Eurasian Economic Union (EEU) leader, so China can benefit from this situation by taking over the leadership in this region using its soft power strategy.

Chinese strategy has a long tradition and it comes from ancient times war tactics *Sun Tzu* (Cleary, 2005). China built its economic strength based on the opportunities created by other countries. China has different economic and political tools for approaching developed and less developed countries. One such tool is the Chinese Communist Party (CCP) cell inside the structure of each of the private Chinese companies. If any company from other parts of the world interacts with a Chinese private company the potential risk of business data access by the Chinese Communist Party is quite possible (Livingstone, 2020). This is another aspect which has international implications for business management.

Along with the BRI, The Chinese Communist Party with the gained insight into business information was exploring potential investment opportunities worldwide trying to acquire strategic assets and business worldwide. If the purchase was not possible for some reason at least the controlling stake was demanded. From 2015 to 2022, China was able to acquire a 24%-100% stake in big companies in the sectors like agriculture (Syngenta in Switzerland), technology (Omnivision Technologies in the USA), energy (Edra in Malaysia), transport (CIT Group in The USA) and mining (Glencore in Peru, SQM in Chile). The mergers and acquisitions especially in the mining sector are related to the needs for the lithium, and copper required for the production of batteries for electric vehicles. The Chinese aggressive approach to acquisitions of businesses globally conflicted also with some political tensions regarding „Chinese influence' in countries like Australia (Chubb, 2022). The investment agreements under The BRI were signed by the government of China country by country mainly about infrastructure including the development of the seaports. Quite often such investments were named the investment corridors such as Bangladesh-China-India-Myanmar (BCIM), China-Mongolia-Russia Investment Corridor, China-Pakistan economic corridor, or New Eurasia Land Bridge connecting Western Europe with Kazakhstan through Russia, Belarus and Poland. The war in Ukraine complicated some of the investment plans but it does not mean that China has stepped out from them. Another interesting characteristic of BRI is that in developing countries corruption is high, so it is much easier for Chinese companies to make business deals in such countries. It is worth noting that in Asia corruption is not treated as something negative, it is part of the social culture. Corruption becomes part of the fixed costs when it has a governance structure based on relationships in Asia or Africa (Talvitie, 2017). Another important aspect of BRI is that China gains military and geostrategic advantages, especially from seaport investments by the involvement of China's People's Liberation Army (Russel and Berger, 2020).



China is also interested to have good economic relations, especially with developed EU countries to have a counterpart to the US global position. For many years economic cooperation between US and China was blooming. The bilateral relationship between China and The US was known even as „Chimerica“ (Hung, 2022). The US agreed with China that the majority of production would be made in China and then imported to the US as the final products. The history of the economy showed that it was not lasting for long as it was a decoupling of this relationship which led to the trade war (Choudhury, 2021). China wanted to have a relationship with a leading country in the EU to have a better influence on the other EU countries including Poland. In 2020 Germany tried to force the Comprehensive Agreement of Investment (CAI) between the EU and China, which was asymmetric and not beneficial to the other EU member states. It rather protected German companies' expansion on the Chinese market and gave managerial benefits to the Chinese companies investing in EU countries. Poland was one of the EU member states which were against such an agreement. It is worth mentioning that the current situation with the war in Ukraine is influencing Chinese investment in Europe, especially in Poland which is a main partner for Ukraine in this war.

After this introduction, a literature review and a case study of Poland are needed to better understand the business management of Poland under that signed the BRI agreement for the investment. The main research question is: *how did The BRI impact business management in Poland in the period 2015-2022?* This research focused on the most important aspects of this topic to answer this question.

## **1 LITERATURE REVIEW**

The situation of global business management under BRI was analyzed in the literature from different perspectives. The business management of companies in Europe during the COVID-19 period was very demanding putting many SMEs on the edge of bankruptcy mainly due to the severe lockdowns, GVCs disruption and the demand decrease (Dygas, 2022). In contrast, China managed to increase its global economy share between the two pandemics SARS-1 and COVID-19 from 8% in 2003 to 20% in 2020 (Devonshire-Ellis, 2020). Although the literature is abundant in this area the question of how the BRI impacted business management in Poland in 2015-2022 is rather limited and can be treated still as the knowledge gap. Most of the studies are related to the Polish-Chinese relationship in the context of BRI (Kostecka-Tomaszewska and Czerewacz-Filipowicz, 2019; Górski, 2018; Lubina, 2017). There is a lack of deep studies which are assessing the positive consequences of Poland's development under the BRI. The fact is that China approaches each region differently, but one thing was common to use all the gates and opportunities to build China's economic power and international competitive advantage. Concerning Poland, some authors put in doubt that business with China was beneficial for Polish companies and made Poland a real European hub supporting the transportation of goods on the route between China and the EU (Jakubowski et al, 2020). Other authors raised the concern and even threats related to BRI in Poland (Bartosiewicz and Szterlik, 2019; Grzywacz, 2020; Holslag, 2017; Tomaszewska, 2019; Pacek, 2022).

According to some authors China has been its own biggest firewall in the diffusion of BRI into Poland, the Czech Republic and Hungary (Krpec and Wise, 2022). The geographic location of Poland was interesting for BRI thus China wanted to build a network of transport that connected China with the EU (called the New Eurasian Land Bridge Economic Corridor) approved by the National Development and Reform Commission (2015). Poland's hope related to the involvement in BRI was to allow the Polish companies to expand in China (*Go China* program in 2018), and reduce the negative trade balance but in fact, it was only a hope. The main role of Poland in BRI in 2015-2022 was reduced to the transit of Chinese goods (Bachulska, 2017). The transit countries in the opinion of some authors treated BRI as neo-colonialism (Diener, 2015; Summers, 2016). In that sense, the case that Poland will be the

transportation hub for European-Asian cargo depends much on the further geopolitical situation development between Russia, Belarus, and Baltic countries and also on a coalition of China and Russia. As the war in Ukraine continues it makes BRI more difficult to implement and Poland becomes directly less involved in this initiative. On the other side, there is a study showing that in these countries where BRI was in progress the involvement of Chinese companies supported by the Chinese government increased (Liu et al, 2017).

The involvement of the countries under BRI is different and depends on the level of infrastructure development, and the existence of the seaports. That is why the BRI involvement has also international business implications. There is even a BRI Index which creates a ranking of involved countries in six categories: economic potential, demographic advantage, infrastructure development, institutional effectiveness, market accessibility and resilience to natural disasters (Knight Frank and Holt, 2018). A few positions described openly the threat of BRI on international business management and the natural environment changed by the Chinese infrastructure investments. For example, according to the report of the World Wide Fund for Nature in Myanmar half of the population was put at risk as those people are dependent on natural capital such as forests, rivers, land and biodiversity. This also creates a potential risk of floods, landslides and water pollution. Myanmar is involved in two investment corridors in BRI namely: Bangladesh, China, India, and Myanmar (BCIM) and the China-IndoChina Peninsula corridor (Han, 2018). Some authors made the effort to analyze the supply chain (SC) risk related to BRI and build the model based on the knowledge from the relevant 178 articles. The model showed that BRI SCs faced a combination of risks triggered by operational processes and informational and environmental (PIE) deficiencies. The model should help the managers in making strategic decisions managing the business related to BRI investment (Ram and Zhang, 2020). An interesting analysis was presented by the authors focusing on the effect of BRI on Malaysian stock-listed construction companies using a panel data regression model. The study results confirmed that Chinese equity ownership in the construction sector impacts the business management of stock-listed companies in Malaysia. The authors tried to prove that the impact of the BRI is rather positive on the development of the construction business in Malaysia, but they do not explore the business consequences of Chinese ownership of the Malaysian capital in those companies. They try to explain the business benefits received by the Chinese owners from the Malaysian construction sector using the concept of *guanxi* (building closer interpersonal ties and networking) which is rather not convincing (Peck-Ling et al, 2022).

Nowadays businesses stream to be sustainable according to Agenda 2030, so sustainability is also used by BRI as propaganda for reaching that goal. According to some authors, BRI can help reach sustainable development only by linking BRI with digital infrastructures and corporate data management systems, with distributed benefits of efforts to local business participants (Seele and Helbing, 2020). Some recent research evaluation of the fulfilment of the sustainable goals from Agenda 2030 showed that reaching full sustainability by the countries such as China, India, Germany, and Japan and business is rather a myth so BRI will not change it (Dygas et al, 2021).

The BRI is also treated by some authors as an effort from the Chinese government to create global connectivity, diplomacy and business management world (Syed and Yung-Hsiang, 2020). In the fact, the vision of how the BRI may become beneficial to local businesses in keeping their business sovereignty is not clear. The interesting fact is that BRI managed to engage many international organizations, more than 20 United Nations agencies, and funds, and in this sense, the Chinese government received a mandate as the funder of the Belt and Road Initiative International Green Development Coalition (BRIGC) to assist the countries in reaching sustainable development which China itself still did not reach out (The BRI, 2020). The important characteristic of the Chinese BRI in general is the asymmetry of the investments. Access to the Chinese market for companies from other countries is strictly

regulated and controlled by the Chinese government. That is why some of the authors described the BRI as a risk or a threat to international business (Hemmings, 2020). The aspect of the BRI's influence on international business management especially on the MNCs was confirmed by many authors (Li et al, 2022; Visvizi et al, 2020; Buckley, 2020). It was also confirmed that BRI influenced international law and governance (Nurgozhayeva, 2020). The CEE region is still very interesting for Chinese BRI because the CEE region is the gate to the western EU countries. In the literature, there are case studies of Chinese companies such as CEFC China Energy which acted as the agent and tried to influence the energy business along with the BRI investment in the Czech Republic in 2015-2018 (Garlick, 2019), Hungary and Slovakia (Matura, 2018) or in Poland (Pendrakowska, 2018; Choroś-Mrozowska, 2018; Bartosiewicz and Szterlik, 2018). Most of the authors who focus on BRI in Poland did not raise the issue directly of the country's indebtedness, sovereignty, or threat of the Chinese soft power to the Polish companies and business management. It was also concluded by the FBI's report stating that the threat comes from the programs and policies pursued by an authoritarian government employing tactics that seek to influence lawmakers and public opinion to achieve policies that are more favourable to China (Wry, 2020). This is an important knowledge finding which needs to be researched more deeply.

## **2 THE METHODOLOGY**

The methodology is based on empirical research of existing literature using the *Mendeley.com* tool and accessible data for The Belt and Road Initiative's impact on Polish business management in the period 2015-2022. The main research question was about the direct impact of BRI on Poland in the period 2015-2022. The author also reviewed existing publicly accessible Polish government documents related to BRI's influence on business development in Poland from 2015 to 2022. Besides that also the research made by the Breugel research team regarding the perceptiveness of BRI was used as the starting point. The other research results were used in the case of Poland related to the railway transport system and commodity export structure with the reference to BRI. Additionally the supportive two questions: "*How do you perceive the Chinese investment in your country in 2015-2022?*," and "*How do you perceive Chinese investment in Poland from 2015 to 2022?*," were placed by the author on the LinkedIn platform with direct access to 3364 business professionals from all over the world. The answers from these pools can be treated informatively by it brings the signal of how the business people perceive the Chinese investments. Such results can not be generalised of course.

There is not enough data for this period but the research is based upon reports published by private businesses and governmental authorities institutions. That there are different estimations of the BRI global impact on business management in 2015-2022. The observations of business management changes are quite interesting for the conclusions and interpretations of the presented data. This is also valid for the identification of research gaps and possibilities for future research.

## **3 RESULTS AND DISCUSSION**

The deep analysis regarding the direct influence on Poland in the period 2015-2022 is very limited so far, but there are analyses of the BRI perceptiveness which can contribute to that. One of them is the research made by the Breugel research team in 2018 which showed that besides the Asian region, the countries from other regions involved in BRI perceived the Chinese initiative as moderately positive (Herrero and Xu, 2019). In February 2023 there was a closed-door event organised by the Bruegel Research Team regarding BRI transformation

and its impact on Europe. The main conclusion was that image of China and the BRI project's perceptiveness deteriorated due to the increased indebtedness of the countries involved in this initiative. The authors shared the latest findings from their research, showing that the BRI has transformed itself from an economic to a much broader strategy with a political security-oriented focus in anti-Western tone (Bruegel, 2023; Herrero, 2023). Concerning the aspects of the Polish railway transportation system with reference to BRI the authors of the research concluded that the BRI project was more suitable for China and the EU as a whole than for Poland in terms of commodity structure of bilateral trade and railway system (Szypulewska-Porczyńska, 2020). The underdevelopment of the Polish railway system concerning the BRI project was also concluded in other research (Hanusik and Woźnica, 2021). The author of this article decided also to ask its LinkedIn network of 3364 direct business professionals connections "How do you perceive the Chinese investment in your country in 2015-2022?" and "How do you perceive Chinese investment in Poland from 2015 to 2022?," Although the results can only have a limited value as they can not be generalised, it was interesting to see the subjective answers results and compare them with the findings in the literature. There is the main conclusion from both pools that the majority of the respondents (69%) mainly from Europe perceived Chinese investments as a threat to their businesses. It is in line with Bruegel's latest findings regarding the latest views on the BRI project. The important fact is that once the infrastructure is built it stayed there in the country and if the government of the country is not able to pay back the Chinese loans the country's debt is growing and China has the right to take over the assets. The discussion can refer to the important question regarding the necessity of Chinese investment. Is it needed for the countries' growth and development? On one side foreign direct investment in general (FDI) was proved to be the wheel for economic development (Biswas and Dygas, 2022).

On the other hand, the way China is implementing its BRI is quite questionable concerning the future state of the sovereignty of the involved countries. The links of Chinese companies to the government are an issue that host countries should realize. The countries like USA, Canada, India and Japan made clear conditions and borders leading even to the exclusion of Chinese companies from investment. It is mainly to the fact that there are reasonable fears of the host countries' governments regarding the possibility of spying and using technology for getting illegally sensitive data. Some countries are tempted by the Chinese BRI to have their economy move forward and develop paying the price of indebtedness or bankruptcy like in Sri Lanka's case where corruption and bad managed government governance caused a problem for the whole country and were fostered or taken advantage of by China. Sri Lanka's Hambantota port was very important in the strategy of the BRI same as Djibouti not only from the business but also military perspective.

China invested 1 bn USD in Hambantota which can be considered an example of the Chinese debt trap experienced by Sri Lanka's government defaulted on foreign debt payments (Frayer, 2022). Besides that China is the global producer of different goods which makes the companies in the world dependent on production in many sectors. It was very well seen during COVID-19 when the EU needed the air transports of masks and medical supplies from China. It showed a deep weakness of the EU organizations responsible for protecting EU business, crisis management and global production policy. The companies which had financial problems during COVID-19 were targeted by Chinese investors who used soft power to manage and influence potential future investments and businesses, especially in the CEE region and also in Greece, and Georgia (Brattberg et al, 2021). China wanted to guarantee its economic position in Europe by signing the CAI agreement, but due to the lack of the consent of all EU member states (e.g. Poland), the agreement was put on hold (McElvee, 2023). Other statements raised in the introduction part of this article were indicating that China wanted to increase not only its presence in Europe but also to have an influence on big business especially in industry and infrastructure. Poland in that case is still important for China as the potential transit country

with access to the sea and the gate to the Western EU countries. The fact that Germany and France wanted to have a direct economic and political relationship with China complicated the situation and put Poland's role in the BRI aside. China declared its readiness for the stabilization process in Europe by proposing a "12-point-peace plan" of ending the war in Ukraine but not resigning from the investment opportunities in Europe (a potential investment of China in Hamburg and Gdansk sea ports was questionable) (VSQUARE, 2022). In this sense, the Polish case study is interesting from the perspective of the real impact of BRI on the business management and it has the international implications.

### 3.1. BRI - Poland case study

Poland has a long tradition of investment relationships with China (more than 70 years) (Burdelski, 2011). Poland cooperates with China in the format designed for the CEE - China cooperation is known today as the "16+1 platform" founded in Budapest in 2012 before the BRI was announced by President Xi Jinping in 2013. The main goal of this platform was to promote the BRI, but it became a gateway to Europe (VSQUARE, 2018). Poland is also high in the BRI Index countries' ranking placing the 17<sup>th</sup> position out of 67 countries. Estonia had only a higher position than Poland (the 7<sup>th</sup>). This can be perceived as a way to become dependent on China which is not good for Poland's sovereignty. The Polish government approved The Polish Act of 24 July 2015 „on the Control of Certain Investments” which aimed at screening investments in sectors of strategic importance for the economy, in particular for energy security, as well as the defence industry. Despite this act, there are still ways where the Chinese companies were somehow allowed to invest in Polish infrastructure and industry creating a direct threat to the local business management, especially to SME companies. It can be seen in the trade data. Poland had the highest trade deficit with China of 22,4 bn USD in 2020 (Paszak, 2021). In this way, Chinese companies impact Poland's business management as each is linked to the Chinese government. Table 1 below shows the influence of chosen Chinese companies in Poland in the period 2015-2022.

**Tab 1. Chinese companies' influence on business management in Poland in 2015-2022**

Investor	Sector	Potential impact on business management	Comments
China Security&Fire	Security	Very high	National security at risk (Konsalnet was bought by 110m EUR)
Haier, Midea, Hisense	AGD, HVAC, electronic	High	plans to take over 35 existing AGD factories
Huawei, ZTE	Telecommunication	Very high	providing 5G infrastructure. Huawei was banned by Donald Trump in the USA
Hutchinson Ports (China Communications Construction Company (CCCC))	Maritime Industry and Infrastructure	Very high	Infrastructure construction in the seaport Gdynia
GLP, CGL	Logistics real estate	Very high	70% of the share in logistics real estate in Poland

The Belt and Road Initiative Organization, China Railway, ABII	Infrastructure and Transport	Very high	Project CPK – 8 bn EUR – live in 2028
Ningbo Tuopu Group,  Geely	Automotive - electrical batteries and spare parts for electric vehicles,  Izera EMP vehicles	High	The first plant of this company in Europe,  The contract signed with ElectroMobility Poland (EMP)
Sinohydro	Infrastructure and Industry	Very high	Lublin-Chełm power transmission line, Wrocław's channel waterway system
Zhonglu Fruit Juice Co., Ltd	Food industry	High	The acquisition of Appol opened the way to the European market of fruit concentrates
AliExpress	Logistics	Very high	The regional logistic hub in Poland
Stecol	Infrastructure and Industry	Very high	Łódź bypass (S14), a section of A2 highway (Mińsk Mazowiecki-Siedlce), Rail Baltica (Czyżew-Białystok),
Nuctech	Electronics	Very High	Scanners placed on the Polish rail borders crossing, in the airports and seaports
Yifan Pharmaceuticals	Pharmaceuticals	High	Acquisition of the insulin producer Bioton
Sunningwell	Infrastructure and Industry	Very high	Acquisition of ISD Huta Częstochowa
Zhejiang XCC Group	Infrastructure and Industry (metal)	Very high	Acquisition of FŁT Group and trademarks from Boryszew Group
Tencent	Gaming Industry	High	Acquisition of Bloober Team, Cenega, Muve, QLOC

Source: author's compilation of the publicly accessed information about Chinese investment in Poland in 2015-2022

The optimal strategy is to keep in the loop a couple of the Asian players such as India and Japan and not just focus on China (the old proverb assigned to Miguel Cervantes is commonly used in business: *do not put all eggs in one basket*). In Poland, there were 3737 registered Chinese companies as of 10.01.2023 and 70% of them started their operations in Poland during 2015-2022. Besides that 80% of all Chinese companies are located in the Mazovia region (COIG, 2023). The most dangerous for the sovereignty of Polish business is the Chinese investment in the maritime industry and infrastructure because according to the Chinese Law Transportation Act 2017, the Chinese affiliate companies need to cooperate with the Chinese

army (Groeneveld and Pankowska, 2022). As can be seen from Table 1 companies in Poland are already dependent in many sectors on Chinese investments, especially in infrastructure and industry and the next step from electronic equipment and telecommunication infrastructure. The Chinese companies in Poland impact the value chains and the local business network. This creates a big challenge for Polish companies to protect their sensitive data and compete with Chinese products and services. Some of the Polish companies started to cooperate with Chinese partners but in the long run, they risk being taken over by the aggressive Chinese capital. On the other side, Polish companies are interested in the Chinese market but only 1% of Polish export of their goods goes to China (VSQUERE, 2018). It shows how difficult the process of investment in China could be for Polish companies and management of the business is strictly regulated by the Chinese government. Companies which want to enter the Chinese market have to transfer their know-how and technology. Additionally, a "Zero COVID" policy of the Chinese government made the operations activities for all foreign companies in China much more troublesome. Business management with China is very specific because Polish companies can do business in China only when they understand and accept *guanxi*, which means Chinese business network and relations as the fundament of business management. There are examples of Polish companies that managed to establish a business in China with the support of PAIH (The Polish Agency for Trade and Investment), but these companies are rather small and medium (e.g., Bella Farmacja or Miraculum) and they are not operating in strategic sectors in China using quite often e-commerce cross-borders platforms which some of them are controlled by the Chinese government. PAIH also placed a guide for Polish companies which want to enter the Chinese market on "The business in China. How to avoid the problems" (Pyffel, 2013). The Polish companies need to be also very vigilant in case of cyberattacks and data leaking of technology and patents which happens from China as well. This is also a potential threat impacting the business management of Polish companies. Another aspect that Polish companies need to face up is the high competitiveness of Chinese companies in Poland due to the subsidies received by Chinese companies from the Chinese government (Sarek, 2018).

A good example is how dominant the IT Chinese business is in Poland. Most mobile operators offer smartphones produced by Chinese companies which were not even known a couple of years ago. A similar situation is in the market chains like *Media Expert* dealing with the sales of domestic-use products such as lavatories, TVs, freezers etc. The majority of these products originate from China. Customers have a limited choice of production origin when buying technical equipment such as computers, smartphones, printers, TVs flat screens, etc. Another area is the textile business in Poland where Chinese exporters invested in the lots in the commercial galleries across Poland and move their textile goods from open-air bazaars to luxury commercial malls in major cities in Poland. These are tangible examples of how Chinese businesses can grow if there is a slot for them to step in. China is also active in international organizations such as WHO, IMF and others which also impacts business management on a global scale. Chinese banks (e.g., Bank of China, China Construction Bank, Haitong Group) are involved in BRI and managed to establish their branches in many countries worldwide to support a financing BRI globally.

### **3.2. The BRI's influence on the business through the international organizations**

There are more than 25 United Nations agencies involved in the BRI including The World Bank Group, International Monetary Fund (IMF), The Food and Agriculture Organization (FAO) and others (UNEP, 2018). Besides these UN agencies, there are also Chinese banks involved as the main source of BRI's financing. The Chinese government through its involvement in international organizations in BRI managed to promote Chinese technology standards in international business (Paulson Institute, 2015). The mergers and acquisitions made in 2015-2022 helped China globally to access the latest technology projects and also the competitors' tender offers. It was possible mainly because as Chinese companies overtook foreign

companies quite often the management board was not changed but it was influenced by the Chinese owners. Another good example of BRI's influence on international organizations is China-IMF Capacity Development Center opened in 2018 to provide developing countries with macroeconomic training as well as training on sovereign debt management, to help countries with assessing their sustainable external debt financing capacity. Good examples are Pakistan, Sri Lanka, Malaysia, Cambodia and Laos. These countries went into a debt trap and the most extreme was Laos which borrowed from China a loan for a railway project equal to almost half of its annual GDP. The active involvement of China in the international trade blocks was also a good way for BRI implementation but BRI is not a trading bloc itself. It was even proved by *the Poisson model of bilateral trade* formulated by Santos Silva and Tenreyro (Silva and Tenreyro, 2006) that China became the main beneficiary of BRI by linking the trade blocks such as NAFTA, UE, and ASEAN+1 along the BRI (OECD, 2018). That is very smart for China to influence the business globally through different sides and levels along the BRI. In this sense, the BRI becomes the platform for promoting international trade with the application of its technology for better control of the trading partners. As the example can be RCEP Agreement in the Indo-Pacific region where China is using the quick response codes (QRs) technology for trading goods among the RCEP's members. It will boost the RCEP economy dominance where the main beneficiary is China (Lim, 2022).

## **CONCLUSION**

Taking into consideration the above data and the material presented the main conclusion is that China had a significant and rather negative influence on Polish business management sovereignty in 2015-2022. The BRI is sponsored by the Chinese government, so politics was highly involved in all investment projects. The main problem is still the lack of one common viewpoint on BRI project goals to be achieved by the decision and policymakers in the Polish government. The magnitude of the Chinese investments in critical infrastructure in Poland during the analysed period should be of big concern today. The author of the article accessed public data and information and the conclusions should give a trigger for the Polish government policymakers to revise the strategy of cooperation with China, especially in protecting Polish companies from Chinese investors who are the agents of CCP which is a threat to the global business. BRI projects can be considered as a potential debt trap which can lead to a problem for the involved countries in getting to insolvency or losing their sovereignty. The big issue is still corruption which China can take advantage of to benefit from that in the longer term. Polish business management is based heavily today on technology which is produced in China and additionally, through the practice of mergers and acquisitions (M&A), the Chinese government can much easier set up the strategy for its Chinese companies in Poland. The influence of that fact was presented in the case of Poland where the scanners produced in China were used for cross-border control and the transit of traded goods. It is needed to add that there is a business asymmetry which means that if a foreign company wants to start a business in China it needs to make a joint venture (JV) with a Chinese one and transfer its know-how and technology. Additionally, each Chinese company which operates abroad must have in its structure CCP members which can results also in a threat to foreign partners. Besides that, another important characteristic of BRI investment projects is the trade-off between time quality and cost. The actual costs on average are 30% higher than the business estimates which might influence the investment decisions of the governments to go for BRI (OECD, 2018). Another important conclusion is that China stepped into and keep trying to influence international organizations, especially UN agencies especially IMF launched in 2018 China-IMF Capacity Development Centre to help countries with assessing their sustainable external debt financing capacity in BRI. In this sense, the business becomes more influenced by politics and Chinese technology which can spy on the contract terms, solutions, and patents, having access to sensitive data of the companies not only in Poland. The conclusion has also



a military aspect. All of the infrastructure along BRI especially seaports, airports, and railways connecting different countries may be used also in a military sense by China.

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# Reverse knowledge transfer – Case of Business Service Center in Slovakia

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**Abstract:** Many multinational organizations all over the world have incorporated shared service centers into their company strategies and activities. These centers provide their parent company a number of benefits, including cost savings, low-cost and skilled labor force as well as the favorable geographic location and time zone. The reverse knowledge transfer from the center of shared services to the parent corporation is not given enough attention yet. Therefore the purpose of this article is to examine, using the example of a specific organization, the cooperation and reverse knowledge transfer between a shared service center and a parent company. The authors use the case study method analyzing the company Adient that chose to establish its center in Slovakia in 2007 in order to benefit from the advantages offered by the region of Central and Eastern Europe and Slovakia itself.

**Keywords:** shared service centers, Slovakia, reverse knowledge transfer

**JEL Classification codes:** L 80, L 84, D 80

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## INTRODUCTION

Globalization has had a significant impact on a number of changes that transnational corporations throughout the world must deal with. These changes have a greater or smaller impact on their competitiveness and position in the global market. Companies are therefore looking for efficient strategies to compete with the other players in their field. One of the choices is to construct a shared service center. The parent company usually assigns one or more tasks to this center. A new paradigm for businesses is the use of shared service centers to improve the efficiency and effectiveness of business support activities (Richter & Brühl, 2019). These are service functions, which were formerly scattered throughout the organization, according to Howcroft, & Richardson, (2012). They were centralized into a single department, which later evolved into an internal service provider (Knol, et al. 2014).

Thus, it can be said that shared service centers are a concept that offers their parent organization a variety of benefits. The fundamental benefit of the centers is that they complete these tasks more quickly as well as more efficiently compared to the dispersed solutions in different national units around the globe.

Investors have a greater selection of markets or nations to choose from when deciding where to locate a shared services center. Foreign investors have become more interested in constructing these centers in the region of Central and Eastern Europe during the 1990s. Several nations in this region share some similarities and distinctions do not seem to be important at the first sight. According to the authors' theory, Central and Eastern European centers are built for a variety of reasons, including (Ślusarczyk, 2017):

- the availability of a cheap and skilled labor force,
- the region's geographic location,
- time zone,
- residents' proficiency in other languages,
- the region's political climate,
- the country's tax structure,
- the currency euro, and others.

The above mentioned conditions encouraged a number of international investors to set up centers in these nations. In our paper, we concentrate on the Slovak Republic as the chosen destination since many multinational companies have established shared service centers in this country. Our analysis will focus on both the shared service center market in the Slovak Republic as well as the relationship between the chosen shared service center and its parent firm (headquarter).

The aim of this article is to examine the cooperation and reverse knowledge transfer between a shared service center/business center and a parent company, using the example of a specific organization.

The article is divided into several parts. In the beginning of the article, the authors introduce the reader to the issue of shared service centers, paying particular attention to the region of Central and Eastern Europe. The literature review section provides an overview of the literature related to shared service centers, or the reverse transfer of knowledge between the center and its headquarter. In the methodology, we present an overview of the basic methods that were applied during the processing of the article. In the results section, we examine the Shared Service Center and Business Service Center sector in Slovakia and issue on the selected case of a business center allocated in Slovakia. In the discussion, we present the questions that arose in our research, the limitations of our research as well as the possible direction of research in the future. At the end of the article, we present the most important findings that emerged from our research. In the references section, we list the sources of literature that were used in the article.

## **1 LITERATURE REVIEW**

Headquarters of multinational corporations have been responsible for the bulk of a multinational's value creation and competitive advantages (Chandler, 1991; Ciabuschi, Dellestrand, & Nilsson, 2015) and "subsidiaries have traditionally been perceived as receivers of knowledge and theorized as inferior to headquarters on several dimensions, including questioning the stock and value of knowledge they possess" (Michailova & Mustaffa, 2012, p. 389).

The mainstream literature has focused on knowledge transfers from parent companies to subsidiaries and not from subsidiaries to parent company (Kogut & Cotta de Mello, 2017). Authors define this opposite flow (flow from subsidiary to parent company) like reverse knowledge transfer. A reverse knowledge transfer, according to mentioned authors, is a process in which knowledge is conveyed from an affiliated (subsidiary) source to the receiver (headquarters), and the recipient absorbs, assimilates, and executes their knowledge to obtain a competitive advantage.

In the context of transnational corporations, subsidiaries have emerged as vital creators of the knowledge and competencies. In order to remain competitive in a global business

environment, transnational corporations must effectively collect and implement the knowledge of their geographically dispersed network of subsidiaries (Sinai & Heo, 2022).

The subsidiaries have different roles in the corporations: some are supposed to commercialize products and services, others conduct research and development, and some manufacture products. The subsidiaries can either utilize the existing corporate knowledge and potentially adapt it if needed or generate new knowledge and create new skills (Mudambi et al. 2013).

Oh and Anchor (2017) make their research about reverse knowledge transfer in South Korea. According to authors knowledge development capability, subsidiary willingness, and autonomy are critical factors affecting the reverse transfer of local market information within multinational corporations networks. Managerial attention is a key factor in recognising potential source of knowledge within the multinational network, and a prior requirement for knowledge transfer to take place. Attention decisions are partially based on the knowledge source location, awareness/attractiveness, and the strategic importance. Thus, transnational corporations can adopt managerial practices and control mechanisms to influence the attention of executives and achieve higher knowledge flow from subsidiaries (Kumar, 2013).

Organizations can support knowledge transfer by the creation of conditions that are helpful for knowledge sharing: full ownership of the subsidiaries, atmosphere of trust, international human resource management, and frequent managerial contacts. Actors impacting transfer include culture, employee commitment and trust, and the use of incentives to encourage knowledge sharing, "knowledge-oriented culture, a technical and organizational infrastructure, senior management process orientation, clarity of vision and language, non-trivial aids, some level of knowledge structure and multiple channels of knowledge transfer" (Søndergaard et al. 2007).

Knowledge transfer can be strengthened by the implementation of organizational motivators that support absorptive capacity. Further, human resource practices such as position definition, appraisal, employee rotation, decentralization, integration, and innovative culture can stimulate knowledge sharing. The more intense the systems of the international human resource management system, the more knowledge is transferred from the subsidiaries (Chung, 2014). According to Ambos's et al. (2006) study, the advantage of the headquarters through reverse knowledge transfer is dependent on the strategic objective of the subsidiaries, the economic growth of the source nation, and the headquarters' absorption capability.

On the other side, Millar & Coi (2009) identify several barriers to successful reverse knowledge transfer including failure of psychological contracts, perceived lack of procedural justice, a lack of intrinsic motivation, psychic distance and liability of foreignness.

The writers have identified the transfer of knowledge from the branch to the main firm, based on the facts described above that come from theoretical sources in the literature. According to Ferencikova & Hrdlickova (2020), branches with markets in the Slovak Republic also exhibit reverse knowledge transfer. In our article, we'll concentrate on the reverse transfer of knowledge in the context of shared service centers, which can be regarded as a vital component of the aforesaid nation's national economy.

We established the following research questions to be used in processing our article:

**Question 1:** What is the performance of the selected shared service center/business center from the point of view of the parent company (are the original intentions and goals of the headquarters met?)



**Question 2:** Does the Slovak shared service center studied produce new information that is then shared with the parent company?

## 2 METHODOLOGY

Several scientific research methods are used in the article. The collecting, processing, and analysis of theoretical literature sources served as the foundation for the article's first section. These are domestic and foreign authors who were passionate about the subject we were looking at. In the empirical section of the article, the case study method predominated. With its implementation, it was able to use a specific transnational corporation as an example to highlight the problem of reverse knowledge transfer. In the case study, we discuss the fundamentals of the Slovakia-based shared services center that we looked at, as well as the particulars of how it operated there. According to Kogut & Cotta de Mello (2017), most studies in which experts investigate reverse knowledge transfer use quantitative methods (particularly surveys); therefore, case studies and other more qualitative methods could be used in future research to better understand this complex and contemporary phenomenon. A case study, according to Yin (2014) is an empirical approach that explores a current phenomena in its real-life environment, particularly when the boundaries between the phenomenon and the setting are not clear and visible. A case study as a research technique is a research strategy that combines many research methodologies, each with its own approach to data collecting and analysis. Based on the foregoing, it is possible to infer that the case study is more than just a data gathering technique or a design feature. It is a sophisticated research strategy. For the sake of digesting this post, we used the case study technique using one example.

The case study method for investigating reverse knowledge transfer was also implemented by Ferencikova & Hrdlickova, (2017); Ahmad & Batkhuu (2021).

Using the synthesis method, at the end of the article we present the basic and most important findings from this case study. To ensure clarity of the selected data, we present tables and a picture about Shared Service Center sector in Slovakia.

Both primary and secondary data were processed for the article's processing. Interviews served as the basis for gathering primary data. This was made possible by the director of the business center Adient in Slovakia (business center as a higher level of services compared to the shared service center). Based on the structured interview conducted on September 22, 2022, it was feasible to study the reverse transfer of knowledge on the specific example of a center functioning on the Slovak Republic market. During the discussion, we also discussed the reasons for joining the Slovak market, as well as the major opportunities and dangers related with running this center on the local market. A controlled interview with a representative of Form's Business Service Center in the Slovak Republic was also undertaken. On this basis, information regarding the sector of shared service centers in Slovakia might be included. We have contributed to a more thorough assessment of this subject by augmenting this material. In the case of secondary data, it was largely official Adient-related material. The provided case study might be processed using the data sources specified. In our article on the Slovak Republic, we also incorporated statistical data on the contribution of these centers to the national economy of the host country.

The company's official website as well as local and international organizations provided us with these statistics. Last but not least, secondary data also involve theoretical literature published in databases like Web of Science, Scopus, and others that served as the foundation for processing the theoretical portion of our article.

### 3 RESULTS AND DISCUSSION

In this section of the article, we will look into reverse knowledge transfer using a chosen corporation as an example, as well as the operation and details of the chosen center. In the example that we are looking at, it involves the corporation Adient, which has its business center in Slovakia, one of the nations in the region of Central and Eastern Europe. We shall study the aforementioned nation from the perspective of foreign investors in the section that follows. We will investigate it as a potential destination for the shared services or business center.

#### 3.1 Shared Service Centers and Business Centers in Slovakia

Slovakia is a nation with a number of characteristics that authors have identified in the literature as reasons for the entry of shared service centers and business centers into this nation's market. These elements encouraged a lot of foreign investors to set up shared service centers and business centers in Slovakia. In Slovakia, 65 shared service centers and business centers were operational in 2021, according to the Business Service Center Forum's annual report (BSCF, 2022).

Examining the advantages of the parent business/investor for the host economy is crucial in addition to the benefits that flow to the parent company from the construction of such a center. These include the influx of capital, expertise, know-how, training and education programs for the workforce, technological influx, and last but not least, the creation of jobs in the host nation. The country's overall employment reflects this. The following table shows how the development of specific indicators as a result of the establishment of shared service centers and business centers has been connected to the generation of jobs in the nation.

**Tab. 1 Annual contribution of BSCF member companies to the Slovak economy**

	2017	2018	2019	2020	2021	2022
<b>Employee income tax</b> (in mil. eur)	80,-	113,-	129,-	136,-	162,-	167,-
<b>Social insurance – employees</b> (in mil. eur)	240,-	92,-	104,-	110,5,-	132,-	136,-
<b>Social insurance – companies</b> (in mil. eur)		248,-	278,-	296,-	352,-	375,-
<b>Salaries expenditures</b> (in mil. eur)	500,-	690,-	782,-	824,-	984,4	1017,-
<b>Avarage monthly salary</b> (in eur)	1 730,-	1 780,-	1 830,-	1 850,-	1 900,-	2050,-

Source: processed by authors according to BSCF (2017, 2018, 2019, 2020, 2021)

As can be seen from the table above, in the case of the sector of shared service centers and business centers in Slovakia, a growing tendency of individual indicators can be observed. The centers are a significant contributor to the state budget and their importance is still growing.

Slovakia stands out among other nations in the Central and Eastern European region for having a significant concentration of large business centers and centers of shared services, by which we define establishments with more than 1,000 employees. There were 13 of them in Slovakia in 2021, according to the BSCF annual report (2022). In that year, one member center had fewer than 100 employees, five centers had between 501 and 1,000 employees, and 18 centers had between 100 and 500 people.

### 3.2 Case study – Adient

The essential indicators related to the subject of our investigation — the Adient center — are presented in the following table for the purposes of processing the empirical portion of the paper.

**Tab. 2 Adient Slovakia – basic information**

<b>Name of a company</b>	<b>Adient</b>
Establishment	2007 – center in Bratislava 2016 – spin-off from Johnson Controls
Mission	advancing the mobility industry and bringing today's advancements.
Main activity	Providing global financial services to operations in Slovakia and in 33 other countries in the world
Other activities	<ul style="list-style-type: none"><li>• human resources,</li><li>• purchase,</li><li>• sales,</li><li>• information and communication technologies</li></ul>
Localization	Bratislava – business center Trenčín – technical center Lučenec, Žilina – manufactory
Number of employees	800 employees (medium-sized enterprise)

Source: processed by the authors according to Adient (2022)

When a business center was established in Bratislava in 2007, the corporation Adient began documenting its history in Slovakia. It was established as a distinct organization within Johnson Controls. Since 1998, Johnson Controls has operated in Slovakia's automotive market, i.e. during a period when Slovakia was not yet a market leader. Then came a time of rapid growth. Employee performance was excellent, and business expansion was rapid to the point where, in 2016, the company made the critical decision to split off its automobile segment. At that time, Adient employed around one-third of the whole Johnson Controls workforce. At the moment, 800 people are employed at the Adient business center in Bratislava (Záhradníková, 2022).

Aside from the business center in Bratislava, Adient also operates two production facilities in Slovakia, in Lučenec and Žilina, as well as a technological center in Trenčín, the output of which is applied to plants around the world. The distribution of individual parts of Adient within Slovakia is shown in the following figure (Adient, 2022).

**Figure 1 Locations of Adient in Slovakia**



Source: Business Service Center Forum (2022)

The primary function of the Bratislava center is to provide international financial services to operations in 33 other countries around Europe, North America, Asia, and Africa in addition to Slovakia. The center also offers services in the following areas (Business Service Center Forum, 2022):

- human resources;
- purchasing;
- sales;
- information and communication technology.

The parent firm made the choice to build a shared service facility and then business center in Slovakia. One of the primary factors that the parent firm considered when deciding where to locate its shared services center was Slovakia's excellent geographic location. Due to its proximity to countries like the Czech Republic, Poland, Austria (particularly Vienna), but also Eastern European nations like Bulgaria and Romania, the country is in a very advantageous logistical location in addition to possessing an international airport (Záhradníková, 2022).

This center was initially established to offer accounting services (processing of financial transactions, settlement of receivables and payables, etc.). Later on, the center carried out a variety of programs. They concentrated on offering services in the fields of human resources, purchasing, information and communication technology, taxation, and the aforementioned accounting services (internal accounting, leasing accounting). They offered these services all around the world (Záhradníková, 2022).

Adient made the decision to move from centralized to decentralized administration in 2018. They want to make sure that customers can access services more easily. Although they primarily serve the EMEA region (Europe, the Middle East, and Africa), the business center in Bratislava nonetheless offers services to the entire world. These include financial services, human resources-related services, and information and communication technology services (Záhradníková, 2022).

The parent firm views the operation of the center in Bratislava as primarily serving a strategic purpose. The Bratislava center is special and plays a special role. It encompasses both local

and international activity. Slovakia is seen as a very essential site for Adient's corporate headquarters. Within this company, Bratislava is the only location where certain activities are carried out. Within Adient in Slovakia, particular financial activities or activities in the area of information and communication technology are conducted. Then, these initiatives are put into practice globally (Záhradníková, 2022).

Adient has no cause to move its headquarters abroad or within the country, even on the basis of the information in the previous section. This wasn't always the case, though. Prior to the pandemic brought on by the COVID-19 virus's spread in 2019, Adient seriously explored moving the center to Banská Bystrica. This idea, however, proved to be completely false in light of the present COVID-19 pandemic crisis, the subsequent measures, such as working from home-office, as well as other issues that the center had to deal with (Záhradníková, 2022).

There is no justification for moving the center to another nation, just as it has no plans to relocate within the country. Slovakia's services are of such high caliber and consistency that this change is not even taken into consideration. The Adient leaders are certain that the modification won't result in significant changes. However, Adient can be highly unexpected, thus this situation might alter in the future. The shortage of qualified labor in Slovakia is a concern that is regularly brought up. Adient has an experience with this issue. According to this center – Slovakia opening up as a country of healthy migration as both the solution and the opportunity for the growth of shared service centers and business centers (Záhradníková, 2022).

Slovakia's business center performs specific tasks that are unique to that country and cannot be found anywhere else in the world. The parent firm must consent to major decisions. This center possesses its unique expertise and is working to establish Slovakia as an international center of excellence (Záhradníková, 2022).

Adient has the ability to use support from the government or the state, just like any other institutions or businesses that operate in the market. Although Adient has frequently accepted public assistance, it does not work closely with government agencies (Záhradníková, 2022). However, AmCham, or the Business Service Center Forum which unifies shared service centers and business centers in Slovakia, has to be given a lot of attention in this context. The dynamism and speed of information exchange, the readiness to share information, or the chance to benefit from members' positive experiences are all provided by BSCF for its members. Therefore, this center has the chance to collaborate with other shared services centers and business centers in Slovakia, and collectively they have more impact in negotiations and other crucial steps (Rusiňák, P. 2023).

Along with more fundamental metrics like labor prices, the availability and equipment of real estate, or the influx of direct foreign investments in general, the so-called country mark is also used for the creation of shared service centers and business centers. Emotions associated with a particular nation are one of the deciding elements in the decision to create a center of shared services or business centers, according to the Adient center, along with economic indicators and the caliber and quantity of the labor force. The landscape is viewed from the perspective of a person – a tourist – who must be mesmerized by the landscape's fundamental qualities and traits. However, Slovakia is not one of the nations that attracts tourists from all over the world, therefore this raises concerns about the viability of building shared service centers or business centers there (Záhradníková, 2022).

In addition to considering the landscape from the perspective of a tourist, it is crucial to consider the country from the perspective of a foreigner who must work here in the shared services center. According to Adient, it's critical to be open to hiring foreign nationals and to give them desirable positions, but we also need to consider the substantial income tax burden that these potential foreign workers must bear. He suggests improving the business climate,

for instance by emphasizing green energy. The Adient center followed a similar course of action and works hard to raise brand awareness among employers as well as customers in the marketplace (Záhradníková, 2022).

The parent company's strategy is firmly ingrained in the Bratislava-based Adient center. It is up to the parent firm to decide whether to keep the center where it is or move it elsewhere. However, the parent firm has no need to move the center just yet because of the highly regarded activities that it provides. Bratislava produces goods of an unmatched caliber, however it is. The business world is uncertain, and the automotive sector responds strongly to global shifts (Záhradníková, 2022).

Based on the foregoing, it is possible to infer that the Adient Shared Services Center in Bratislava is unique and, with time, conducts operations with ever higher standards, while simultaneously executing services for ADIENT that are not performed anywhere else in the world. As a result, a so-called center of excellence is being established in Bratislava. One of the current trends in the field of sharing services is the establishment of centers of excellence, with centers of excellence primarily dedicated to services in the field of information and communication technology (Trend, 2014).

### **3.3 Discussion**

From the point of view of the Slovak Republic, it is important if centers of shared services are built in the country. Not only are these centers reflected in the amount of direct foreign investment that flows into the national economy of this country, but they also significantly contribute to the creation of the country's gross domestic product, are a significant contributor to the state budget, and at the same time are important to employers in the country. Based on our article, it is necessary to draw attention to the know-how, technologies, information and knowledge that come to the country along with the construction of these centers. From this point of view, it is a traditional direction of knowledge transfer, which is devoted to many authors all over the world. Kogut & Cotta de Mello (2017) define the opposite flow of knowledge, the definition of which is presented in the literature review section. This knowledge backflow has not received much attention in the literature. In case the authors examine the reverse transfer of knowledge, few of them deal with the reverse transfer of knowledge on the example of shared service centers and business centers. There is therefore a literature gap in this area.

This reflects an outflow of direct foreign investments for the countries of origin of multinational firms that have these centers in the Slovak Republic (as well as any other country in the globe). On the other hand, these firms have the chance to enter new markets and do certain tasks more effectively. Furthermore, these branches in the host nations generate the research that we have conducted, collect expertise and information, and know-how that can subsequently be passed back to the home firm.

Foreign investors ceased depending on the labor economic model in the case of Adient, as well as many other international firms operating on the Slovak Republic market. Representatives from the shared service center and business center industries see enormous potential in the Slovak Republic for the creation of new centers, the expansion of existing centers, the hiring of personnel for new, more demanding jobs, and the stable building of centers of excellence. According to the Slovak Investment and Trade Development Agency, owing to competent people, shared service centers and business centers are evolving into centers with better added value and a stronger emphasis on service quality. They advance the value chain by developing centers of excellence and specialized posts (SARIO, 2022).

Even in the instance of the Adient business center in the Slovak Republic, which we investigated, the leaders are attempting to develop the Bratislava business center into a center of excellence. All of the duties done at the Bratislava retail complex are specialized and unique to the globe. As a result, the aforementioned center has its own expertise, yet fundamental decisions require the approval of the parent firm.

In this regard, it is important to note that our example is not typical of a division of a multinational firm. Centers of shared services are one example; there is no common approach for their statistics reporting, therefore they cannot be properly categorized into any category (Rusiňák, 2023).

Nonetheless, it is a branch of a foreign corporation, which is required for producing a reverse knowledge transfer. In the instance of the Adient business center that we investigated, its representative expressed an interest in establishing a center of excellence from the Bratislava business center. This focuses the management of the center's attention even more on specific operations that will not be carried out elsewhere for the given transnational organization. Based on the foregoing, we may infer that, even in its original form, we did not record a major transfer of knowledge to the parent business in the case of the center's primary operations in our instance of the shared services center. The establishment of a center of excellence, in our opinion, will result in a greater degree of specialization of the provided center, and the reverse transfer of knowledge to the parent firm will be even less than previously.

In this light, it is important to note that ours is a unique situation of a firm with only one such center, located in Bratislava. In fact, however, it is conceivable to encounter multinational organizations with several such centers across the world, and knowledge transfer can therefore occur not just back to the parent firm, but also between particular branches or shared service centers.

## **CONCLUSION**

Parent firms can benefit from shared service centers and business centers in a number of ways, with the authors frequently mentioning cost savings, improved efficiency, and other advantages. It is also feasible to see the advantages that the host nations gain from the development of centres. These are advantages in the form of capital inflows, expertise, job creation and increasing employment, higher employee credentials, and similar advantages. The reverse transfer of knowledge from the centre to the parent company is receiving more and more attention as time goes on and the level of quantity and quality of services provided by the centres rises. In our essay, using the example of a particular business centre, we broadened the research on the reverse transfer of knowledge from Slovakia to the United States.

Increased worker skill levels and scientific and technological advancements in the target nations benefit the parent companies by bringing fresh insights, innovations, and know-how that may be used retrospectively within the parent company or throughout the entire group of enterprises.

The business center we looked at, which is located in Slovakia, exhibits a similar tendency. The Adient centre, which was established in the aforementioned country in 2007, saw gradual growth in terms of the number of personnel and branches there as well as in the variety and caliber of services it offered.

The parent company has the following perceptions of the Adient business centre in Bratislava:

- The Bratislava business center plays a strategic role and holds a unique position within the company;

- Activities carried out in Bratislava are not carried out anywhere else in the globe for Adient. It is based on the notion that shared service centers and business centers are set up specifically to undertake activities that will not need to be repeated for the given organization, hence lowering overall expenses. The services supplied by the center in Bratislava are not limited to Central and Eastern Europe, but are available on a global scale. However, it should be noted in this context that this does not apply to all shared service centers and business centers. In actuality, such transnational organizations may have multiple centers of shared services or business centers around the world, with these centers frequently performing comparable or similar activities. In such instances, the backward transfer of information is more visible. In the future, we will concentrate our efforts on locating such a shared services center, or business center, where the reverse transfer of knowledge may be more precisely defined;
- Even in the case of the Adient business center in Bratislava, it is possible to identify operations that are introduced in Slovakia, developed, and then integrated into the whole corporation's plan. These are primarily partly financial or information technology activities that are developed in Bratislava and subsequently exported around the world;
- A reverse transfer of knowledge in the field of sustainability and the center's involvement in diversity, equity, and inclusion may be witnessed in the case of the business center in Bratislava to the parent firm Adient. Although it is not one of the main key activities or tasks of the Bratislava business center in this particular case, representatives of the Bratislava business center regularly present not only their results in this area, but also individual steps, procedures, and know-how to the parent company and other branches around the world;
- The Adient firm is unique in that it not only has its business headquarters in Slovakia, but also many production plants here. The technological center in Trenn is especially noteworthy, as the reverse transfer of information from Slovakia to the parent company is entirely unambiguous. The findings of the technological center in Bratislava's research and development are implemented not only in the parent firm, but also in other Adient group companies around the world;
- As a result, we can conclude that the Adient company we investigated, or more specifically, its business center built in Slovakia, is not a traditional case of reverse knowledge transfer, as was the case in research by authors devoted to reverse knowledge transfer from Central and Eastern European countries (e.g. Ferencikova, Hrdlickova (2020) and others). Adient's strategy is founded on the main concepts of shared service centers and business centers – the center's mission is to perform one or more activities better (more efficiently, better quality, cheaper...) than the parent company would if the supplied activity was carried out by its own directors;
- The company we reviewed is unique in that it lacks an equivalent center elsewhere in the globe where it could supply its basic know-how, and its basic know-how is also not required for the parent company's activities. Despite this, we were able to uncover a few less substantial reverse knowledge transfers from the Adient business center in Bratislava to the parent corporation.

Therefore, it can be inferred that the existence of a reverse knowledge transfer from Slovakia (or from Central and Eastern Europe) to the United States, where Adient has its headquarters, was established in the case of the business centre that we analysed. Knowledge is subsequently distributed to other branches of the group from there. Our study supported the potential of the nation in the Central and Eastern European region and exposed one of the fundamental elements that investors view as a justification for investing in this nation's market: a skilled workforce that is adaptable enough to meet the needs of the specific employer.

One of our study's limitations is that it only looked at one particular business center in Slovakia. Our future research could be extended to other providers of shared services operating in the



Slovak Republic as well as other countries in the Central and Eastern European region, to determine whether there is a backward transfer of knowledge in these cases, as well as in the case of the center studied by us, and to compare selected examples within and outside the country.

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# Impact of economic indicators of sustainable development of Slovak spas

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**Abstract:** The natural healing waters of the Slovak Republic are known for their uniqueness and rich content of healing mineral compounds. The aim of the article is to identify and apply indicators of sustainable tourism to the development of spa tourism using selected statistical methods. The data will be analyzed and synthesized based on the available annual reports of spa companies in Slovakia. The result of the article is to determine, through correlation and regression, the dependence of selected indicators of sustainable tourism on the gross added value of tourism focused on spa tourism. Based on the results, we found that the selected indicators of the sustainable development of spa tourism have statistical significance depending on the GDP of Slovakia. Overnight stays in spa establishments in the Slovak Republic have the greatest impact on GDP.

**Keywords:** tourism, suitable, spa

**JEL Classification codes:** Q01, Z32

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## INTRODUCTION

Slovak spas are a cultural and historical phenomenon in the Central European area. The issue of spa tourism, as one of the oldest and most important types of tourism, is increasingly discussed among leading experts and is a subject of interest in the field of healthcare. Spa tourism contributes significantly to overall tourism; therefore, it is important to study this area. The importance of tourism is evident in several areas. Its share in the countries' GDP is not negligible, in some cases it even constitutes the main part of the country's income. Sustainable development is important for spa tourism in Slovakia from the point of view of tourism because of its benefits and increasing the share of Slovakia's gross domestic product. It is therefore important to find out the sustainability of the spa industry to be able to better orientate on the improvement of the provision of spa services and its increase in visits and overnight stays. Economic indicators of sustainable development are a suitable tool for examining the state of spa tourism in Slovakia. There are not enough authors who would deal with the sustainability of spa tourism in Slovakia and its analysis. In the current literature are not adequate authors or researchers deal with effect the economic indicators of sustainable indicators for spa tourism to GDP of Slovak Republic. The Slovak spa industry contributes to the creation of GDP with a value of 61,777 Euros in 2021 (The Statistical Office of the Slovak Republic, 2022). We would like to identify properly economic indicators and measure their impact to GDP and find out their impact at GDP. The purpose of the article is to identify economic indicators of sustainable development applicable to spa tourism and to determine their dependence on Slovakia's GDP. The value of GDP of spa tourism in Slovakia we can find in The Tourism Satellite Account in Slovakia Statistical Office, where is not

possible find exactly which economics indicator of sustainable development important for GDP.

## 1 LITERATURE REVIEW

Spa tourism has a high potential to attract visitors to destinations. It is not given much attention in the literature, despite this essential reason, such as quantifying the benefits and costs of investing in spa/balneo centers, offering multipliers that can be used to evaluate and make investment decisions (Torres-Pruñonosa, 2022). Indicators of sustainable development applied to spa tourism were mentioned and measured by Slovak authors only marginally. The author Mačiš, M. (2018) summarized all the indicators that are measured within the entire tourism industry. Some of them can also be applied to the spa tourism, but they are not specifically stated. Štefko R. et al. (2020) dealt with economic indicators applied to spa tourism within the financial and economic situation. The measurement and evaluation of indicators of sustainable development is studied in all areas (in economics, demography, healthcare, environment, etc.). When assessing the sustainable development of spa tourism, indicators are most often used - indicators divided according to the environmental dimension, the economic dimension, and the social dimension (Guerreiro & Seguro, 2018; Štefko et al., 2020). The most well-known set of indicators applied to the sustainability of the development of spa tourism are the indicators issued by the UN. In the European Union, sustainable development indicators are used mainly in connection with the development of the Sustainable Development Strategy for the European Union (European Commission, 2016). Indicators are evaluated over a certain period and refer to a specific spatial unit such as a country, region, municipality. Indicators of the sustainable development of spa tourism are divided into certain groups of indicators that provide information to determine the relationships between the impacts of tourism on cultural and natural resources. Tourism depends on these relationships (UNWTO, 2013). Indicators of sustainable development of spa tourism are used for multidimensional assessment of the sustainability of destinations. It is necessary to point out that the indicators serve only as a proposal for examining the impact of tourism on sustainable development. Among the most frequently used economic indicators of the sustainable development of spa tourism are indicators such as the number of overnight stays of guests in spa facilities, the proportion of direct employment in spa tourism (Sava, 2013; Szromek, 2021; Krstić, Petrović, Stanišić, 2015). Other main indicators what are mostly used in research are: number of overnight guests, share of direct employment, average guests spend, average capacity utilization, the level of unemployment in the region, average number of overnight guests.

Within the availability of resources, indicators of the economic dimension are applicable to the spa industry in Slovakia. They are divided into several groups in terms of their seasonality, economic benefits, and employment. They help define the contribution of spa tourism to economic sustainability in a specific destination, tab. 2 (Ramazanov, Bolatbekov, 2018). Latifian, Madahi, Mabhout (2018) state that there is a strong link between spa tourism and economic growth, which leads to an increase in the economic development of the country due to the improvement of the quality and development of the travel activity of the inhabitants. By examining various economic factors, we understand the benefits of spa tourism in the creation of GDP and the overall stability of the economy through an increase in employment in each destination. Job creation can be much higher in the spa tourism industry compared to any other industry because of the spillover effects and reduced impact of tourism activities (Matijová, et al, 2019).

Authors Purwomarwanto, Ramachandran (2015) determined two models for measuring economic indicators of sustainable development on GDP. The first model uses GDP to represent economic growth and the number of international tourist arrivals to represent

tourism growth. The second model uses the hotel occupancy rate, the average length of stay and the number of tourist arrivals as a metric of tourism growth. Based on the obtained results, the authors consider the development of any type of tourism as one of the strategic economic pillars. Another authors Kum, Aslan and Gungor (2015) determines that the various sectors of tourism have significant role in economic, cultural, and social development. They researched that tourism arrivals have impact at GDP of country. Indicators as overnights, number of beds and number of visitors has positive relationship at GDP. Stryzhak, Sayar a Ari (2022) made a study which shows that economics indicators of sustainable development for tourism have nexus among GDP indexes. Also determined that between economic growth of country and various forms of tourism can be explained by various factors as strategic orientation, sharing of tourism revenues in structure of GDP or national system. Many authors in different countries did research about causal relationship between tourism as spa and economic growth among to GDP (Lee, Chang, 2008; Chang, Khamkaev and McAleer, 2010; Mello-Sampayo, Sousa-Vale, 2012). Their researching was applied with sustainable indicators nexus GDP. Results of their work shown that indicators as overnights, number of tourist or number of beds might have a positively connection to increasing of GDP (Çağlayan, Şak, Karymshakov, 2012).

**Table 1 Economics indicators of suitable development**

<b>Domains</b>	<b>Indicators</b>
<b>Seasonality</b>	Monthly bednights
	Percents of jobs which are seasonal
	Seasonality rate
	Percent of establishments open during all year
<b>Economics benefits</b>	Percent of tourism on GDP
	Number of same-day visitors
	Number of tourist
	Establishments using local products
<b>Employment</b>	Employment / total economy
	Employment by gender
	Employment by qualification

Source: adapted from Guerreiro, S., Seguro, P. (2018), p. 5

The sustainability of spa tourism also faces a lot of importance within the growth model and its compatibility with the quality of life of local communities. It is proposed to stop using models focused on economic growth and rather to focus on the quality of growth and its compatibility with the quality of life of the inhabitants (Băndoi A et al., 2020).

Spa tourism contributes to sustainable development by identifying lifestyle habits, various types of comfort and modernization, and progressing towards sustainability. It also contributes to solving different types of consumer behavior (Lopes, P., Rogiguez-Lopez, 2022).

## **2 METHODOLOGY**

The article is composed of several research methods. To identify and establish measurable indicators of the sustainable development of spa tourism, the methods of deduction, synthesis and comparison of scientific sources were used. Data from the Statistical Office of the Slovak Republic and annual reports for 21 spa companies were used. Spa companies in

Slovakia are included in several groups of NACE 869 and therefore we had to use the collection and synthesis of the required data. Correlation and regression methods were used to determine the dependence of spa economic sustainable development indicators on the GDP of the Slovak Republic. Two methods are commonly used to evaluate the relationship between variables, namely correlation and regression analysis. Both are based on a specific analysis of a set of specific assumptions. Regression analysis quantifies the direction and strength of the relationship between two numerical variables x and y. Unlike correlation, the two variables are not interchangeable, and the key is the correct identification of the result. Lack of data to provide more data to calculate a more comprehensive correlation and regression method were not available and provided by spa companies. GDP was used for the whole of Slovakia. The processed data were for the period 2012-2022. Data on spa companies were ascertained according to their ID number. Due to poorly statistical data about spas, we choose only visible and available data for our research.

Two hypotheses are established:

**Hypothesis 0:** Selected economic indicators of the sustainable development of Slovak spas have not positively impact at the GDP of the Slovak Republic,

**Hypothesis 1:** Economics indicators of the sustainable development of Slovak spas has positively impact at the GDP of the Slovak Republic.

The formula for calculating a simple linear regression will be as follows:

$$Y = \beta_0 + \beta_1 X + \varepsilon (1)$$

Y - dependent variable,

X - independent variable,

$\beta_0$  - parameter of the model, the so-called a locating constant that expresses what value the dependent variable Y will acquire if the independent variable X has a value of 0.

$\beta_1$  - parameter of the so-called model regression coefficient, which expresses the slope of the regression line. It indicates how many units Y changes on average if X changes by 1 unit,  $\beta_1 > 0$  - direct linear dependence - positive dependence,  $\beta_1 < 0$  - indirect linear dependence - negative dependence.

The statistical correlation will be carried out in the statistical program Gretl based on selected economic indicators of sustainable development, namely: the number of overnight stays, the number of visitors, the number of beds and the GDP of the Slovak Republic.

### 3 RESULTS AND DISCUSSION

Spa tourism has an impact on the economic status of the Slovak Republic, especially due to its history and attractiveness. From the point of view of tourism, it has a significant impact on attendance even in non-seasonal periods. Finding out key economic indicators helps to increase the interest of the state. Spa tourism in Slovakia is positively associated to economic development, monetary gains, generation of employment opportunities, infrastructure improvements and reduction of poverty. The economic impact is needs to be analyzed and do more research with economic indicators or values which can define how sustainable the spas are. In our research we used the data which were available.

### **3.1 Economic indicators of sustainable development of spa tourism**

As part of the monitoring of spa tourism for economic sustainability in the destination, appropriate indicators of economic value must be chosen. There are several indicators (indicators) that are created based on defined criteria such as the flow of spa tourism in the destination, the performance of the spa companies, the quality and quantity of employment, safety and health protection and the supply chain in the field of tourism (European Union, 2013). Selected economic indicators of the sustainable development of spa tourism are presented in figure no. 1. We selected the economics indicators based on available data of all spa establishments in Slovakia. These data are from The Statistical Office of the Slovak Republic and are visible for all researchers or public. The economics indicators as overnights, number of beds and number of visitors are the main indicators which can show us value of sustainable development of spas and their impact at GDP or economy of Slovakia. Development of selected economic indicators according in the years from 2012-2021 showed us that the number of overnight stays in spa establishments was the most significant in 2019 when total number of overnight stays was 2,924,573. The lowest decrease in the number of overnight stays was in 2020 and 2021 due to anti-pandemic measures, up to 64% on average compared to 2019. The number of beds in spa establishments was not significantly different in period from 2012-2021. The lowest number of beds was in 2012, when 11,841 beds were available.

### **3.2 Economic indicators of the sustainable development of spa tourism and their dependence on the Slovak GDP**

Selected economic indicators where applicated to Gretl program for showing us OLS model and results if the research has statistical significance. Since the model testing results indicate that inflation cannot be considered statistically significant for the model, we created another model using the two significant variables of the previous model. We estimate the second model as:

$$y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 \quad (2), \text{ where}$$

y= gross domestic product SR

x<sub>1</sub> = attendance of spa companies in the Slovak Republic

x<sub>2</sub>= number of overnight stays in spa establishments in the Slovak Republic

x<sub>3</sub>= number of beds in spa establishments in the Slovak Republic

b<sub>0</sub> = population capture

b<sub>1</sub>, b<sub>2</sub> = population slope (least squares estimates).

Correlation analysis (tab. 2) showed us the dependence of individual indicators. Staying overnight at the spa has a clear effect on spa attendance at a value of 0.97, which is closest to the value of 1. Subsequently, the number of beds and the effect on the attendance of spa companies are also pointed out. The value dropped to 0.34, which means that it does not have such a close influence on the visitation of spa establishments. The relationship between GDP and spa visitation is -0.15, which means that there is no significant dependence. It only means that it is not clear to demonstrate the direct influence of the indicator on the applicability of spa companies, due to the lack of data suitable for overall correlation.



**Tab 2 Correlation analysis of suitable indicators of SPA tourism in Slovakia**

	<i>attendance at spa establishments</i>	<i>overnight stays in spa establishments</i>	<i>number of beds in spa establishments</i>	<i>GDP</i>
Attendance of spa establishments	1			
Overnight stays in spa establishments	0,970028263	1		
Number of beds in spa establishments	0,340554844	0,243565	1	
Slovakia GDP	-0,158181737	-0,33445	-0,24581	1

Source: own processing in the Gretl program

The multiple R is the value of the correlation coefficient, which indicates a positive correlation between the variables. More important for research are the adjusted R<sup>2</sup> values, which represent the coefficient of determination that explains the intensity of variation in the dependent variable caused by the independent variables in the model. The adjusted R<sup>2</sup> value is 0.78 (Table 4), indicating that 78% of the variation in y values around the mean is explained by the regressors x<sub>1</sub>, x<sub>2</sub>, or 78% of the values fit the model. From the results, we can conclude that there is a significant connection between the selected indicators of the gross domestic product of the Slovak Republic and the selected economic indicators of the sustainable development of the spa tourism.

**Tab 3 Regression analysis**

<i>Regression Statistics</i>	
Multiple R	0,925858412
R Square	0,857213799
Adjusted R Square	0,785820698
Standard Error	4131512,592
Observations	21

Source: own calculations

Data from Table 3 are used to determine the regression coefficients. From the calculated values, the model can be interpreted using the following equation:

$$y = 250939265,3 + 860,25x_1 + 98,32x_2 - 13492,78x_3 \quad (3)$$

Confirmation of the validity of the regression output can also be verified by comparing the p-value with the  $\alpha$  confidence level. If  $p < \alpha$ , then  $H_0$  will be rejected, and it can be concluded that the selected variables are statistically significant for the model. Another way to test the validity of the model is to calculate the t statistic. The critical t value is calculated using the MS Excel formula for a two-tailed distribution with  $n - k =$  degrees of freedom and  $\alpha = 0.05$  confidence level, where  $n = 21$  (number of observations) and  $k = 4$  (number of regressors). If  $|t| > t_{21}$ ,  $H_0$  is rejected. The  $t_{21}$  value was calculated to be 5.435. Regression is shown in

table 4 below. As we can see, the variables overnights and number of beds in spas have not highly meaning for our research and impact at GDP of Slovakia. Based on P-value less than  $\alpha = 0,05$  we still use it and doing more calculations.

**Tab 4 Regression of selected economic indicators of sustainable development of Slovaks spas**

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	250939265,3	46171845,77	5,43489785	0,00161
the number of visitors to the spas	860,2495752	156,7621346	5,487610751	0,001532
staying overnight in the spas	-98,36051415	17,06603795	-5,763523696	0,00119
number of beds in spas	-13492,78187	3952,853059	-3,413428647	0,014258

Source: own calculations

As can be seen from the model results, even a very small increase in GDP per capita will have a highly positive effect on economic well-being. On the other hand, there is a negative relationship between overnight stays in spa establishments and the number of beds. However, we need to test the model to confirm the results.

The level of significance  $\alpha$  is set at 0.05. Hypothesis testing can be done using ANOVA to calculate F-value and F-significance or using the t-test statistic to calculate p- and t-values. MS Excel software is used for all calculations. The results of ANOVA are shown in Table 5. The results indicate that  $F_{\text{signif}} (0.006)$ , which is just above the specified limit of  $\alpha$  value. We can claim that the model has statistical relevance. This means that the chances that the regression output could have been obtained by chance are very small.

**Tab 5 ANOVA results**

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	6,14854E+14	2,04951E+14	12,00696	0,006016713
Residual	6	1,02416E+14	1,70694E+13		
Total	9	7,17271E+14			

Source: own calculations and processing

Based on the processed correlation and regression analysis, the results are as follows:

The spa attendance coefficient has an estimated standard error of 156.76, a t-statistic of 5.48, and a p-value of 0.0015. Using the p-value approach, the null hypothesis can be rejected, and the variable is shown to be statistically insignificant at the  $\alpha = 0.05$  level of significance as  $p > 0.05$ . The t-value approach indicates that  $|t| < t_{21}$ , which means that  $H_0$  can be rejected, and indicates that the visitation of spa establishments is statistically insignificant for the model.

The coefficient number of overnight stays in spa establishments has an estimated reference error of 17.066, a t-statistic of -5.76 and a p-value of 0.00119. Using the p-value approach, the null hypothesis will be rejected, and the variable will be shown to be statistically significant at the  $\alpha = 0.05$  level of significance as  $p < 0.05$ . The t-value approach indicates that  $|t| > t_{21}$ , which means it will be rejected, and indicates that the variable is statistically significant for the model.

The coefficient number of beds in spa establishments has an estimated reference error of 3952.853059, a t-statistic of 3.41 and a p-value of 0.014. Using the p-value approach,  $H_0$  is rejected and shows that the variable is statistically significant at the  $\alpha=0.05$  level of significance as  $p<0.05$ . The t-value approach indicates that  $|t|>t_{21}$ , which means that  $H_0$  will be rejected, and indicates that the variable is statistically significant for the model.

After testing this model, selected economic indicators which has highest impact at GDP of Slovakia is the number of visitors of spa.

## **CONCLUSION**

Based on calculations, we proved that selected economic indicators of sustainable development applied in spa tourism have an impact on the GDP of the Slovak Republic. The null hypothesis was rejected. It turned out that the most important factor in the creation and increase of the GDP of the Slovak Republic is the attendance of spa enterprises in the Slovak Republic. By performing a quantitative analysis using a multiple regression model, the relationship between selected economic indicators of sustainable development (visits to spa establishments, number of beds in spa establishments and number of overnight stays) and GDP of the Slovak Republic was investigated. The GDP of the Slovak Republic was taken as a dependent variable. In conclusion, we can state that there is a significant connection between them. Selected economic indicators of sustainable development applied to spa tourism showed that it is necessary to focus on the development of spa industry in Slovakia and monitor its output data. We can agree with researchers in literature review, that indicators such as number of visitors or overnight stays have positive impact of GDP. Given that spa tourism is not subject to seasonality, further analyses should be developed within the framework of participation in Slovakia's economy. For this research it is important do more future development with other indicators in longer timeline. We have been limited by inadequately data from Slovak Statistics Office due to reason, that spa companies include hotels and restaurants and they are not categorized only as spa companies. This research shown us, that is important and significant to focus on economic impact of spa tourism in Slovakia for increase of development tourism. From our point of view, spa companies should be more participate with Slovak government and provide more data about their operations. We recommend continue with research focused on impact of spas companies at economic of Slovakia.

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# Towards a more sustainable world – the UE efforts to establish more decent work conditions

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**Abstract:** The aim of the paper is to present the evaluation of the EU activities in the promotion and implementation of more decent work conditions and therefore its contribution to achieving sustainable development goals (SDGs) outside EU.

The EU enforces sustainable development using different policies, including trade policy. Among specific sustainability issues addressed by the EU in trade agreements are human and labour rights, responsible business conduct and environmental protection. In such a way the EU contributes to the promotion of “sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all” (SDG 8). The EU’s portfolio of activities affecting third countries includes many solutions: 1) all recent EU free trade agreements contain chapters devoted to SDGs; 2) domestic and imported products made with forced labour may soon be banned on the EU market; 3) EU supports ILO’s efforts to improve labour conditions in third countries. At home, the EU is determined to achieve SDG goals set in agenda 2030, it also promotes the vision of Industry 5.0, in which the wellbeing of a worker is central for the production process. The results indicate that the EU is coherent in its policy – the model for enforcing labor rights in external relations is based on dialogue and cooperation, just as it is in domestic policy making.

**Keywords:** decent work, EU trade agreements, labour rights, social clause, sustainable development

**JEL Classification codes:** F13, F15, F16

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## INTRODUCTION

Sustainable development goals are the subject of both the domestic policies of countries, as well as the subject of international cooperation and foreign policy of some countries and the EU. One of the areas through which countries are pursuing SDGs in other countries is trade policy. Trade agreements concluded by both EU and many non-EU countries include Trade and Sustainable Development (TSD) provisions. They have different institutional or regional origins, they differ in scope, implementation provisions and effects. There are two main approaches to enforcement of SDGs in third countries: the promotional one (or collaboration system), used by the EU, and sanction-based one (or cooperation or conditional system), used by Canada and US.

SDG provisions have become a standard part of all recent free trade agreements (FTAs) concluded by the European Union (Duina & Viju-Miljusevic, 2023, p. 129-148). In such a way the EU not only undertakes actions to progress towards fulfillment of SDG goals at home, but it also affects third countries’ policies in this regard. The EU conducts trade relations with the aim of promotion or exports of its values, laws, standards and norms (Borchert et al., 2021; Marx et al., 2016).

The purpose of the article is to examine the extent to which the EU is consistent in its policies: whether the philosophy of achieving the SDGs at home is similar to the ways it seeks to meet them in third countries. The ways of EU's exports of values by means of trade policy are examined and the critical evaluation the portfolio of EU's activities in achieving SDG goal no 8, which relates to "sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" is made.

The paper consists of four sections. The first one investigates the EU trade policy as an instrument of enforcement of sustainable development goals. It outlines changes that have taken place in EU trade policy, resulting in the inclusion of TSD chapters in all FTAs since 2011. The second section is devoted to Goal 8 and meeting the SDGs relating to decent work. Next section aims in investigating the EU trade policy as an instrument for implementing decent work conditions in third countries, while the last one concentrates on EU actions and achievements in terms of meeting SDG 8 in member states.

## **1 LITERATURE REVIEW**

There are different means of promotion of SDGs, labour provisions in particular, in third countries. The EU carries it out by using "soft" instruments, such as dialogue and collaboration contrary to the cooperation (conditional) sanctioning system used by some non-EU countries. In 2013 about 40% of trade agreement (especially US and Canadian ones) that included labour provisions had a conditional dimension, i.e., a sanction or a benefit in case of compliance. They allow for sanctions if particular labour standards are violated after ratification of trade agreement or they condition concluding the agreement on respect for particular labour standards (ILO, 2015).

There are claims that the EU uses FTAs to export its standards abroad, especially to neighboring countries that integrate with the EU and to developing countries. In both instances, the argument is raised that there is an asymmetric dependency relationship in which these countries are rule-takers vis-à-vis the EU (Duina & Viju-Miljusevic, 2023, p. 140). However, there is an ongoing debate on whether the EU promotional system is effective or whether the EU should start using tougher instruments of influence. So far, as the results of the studies indicate, there is no conclusive evidence as to which system is more effective.

Hradilová & Svoboda (2018) discussed the practice related to TSD chapters in the EU FTAs and compared it with the model promoted by the US. They came to the conclusion that the sanction-based approach used by the US was not effective in case of Guatemala, while the cooperation model used by the EU, along with capacity building (e.g., strengthening of civil society participation) is a more relevant approach.

Campling et al. (2016) examine the possibilities and limitations of promotional and conditional approaches to labour provisions in trade agreements. Authors propose a research agenda for evaluating the effects of the EU FTAs regarding labour provisions. They underline that the academic literature has concentrated on reasons of integration of labour standards in EU trade agreements, while the outcomes for workers in third countries are not comprehensively evaluated. They argue that empirical studies are needed to examine the effects of labour provisions in specific countries.

The implementation of labour provisions under the EU-Columbia FTA was investigated by Marx et al. (2016). They pointed out that both the credibility of the EU and effectiveness of TSD chapters is negatively affected by their design and application. Contrary to US-Columbia agreement, as Marx et al. claim, there is no close monitoring and follow up on the implementation and enforcement of labour provisions in EU-Columbia agreement.

Orbie et al. (2017) investigated the effects of labour rights commitments in EU-Peru-Columbia FTA, with special focus on Peru's agricultural sector and the civil society involvement. The results indicate that labour protection in Peru possibly violated the country's agreement with the EU, despite Peru's ratification of all fundamental ILO's Conventions.

Tran et al. (2017) examined the role of trade-labour linkages in transforming Vietnam's labour regime. They found out that external factors (such as trade agreements) had a minimal effect on improving labour conditions in Vietnam, but prospects for strengthening the right to associate are improved by the possibility of sanctions (as in case of Trans-Pacific Partnership). Thu & Schweißhelm (2020) argue that if partners do not share the same political values (as in the case of Vietnam and EU) and formulate labour standards as part of their trade agreement, the chances for improving labour standards and establishment and functioning of representative and balanced civil society structures are low. They also argue that in such case only ex-ante conditionality can safeguard civil society participation and labour rights compliance in trade agreements.

García (2022) examined the recent decision of panel of experts stating that the South Korea has not acted consistently with its sustainable development obligations under the EU-Korea trade agreement. She argues that the dedicated dispute settlement system, if enforced vigorously, can provide an alternative to sanctions. The case of Korea and ratification – soon after the panel's decision – of the fundamental ILO's Conventions confirms this statement. Harrison et al. (2019) focused on TSD chapters in EU FTAs with the Caribbean, South Korea and Moldova. They argue that the impact of TSD chapters upon labour standards have been hindered due to operational failings, such as lack of legal and political prioritization of TSD chapters and shortcomings in the implementation of key provisions.

Stoll et al. (2018) propose a model labour chapter to be included into future EU trade agreements. It is intended as a template in future EU trade negotiations. International rules and standards on labour issues are integrated to the proposed model chapter. According to this proposal, the parties should not only ratify and implement all fundamental ILO Conventions and their Protocols, but they should go beyond fundamental rights and include additional issues, such as health and safety standards at work, regulations on decent living wages and working hours. Another novelty would be a dispute settlement procedure designed to address violations of the substantive obligations included in the labour chapter. This would move the EU system away from a promotional one to the sanctions-based regime used in American agreements.

## **2 METHODOLOGY**

The research method is based on the critical review of literature and the analysis of source materials (the texts of the Agreements and official documents). The EU policy papers, reports and expert commentaries were critically analysed. The Author discusses two main approaches to the promotion of SDGs by countries and provides arguments for different approaches. A descriptive analysis of statistical data relating to the SDGs was also carried out.

## **3 RESULTS AND DISCUSSION**

### **3.1 EU trade policy as an instrument of enforcement of sustainable development goals**

The EU trade policy in 21<sup>st</sup> century is much different to what it was 20 years ago. The scope of trade agreements negotiated and signed by the EU broadened, and they now include topics



far beyond trade. Sustainability issues, such as human rights, labour and environmental standards, responsible business conduct are among core new topics. The first sustainability provisions with respect to labour and environmental standards were included in 2008 EU-Cariforum Economic Partnership Agreement (*The EU-CARIFORUM Economic Partnership Agreement*, 2008). Sustainability issue in this agreement is explicitly based on the “essential and fundamental” elements set out in the Cotonou Agreement, i.e., human rights, democratic principles, the rule of law, and good governance. Exactly the same has been done in the EU SADC (Southern African Development Community) Economic Partnership Agreement signed in 2016 (*The EU-SADC Economic Partnership Agreement*, 2016).

The first free trade agreement to include separate Trade and Sustainable Development (TSD) chapter and be the first “new generation” trade agreement is the 2011 FTA with Korea (*Comparative Analysis*, 2022, p. 39; *EU Trade Relations with South Korea*, 2023). Currently TSD chapters are included in 11 agreements (with: Canada; Central America<sup>1</sup>; Colombia, Peru, and Ecuador; Georgia; Japan; Moldova; Singapore; South Korea; Ukraine; United Kingdom; Vietnam). Seven more are awaiting ratification or are still negotiated (*Sustainable Development in EU Trade Agreements*, 2023).

The “new generation” agreements are an element of the EU’s broader strategy combining economic objectives with social and political ones through which the EU pursues the policy of “change through trade” (Kužnar & Menkes, 2022). EU encourages its partners to base their trade relations on the foundation of adopted values and verifies their implementation. The legal basis of the policy of such “conditionality” are the norms of the TEU and TFEU (*The Treaty on European Union*, 2012; *The Treaty on the Functioning of the European Union*, 2012). The Commission in 2015 made a commitment to “a trade and investment policy based on values” (*Trade for All*, 2015). The catalogue of values included in “new agreements” comprises: the “provisions whereby the Parties will reiterate their commitment to promote, protect and fulfil human rights and fundamental freedoms, which are universal and indivisible, as well as to promote the values of democracy, good governance, the rule of law, and the principles of non-discrimination, equality and solidarity” (*Answers from the Commission to Written Questions*, 2018).

Apart from pursuing the policy of change through trade, the EU is committed to implementing Agenda 2030 (*Transforming Our World: The 2030 Agenda for Sustainable Development*, 2015) and its 17 Sustainable Development Goals into EU policies. It does so by using a mix of different tools and policies, one of which is trade policy. Promotion of sustainable development within the EU and in third countries through trade policy originates in European Commission’s Communication “Trade for All: Towards a more responsible trade and investment policy” (*Trade for All*, 2015). An integral part of “new agreements” are Trade and Sustainable Development (TSD) chapters. Usually, TSD chapters contain commitments to ratify and effectively implement multilateral instruments on core environmental and labor standards; commitments not to lower domestic levels of protection and/or no to enforce them as trade leverage; and aspirational commitments to gradually raise overall levels of protection (Mazzotti, 2021).

The EU not only includes TSD provisions in FTAs, but it also acknowledges the need to make sure that regulations are implemented and respected. Therefore, in 2017 a public debate on how to improve the implementation and enforcement of TSD chapters in EU trade agreements was launched and a 15-Point Action Plan was released by the Commission in 2018 (*Comparative Analysis*, 2022, p. 39; Non-paper of the Commission services, 2018). The EU meets its partners regularly to discuss implementation of TSD commitments in the trade agreement between them. A complaint may be lodged (by EU Member States or EU civil society

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<sup>1</sup> Panama, Guatemala, Costa Rica, El Salvador, Honduras, Nicaragua.

representatives) in case of violation of commitments. In 2021 The European Commission conducted a review of this Action Plan. One of the results was “Communication on the power of trade partnerships: together for green and just economic growth” adopted by Commission in June 2022 (*Communication on the Power*, 2022). It underlines the EU commitment to the protection of the environment and labour rights worldwide: “The EU is strongly committed to ensuring that its trade agreements foster sustainability, so that economic growth goes together with the protection of human rights, decent work, the climate and the environment, in full adherence with the Union’s values and priorities” (Introduction).

The *Communication* identifies specific actions aimed at enhancing the contribution of EU trade agreements to promoting the protection of the environment and labour rights in six policy priorities:

1. “The need to be more proactive in cooperating with partners;
2. Stepping up a targeted and country-specific approach to TSD;
3. Mainstreaming sustainability beyond the TSD chapter of trade agreements;
4. Increasing monitoring of the implementation of TSD commitments;
5. Strengthening the role of civil society;
6. Strengthening enforcement by means of trade sanctions as a measure of last resort” (*Sustainable Development in EU Trade Agreements*, 2023).

The results of including TSD chapters into EU FTAs are ambiguous. There is no wide agreement that the positive change sought by the EU has occurred in partner countries. Some stakeholders, scholars, several Member States, and Parliament were even calling for introducing sanctions in order to better enforce the rules (Bronckers & Gruni, 2021). On the other hand, the Commission’s original policy, which is still promoted, is the soft “cooperative” approach. According to this approach, desired reforms in trading partners may occur as an ex-post result of implementing the trade agreement. They provide a framework for dialogue, cooperation, and/or monitoring rather than drawing consequences for not compliance. However, trade sanctions have been mentioned recently (June 2022) as a measure of last resort (*Communication on the Power*, 2022).

### **3.2 Decent work for all in a sustainable development agenda**

The ILO has developed a Decent Work Agenda before it was integrated into Agenda 2030. Decent work is the one that is based on four pillars: access to jobs, social protection, rights at work and social dialogue. Decent work is not just any job, is it the one that provides workers with fair income, it gives dignity and equal rights for men and women. It allows employees to realize their work aspirations and involves opportunities for personal development<sup>2</sup>. People are free to express their concerns, to organize and participate in decisions that affect their lives (ILO, 2023a).

Decent work is a driving force of sustainable development. The economic growth and decent work are interconnected: more decent jobs create better conditions for stronger and more inclusive economic growth, while improved growth promotes creation of better jobs. Moreover, decent work for all reduces inequalities, increases resilience and facilitates transition towards more sustainable economy.

Therefore, in September 2015, decent work and the four pillars of the Decent Work Agenda have been integrated to the 2030 Agenda for Sustainable Development. Goal no 8 of SDGs calls for: *Promoting inclusive and sustainable economic growth, employment and decent work*

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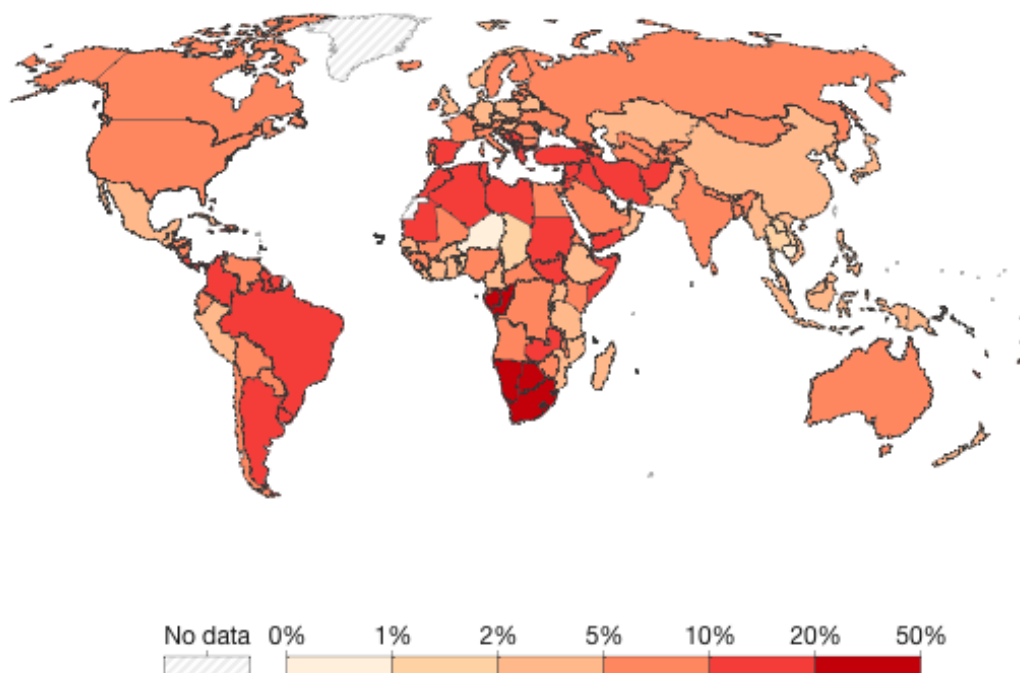
<sup>2</sup> This matter in relation to migrant workers is the subject of, often difficult, cooperation between the ILO and the UN.

*for all*. There are 12 Targets and 17 Indicators for this goal. The targets that are most directly connected with the decent work are 8.5, 8.6, 8.7 and 8.8. Some elements of decent work are also embedded in the targets of many of the other 16 SDGs.

Target 8.5 concentrates on full employment and decent work with equal pay. The UN aim by 2030 is to “achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value”. There are two indicators that help to track whether the target is achieved. Indicator 8.5.1 is the average hourly earnings of female and male employees, by occupation, age and persons with disabilities and Indicator 8.5.2 is the unemployment rate, by sex, age and persons with disabilities. Target 8.6 is “by 2020, substantially reduce the proportion of youth not in employment, education or training”. Target 8.7 aims to “take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms”. And target 8.8 is: “protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment” (*Transforming Our World: The 2030 Agenda for Sustainable Development*, 2015).

As presented in Map 1, the unemployment rates in the world in 2021 varied from over 20%, mostly in African countries (South Africa, Djibouti, Eswatini, Botswana, Lesotho, Congo, Gabon, Namibia) as well as in Palestine and Armenia, to over 10% in South America and northern part of Africa and Middle East, to much lower rates in the rest of the world.

**Map 1 Unemployment rate in the world, 2021**

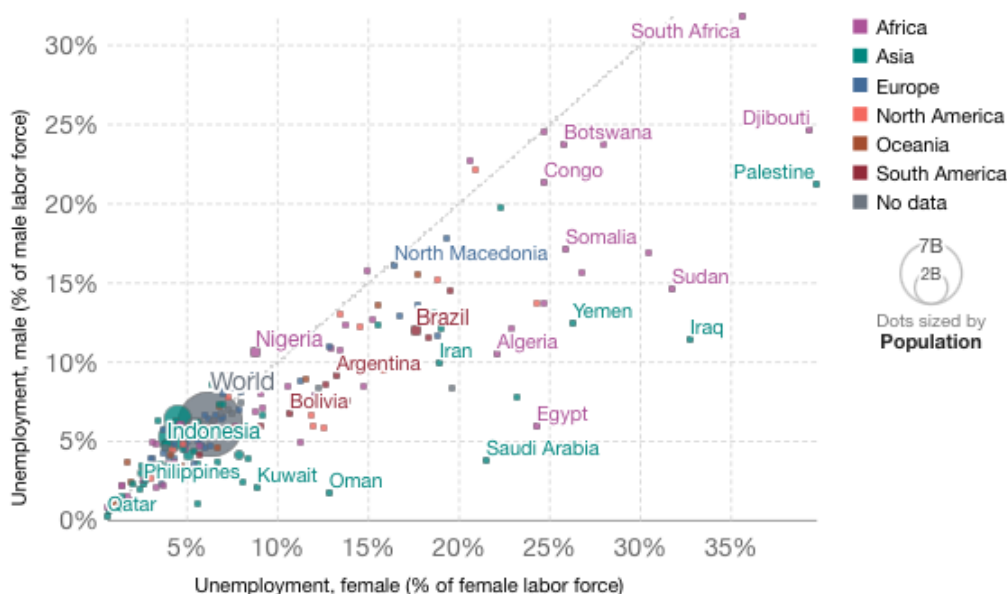


(Unemployment refers to the share of the labor force that is without work but available for and seeking employment).

Source: (Our World in Data, 2021a)

Unemployment rates among females remain higher than of males in most of the countries presented in Figure 1. The world data indicate on average slightly more unemployed women (6.36%) than men (6.06%).

**Figure 1 Unemployment rate of males vs. females, 2021**



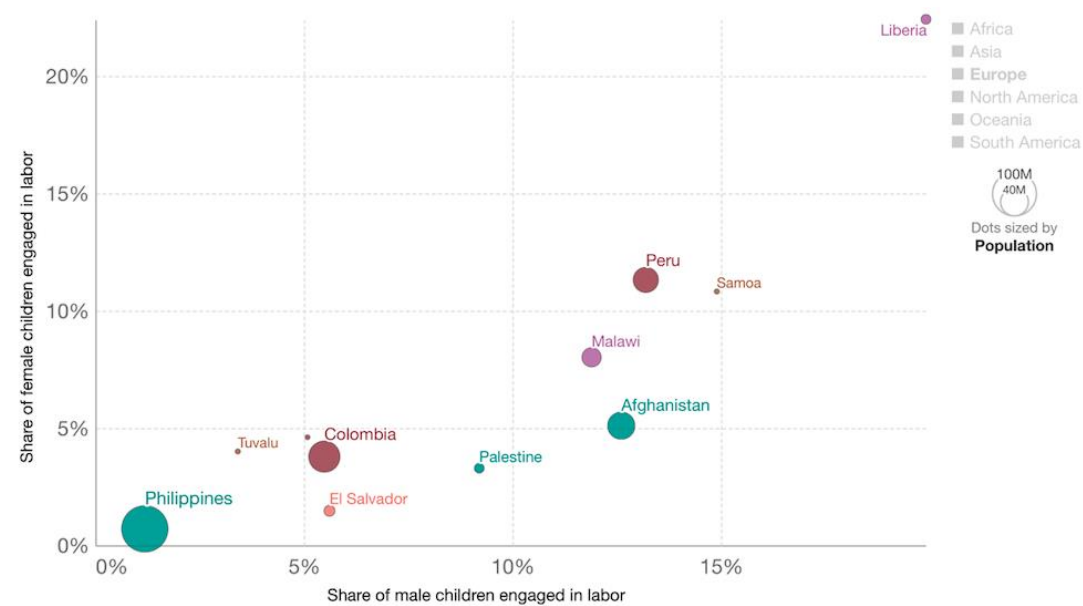
Source: (Our World in Data, 2021b)

There are no data available across countries that would enable comparison of earnings for male and female employees. ILO reported such data for 10 countries only in 2016. In seven of them men's earnings were on average higher than women's (Our World in Data, 2016). Women have often undervalued and low-paid jobs in many parts of the world. Globally, about 50% of all women are in labour force (compared to 80% of men), and they earn on average 23% less than men (ILO, 2017).

Target 8.6 is related to youth employment. Worldwide data indicate that more than 20% of young people in 2014 were not in employment, education or training and over 73 million were looking for work (ILO, 2017). The most recent World Bank data indicate that in 14 countries the rate of youth not in employment, education or training exceeded 40%. Many of those having jobs, were in poverty, living on less than 2 USD per day (World Bank, 2022).

Apart from the young people searching for jobs and not being able to find them, there is a serious problem of forced labour and child labour (target 8.7). 21 million people are in forced labour, out of which 11 million are women and girls. Around 10% of all children are in child labour. It is less than in 2000 but remains high. Figure 2 presents countries for which data was available by sex.

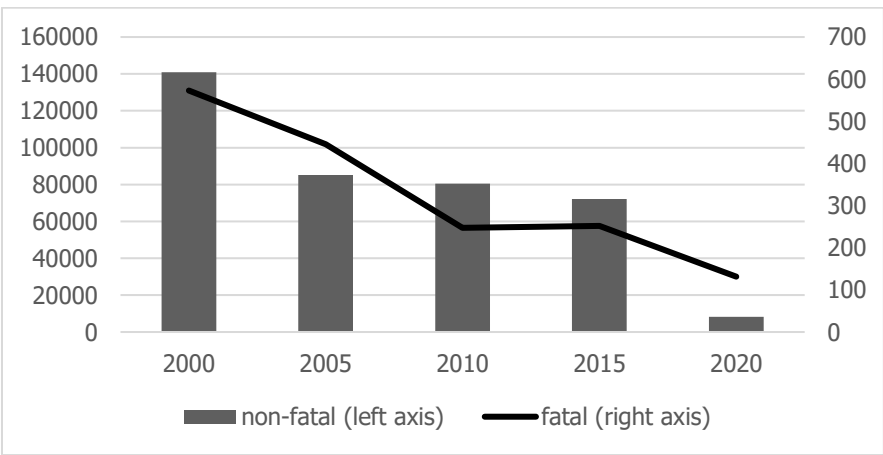
**Figure 2 Share of children aged 5-17 years engaged in labor, 2020**



Source: (Our World in Data, 2020c)

Finally, target 8.8 is focused on protecting labour rights and promoting safe working environments for all. Data for this indicator presented on figure 3 present a downward trend observed since 2000 both in terms of fatal and non-fatal injuries observed at work. While in 2000 there were almost 141 000 non-fatal and 573 fatal cases per 100 000 employees reported worldwide, 20 years later the numbers went down to 8187 and 131, respectively.

**Figure 3 Non-fatal and fatal occupational injury rates 2000-2020, the number of cases per 100 000 employees**



Source: own elaboration based on (Our World in Data, 2020a, 2020b)

### 3.3 EU trade policy as an instrument for implementing decent work conditions in third countries

The linkages between the European Economic Community's (EU's predecessor) trade policy and labour standards have been the subject of public debate since the end of 1970s, when

the Economic and Social Committee started to include references to a social clause, i.e., considering the minimum standards of the International Labour Organization in trade negotiations (GATT, GSP, Lomé II). However, it was not until mid-1990s that the inclusion of labour standards into GSP reforms was argued. The European Communities first introduced the social clause in Council Regulation (EC) No 1154/98 of 25 May 1998 and from then the unilateral GSP scheme incorporated a social clause. It had a stimulative and a sanctioning component. The latter one ("stick") refers to the temporary withdrawal of European GSP preferences to developing countries in cases of forced or prison labor. The stimulative component ("carrot") takes the form of additional trade preferences for countries adhering to certain labor standards. In a sense, this regulation de facto recognized the Community's competence to promote labor standards internationally through its trade policy (Orbie et al., 2005).

New millennium brought more direct linkages between EU trade policy and social clause. "New generation" trade agreements with TSD chapters are the means by which the EU prevents a "race to the bottom", i.e. a competitive position that is built on cheap labour (Chan, 2003). Such policy not only affects labour rights in third countries, but is also prevents job losses in EU countries, especially in low-skilled sectors.

TSD chapters include the commitment of EU trading parties to respect and implement core labor standards included in ILO's fundamental conventions listed in the ILO Declaration on Fundamental Principles and Rights at Work:

- freedom of association and the right to collective bargaining;
- abolition of all forms of forced labour;
- elimination of child labour, and;
- equality (ending discrimination) in the workplace (*Labour Rights*, 2023).

This commitment applies irrespective of the ratification of the relevant eight ILO conventions. This approach corresponds to the "carrot" component of social clause as it promotes more favourable trade relations with countries which commit to respect internationally recognized labour standards. Following the idea of promotional rather than conditional model of labour rights enforcement in trade agreements, the EU has not decided to "force" its partners to ratify the conventions before concluding a trade agreement. However, as table 1 reveals, most of EU FTAs partners have ratified ILO's fundamental conventions. Japan and Singapore have not ratified Convention no 111 on Discrimination (Employment and Occupation), South Korea and Singapore are not parties of Abolition of Forced Labour Convention, 1957 (No 105), Singapore and Vietnam have not ratified Convention no 87 on Freedom of Association and Protection of the Right to Organise. In several cases the dates of ratification of conventions indicate that there some encouragement may have come from the commitments in the EU FTA (e.g., Vietnam – ratifications of Conventions no 98 and 105 took place before or immediately after the ratification by the EU of this FTA; similar situation was observed in case of Canada and Convention 98 and 138, Japan and Convention no 105.

**Table 1 The status of ratification of ILO's fundamental conventions by EU FTA partners**

FTA party	Date of entry into force	ILO's Convention							
		87	98	29	105	138	182	100	111
<b>Canada</b>	2017 (p.a.)	23.03.1972	14.06.2017	13.06.2011 (P - 17.06.2019)	14.07.1959	8.06.2016	6.06.2000	16.11.1972	26.11.1964
<b>Central America</b>	2013 (p.a)	all ratified	all ratified	all ratified (P – some not ratified)	all ratified	all ratified	all ratified	all ratified	all ratified
<b>Colombia</b>	2013 (p.a)	16.11.1976	16.11.1976	4.03.1969	7.06.1963	2.02.2001	28.01.2005	7.06.1963	4.03.1969

<b>Peru</b>	P2013 (p.a)	2.03.1960	13.03.1964	1.02.1960 (P - 18.06.2021)	6.12.1960	13.11.2002	10.02.2002	1.02.1960	10.08.1970
<b>Ecuador</b>	2013 (p.a)	29.05.1967	28.05.1959	6.07.1954	5.02.1962	19.09.2000	19.09.2000	11.03.1957	10.07.1962
<b>Georgia</b>	2016	3.08.1999	22.06.1993	22.06.1993	23.09.1996	23.09.1996	24.07.2002	22.06.1993	22.06.1993
<b>Japan</b>	2019	14.06.1965	20.10.1953	21.11.1932	19.07.2022 *	5.06.2000	18.05.2001	24.08.1967	--
<b>Moldova</b>	2016	12.08.1996	12.08.1996	23.03.2000	10.03.1993	21.09.1999	14.06.2002	23.03.2000	12.08.1996
<b>Singapore</b>	2019	--	25.10.1965	25.10.1965	25.10.1965 ^	7.11.2005	14.06.2001	30.05.2002	--
<b>S.Korea</b>	2015	20.04.2021	20.04.2021	20.04.2021	--	28.01.1999	29.03.2001	8.12.1997	4.12.1998
<b>UK</b>	2021	27.06.1949	30.06.1950	3.06.1931 (P - 22.06.2016)	30.12.1957	7.06.2000	22.03.2000	15.06.1971	8.06.1999
<b>Ukraine</b>	2016 (p.a.)	14.09.1956	14.09.1956	10.08.1956	14.12.2000	3.05.1979	14.12.2000	10.08.1956	4.08.1961
<b>Vietnam</b>	2020	--	5.07.2019	5.03.2007	14.07.2020	24.06.2003	19.12.2000	7.10.1997	7.10.1997

p.a. – provisionally applied

\* Will enter into force for Japan on 19.07.2023

^ Not in force, denounced 19.04.1979

87 Freedom of Association and Protection of the Right to Organise Convention, 1948 (No 87)

98 Right to Organise and Collective Bargaining Convention, 1949 (No 98)

29 Forced Labour Convention, 1930 (No 29) and 2014 Protocol to Forced Labour Convention

105 Abolition of Forced Labour Convention, 1957 (No 105)

138 Minimum Age Convention, 1973 (No 138)

182 Worst Forms of Child Labour Convention, 1999 (No 182)

100 Equal Remuneration Convention, 1951 (No 100)

111 Discrimination (Employment and Occupation) Convention, 1958 (No 111).

Source: own elaboration based on (ILO, 2023b) & (Ionel, 2022)

The case of South Korea is different. It ratified Conventions no 87, 98, 29 in 2021, six years after the FTA entered into force, and only after the settlement of the first EU dispute under the TSD chapters on 20 January 2021. The panel of experts did not support the EU claim that South Korea made insufficient efforts to ratify the fundamental ILO conventions but it recommended that South Korea changes its labour legislations and brings it into conformity with the principles of freedom of association (Ionel, 2022, p. 6). Eventually, after reforms in Korea's Trade Union and Labour Relations Adjustment Act on 20.04.2021 South Korea ratified three out of four outstanding Conventions on: Freedom of Association and Protection of the Right to Organise (87), Right to Organise and Collective Bargaining (98) and Forced Labour (29). Korea is working towards the ratification of the final one on the abolition of forced labour ((García, 2022).

The EU undertakes also more direct actions in case of violation of fundamental labour rights ("stick" component). In September 2022 the Commission has proposed to prohibit products made with forced labour on the EU market. The ban affects all products, both made in the EU (for domestic consumption and exports), and outside the EU (and imported to the EU). The proposal is in the phase of discussion and after it is agreed by the European Parliament and the Council of the European Union it will enter into force. It will apply 24 months later (*Commission Moves to Ban...*, 2022).

This action is a part of wider EU efforts aimed at securing decent work conditions worldwide. In its Communication (*Communication on Decent Work*, 2022) the EU stressed that it is taking a comprehensive approach that addresses workers in domestic markets, in third countries and in global supply chains. It does so by promoting responsible business conduct of EU companies and companies operating in countries with which the EU maintains trade relations.

### 3.4 EU actions for more decent work conditions in home countries

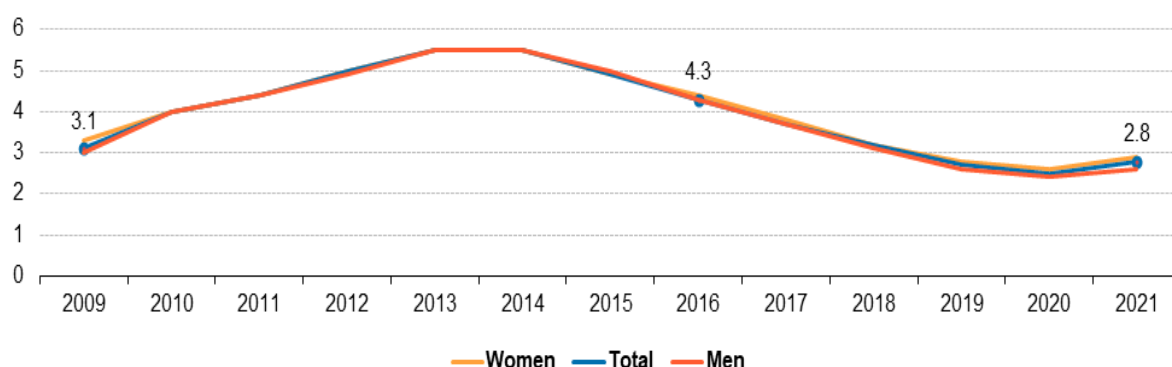
The EU deals with the challenge of securing more decent work condition in its members states as well. Even though the EU countries have the most equal societies in the world with the highest standards in working conditions, and broad social protection, more work needs to be done to transform Europe into more inclusive and better functioning labour markets. As a result, in 2017 the European Pillar of Social Rights with 20 key principles was proclaimed and in 2021 the European Pillar of Social Rights Action Plan followed. It turns the principles into concrete initiatives to benefit citizens and put them first in the recovery from Covid-19 pandemic. There are three targets in the Action Plan to be achieved by the end of the decade in the areas of employment, skills, and social protection, consistent with the UN Sustainable Development Goals:

- at least 78% of the population aged 20 to 64 should be in employment;
- at least 60% of all adults should be participating in training every year;
- a reduction of at least 15 million in the number of people at risk of poverty or social exclusion (European Commission, 2021b).

Member states made national commitments to meet the three EU targets by 2030 (European Commission, 2022b).

The indicator which is consistent with the UN Target 8.5 presented in section 2 is the one related to employment rates. Until the Covid-19 pandemic, there was an upward trend in the EU in terms of employment rate. In 2019 it reached 72.7%, in 2020 it fell to 71.7% and in 2021 it went up to 73.1%, which is the highest level observed so far. There is still relatively large gender employment gap in the EU: in 2021 78.5% men were employed and 67.7% women (Eurostat, 2022a). Another indicator which is monitored is the long-term unemployment (above one year). It usually follows, with a delay, the trends in unemployment. It means for example that the effects of the Covid-19 are only visible in 2021 data. Long-term unemployment has devastating effects for the individuals and the society, as the employability prospects are reduced, human capital is depreciated, social cohesion is endangered and the risk of poverty and social exclusion increases. It can also lead to a deterioration of individual skills and health. As Fig. 4 illustrates, in 2021 the long-term unemployment reached 2.8% of the labour force in the EU. The proportion of long-term unemployment in total unemployment has decreased over the past few years (the peak was in 2013).

**Figure 4 Long-term unemployment rate, by sex, EU, 2009-2021 (% of population in the labour force)**



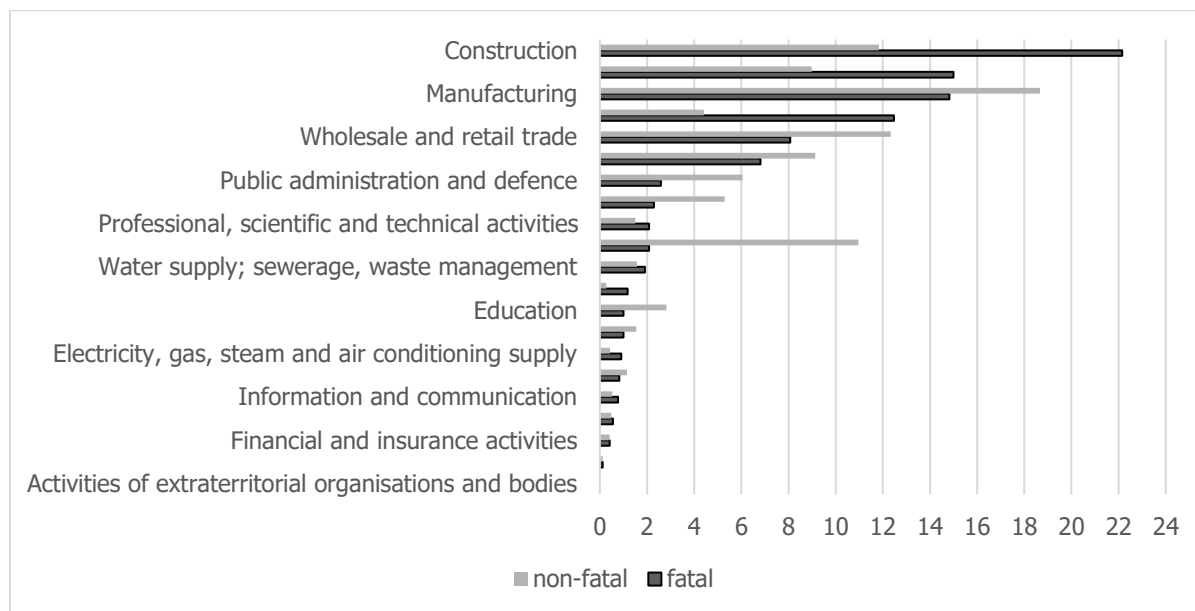
Source: Eurostat (online data code SDG\_08\_40)

The EU pays special attention to the economic growth that is supposed to generate decent work. It is a safe work, without accidents (fatal or non-fatal). In 2020, the rate of fatal



accidents in EU reached 1.77 fatalities per 100 000 employed persons. Ten years earlier the rate was 2.31, so a considerable decrease was observed (Eurostat, 2022b). Three top sectors where fatal accidents occur are construction, transportation and storage, and manufacturing (together they were responsible for over 50% of fatalities in 2019) – figure 5.

**Figure 5 Non-fatal and fatal occupational accidents in the EU, 2019 (% of fatal and non-fatal accidents)**



Source: Eurostat (online data codes HSW\_N2\_01 and HSW\_N2\_02)

Decent work is also the one that offers fair income and social protection. As Eurostat data reveal, having a part time job or temporary contract just as having low skills and being a non-EU born worker increases the incidence of in-work poverty. In 2020, 9.4% of employed people were so-called “working poor” – at risk of income poverty (Eurostat, 2022c).

The European Pillar of Social Rights Action Plan is one of many actions the EU undertakes in order to ensure social fairness and prosperity (and therefore – more decent work conditions) in Member States. Other initiatives include for example: NextGenerationEU<sup>3</sup>, European Skills Agenda<sup>4</sup>, New Consumer Agenda<sup>5</sup>, Directive on improving working conditions in digital platform work<sup>6</sup>, Minimum Wages Directive<sup>7</sup>.

Other EU actions which may have an impact on work conditions include the promotion of Industry 5.0 concept. It adds the transition to a sustainable, human-centric and resilient industry to the existing Industry 4.0 approach. Digital and green transitions of industry are perceived as essential for this process. This concept goes beyond technology- or economic enabled growth, and views growth as focused on human progress and well-being. It places

<sup>3</sup> Recovery plan for Europe, [https://commission.europa.eu/strategy-and-policy/recovery-plan-europe\\_en](https://commission.europa.eu/strategy-and-policy/recovery-plan-europe_en)

<sup>4</sup> European Skills Agenda, <https://ec.europa.eu/social/main.jsp?catId=1223>

<sup>5</sup> New Consumer Agenda, [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_2069](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2069)

<sup>6</sup> Commission proposals to improve the working conditions of people working through digital labour platforms, <https://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=10120&furtherNews=yes#navItem-2>

<sup>7</sup> Adequate minimum wages in the EU, <https://ec.europa.eu/social/main.jsp?catId=1539&langId=en>

the wellbeing of the worker at the centre of the production process. The human-centric approach in industry, proposed in Commission's reports (European Commission, 2021a, 2022a), is the essential change that industry should undergo in coming years. A safe and inclusive working environment is one of the core elements of this shift. New technologies, often perceived as a source of job loss, could be applied in such a way that the number of accidents at work falls and routine jobs could be replaced by robots. They could also be helpful in work in case of mentally disabled persons or physically weaker people.

## CONCLUSION

The economic literature devoted to the incorporation of labour rights and SDG into trade policy is extensive, but there is no clear indication as to which system is more effective. Subsequent researchers are filling in the existing gaps, but this effort, in a situation of evolution of policies and tools of their implementation together with changes in the status quo in the scopes in question and the taking of successive new measures by the EU, does not result in a coherent and complete answer to all research questions. In fact, one can get the impression that further research gaps are revealed faster than the perceived ones are filled with conclusions from economic research. In the case of this study, a selected slice of reality could be examined, and partial conclusions can be drawn. The focus was on trade policy as a vehicle for exporting – selected – European values.

The results show that the *modus operandi* of the EU differs significantly not only from the forms of action of universal organizations, but also of the EU's strategic partner, the US. The EU uses a system of incentives, supports contracting states in internalizing the promoted values and avoids the conditionality. Such approach is consistent with the EU policy conducted at home. The very essence of the EU is based on collaboration and working out a common position between 27 countries. The same approach is visible in promoting labour rights and other SDGs in third countries. Additionally, the EU – contrary to US – has "a memory" of colonial past. It cannot and does not want to push certain solutions. The US has more freedom in this regard – both because of the past and the instruments that are available to them. Finally, the EU must consider the competition with its strategic rival, China in its economic relations with developing countries<sup>8</sup>. The EU takes into account these countries' choice of export markets for their goods, as well as the sources of financial resources outside the EU – and thus their ability to reject stricter-than-promotional solutions to labor regulations enforced by the EU.

Further research should combine the examination of new EU actions with an attempt to develop quantitative measures of the effectiveness of actions.

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<sup>8</sup> China or Russia (and earlier the USSR) do not condition cooperation with developing countries on measures for sustainable development, decent working conditions, etc.

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# Impact of gender performance on empathic leadership of employees

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**Abstract:** The content of the paper is focused on compassionate, empathic leadership of employees, focusing on gender performance, specifically women as empathic leaders. The aim of the paper is to determine whether there are significant differences between female and male leaders in the acceptance and implementation of a compassionate empathic leadership style of employees. The research was conducted on a representative sample (n=120). A five-point Likert scale was used. The partial correlation coefficients used in the paper show that there is no significant difference between women and men in accepting and understanding their own emotions. Unlike men, women leaders are somewhat more inclined to develop the ability to just get rid of negative emotions and create a nursery of their own positive emotions. Much more and more often than men, they support colleagues and employees to express their emotions at work, as well as in spreading empathic values and processes of compassionate management of employees.

**Keywords:** leadership, style, empathy, gender

**JEL Classification codes:** D23, D83, D91, O15

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## INTRODUCTION

Human resource management is not a concept based on ordering employees what to do and watching over them as they do it. It is primarily the action of the leader in identifying the organization with its employees in directing their energy and abilities towards the realization of the organization's goals. It is also an action in the direction of each employee finding himself and his interests in the organization. People in organizations do not work in isolation, but most often as a team, a work group. When performing their jobs and tasks, they enter into various forms of psychosocial interconnections and connections. One of the key links in this is intelligence, especially emotional intelligence.

Intelligence can be defined in several ways and from several approaches. One of the more widely accepted is that it is a mental ability, or rather a set of mental abilities that allow recognition, learning, memory and the ability to think (Mayer, J.D. et al. 2008:507; Moin, M.F. et al., 2020:498). Unlike the term general intelligence, which is most often mentioned and used, the term emotional intelligence is defined through the ability to understand oneself and others with whom people are connected and adapt to the environment, in order to be more successful in solving different emotional needs in different situations (Bar- he, R. 2003:12).

The value and meaning of emotional intelligence in work is well described by Mudd, citing the Washington Business Journal from May 2005. in which the results of an extensive survey were published. According to her, the average manager in the US spends more than 40% of his total time at work dealing with conflicts between employees that are a direct result of negatively accumulated emotions (Mudd, P.A. 2006).

Emotions at work are not so easy to identify, and therefore, not to direct. Data obtained from a larger study, presented by Kannaiah and Shanthi, confirm this (Kannaiah, D. & Shanthi, R. 2015: 147). The most significant of these results are: 61.3% of employees were able to accurately identify and understand the causes of their emotions at work, and 20.0% of employees were unable to do so. 52.0% of employees control their emotions regularly and pay the necessary attention to it, 34.0% never control them, 41.3% of employees control their emotions to divert attention from them, diverting their attention to work or some other activity, 20.7 % of employees control their emotions in a natural way, without making any special efforts, nor preparations, i.e. acquired skills, etc.

It is known and proven that there are significant differences in the expression of emotions between men and women and that these differences should be known and respected during work and management of work processes. In this paper, efforts are made to try to determine whether there are gender differences in this approach by focusing on compassionate empathic management of employees. A lot of research has been published, and thus available knowledge, but there is almost no knowledge that comes from transitional societies.

## **1. LITERATURE REVIEW**

Emotional intelligence rests on the heart, mind and soul aspects of people in organizations.

Regardless of whether it is unpleasant or pleasant emotions, employees with highly expressed emotions by management will identify more strongly with the organization. They will stay longer in such an organization and be more loyal to it.

These brief indications indicate that emotional intelligence is primarily a complex, integrated set of various natural and acquired abilities that include at least eight acquired abilities. (1) Ability to identify emotions. (2) The ability to understand emotions. (3) Ability to understand (decode) emotions. (4) Ability to develop emotions. (5) Ability to use emotions effectively. (6) Ability to perceive emotions. (7) Ability to integrate emotions in processes. (8) The ability to manage emotions with the aim of realizing appropriate forms and content of organizational behavior (Mayer, J.D. et al., 1999:267).

The art of mastering these abilities indicates the degree and quality of implementation of emotional intelligence in human resources management in organizations. Unlike Mayer and colleagues, Bar-on defined emotional intelligence, developing it through five dimensions, which in total contain 15 scales used to measure the emotional intelligence quotient. Bar-on is credited with introducing the emotional intelligence quotient. The emotional intelligence quotient (EQ) can be defined as a measure of a person's ability to recognize, develop and manage their own emotions, in order to be ready to manage the emotions of others (Bar-on, R. 2003:12). Leading people through emotionally developed intelligence leads to success, as many authors have pointed out so far. Leaders' emotional expressions carry more weight than their actual messages to their employees (Newcombe, M.J. and Ashkanasy, N.M., 2002: 601; Jonsdottir, I. J. & Kristinsson, K., 2020:137). Leaders who show excitement, enthusiasm and energy direct their followers in the direction of developing these emotions and identifying with them (Humphrey, R.H., 2002: 493), (Dasborough, M.T. & Ashkanasy, N.M., 2002: 615; Aftab, J. et al., 2021:54). Leaders, on the other hand, who show sad emotional expressions make them less effective, and followers feel less enthusiasm and more fatigue (Glaso, L. et al., 2006:136; Clarkson, B. G. et al., 2020:61). Emotions of anger in leaders can lead subordinates to feel that these are privileged emotions that come from their status as leaders. However, it is believed that when leaders show emotions of anger, they are much more effective than when they show emotions of sadness or when they do not show their emotions at all. (Tridens, L.Z., 2000: 71; Kim, W. et al., 2020:36). The expression of negative emotions of the leader does not have the same meaning and impact on all team members. There are situations where emotions reduce uncertainty among team members (Morris, J.A. & Feldman, D.C., 1997: 257;

Guthridge, M. & Giummarra, M. J., 2021:5). Emotional intelligence can positively influence team leadership. Especially in stressful and conflict situations (Hur, Y. et al. 2011:591), (Hong, Y. et al. 2011: 320). Leaders with a high coefficient of emotional intelligence are considered better leaders compared to those with a lower coefficient (Thiel, C.E. et al., 2012: 517), (Madera, J.M. & Smith, D.B., 2009:103). Leader emotions are positively related to good and desirable human leadership attributes such as: leader effectiveness, positive effect of emotional contagion, less emotional burnout, etc. (Cross, B. & Travaglione, A., 2003:221). As many as 2/3 of the competencies required for effective functioning in the workplace are of emotional significance. Good leadership is not only focused on controlling one's own emotions, but also on understanding the emotional states of one's followers and helping them resolve emotional difficulties (Goleman, D., 2001; Arghode, V. et al., 2022:239).

There are quite clear differences in the empathetic management of employees between women and men. Women experience their emotions more intensely and more frequently than men (Brody, L.R. & Hull, J.A. 2000:325). They express their emotions more often than men and these emotions are often related to the status and role of women in organizations (Fischer, A.H. 2000). The status of women comes from the personal perception of power, dominance and interpersonal relations in the organization (Tridens, L.R. 2000: 561). Men in organizations, who are more inclined to express emotions of anger, reach higher status more often than women, who are more susceptible to emotions of sadness (Fischer, A.H., 2000). With people who have more power in the organization, this power is simultaneously accompanied by greater freedom in expressing their negative emotions such as anger and rage (Overbeck, et al., 2010: 126). Men, who more often have a higher status in the organization than women, show more significant than women the emotions that accompany this power, such as trust, pride, etc. (Lovaglia, M. & Houser, J.A. 1996: 864). Women smile more than men and these emotions are more characteristic of them (LaFrance, M. et al. 2003: 305). Also, they tend to express less emotions of grief and anger than men (Plant, E.A. et al., 2000: 81). For them, the emotions of anger are associated with influence in organizations, and the emotions of sadness with a lack of self-confidence and status in the organization (Fischer, A.H. 2000). Men, on the other hand, are more inclined than women to control and suppress their emotions at work (Shields, S.A. 2005: 3).

## **2. METHODOLOGY**

The aim of the paper is to determine whether there are significant differences between the genders of managers in the acceptance of empathic management style of employees. From this goal, four hypotheses are established:

H1 - female leaders are more inclined to accept and understand their own emotions than men.

H2 - female leaders are more inclined than men to develop the ability to release themselves from negative emotions and create their own positive emotions.

H3 – female managers are more likely than male managers to support employees in expressing their emotions at work.

H4 - female managers are more inclined than male managers to spread empathic values and processes of compassionate management of employees.

The primary data for this research was collected through an online survey on a sample size of n=120. The respondents were managers in 16 medium-sized and small companies from various industries from the area of three counties in northwestern Croatia: Zagrebačka, Krapinsko-Zagorska and Varaždinska. The choice of companies was random. The sample size and sampling technique are based on stratified random sampling as presented by Cooper and Schindler in a situation where the population is not homogeneous (Cooper & Schindler, 2008:137). Of the sent questionnaires, 96 respondents responded with correctly and completely filled questionnaires, which can be considered an acceptable selection considering



the type of survey. The survey was conducted in the second half of 2022. It was completely anonymous and the respondents were informed of this before participating in the survey. They were also informed about the purpose of the survey.

**Tab. 1. Demographic map of respondents**

No.	Demographic characteristic	Number of respondents	Percentage	Cumulative
A.	Gender structure:			
	Men	31	32,68	32,68
	Women	65	67,32	100,00
B.	Age structure (years):			
	Until the 25	17	17,71	17,71
	26-40	34	35,42	53,13
	41-60	37	38,54	91,68
	61 and over	8	8,33	100,00
C.	Structure by professional training:			
	Secondary vocational education	67	69,79	69,79
	High vocational education	29	30,21	100,00
D.	Size of the company from which they come (total number of employees):			
	Until the 10	14	14,58	14,58
	11-30	28	29,17	43,75
	31-50	35	36,45	80,20
	51 and over	19	19,80	100,00

Source: author's research

The most frequently represented respondent was female (67.32%), between the ages of 41 and 60 (38.54%), had a secondary vocational education (69.79%) and came from a company with between 31 and 50 employees (36 ,45%).

Secondary data were collected from databases: Scopus, EBSCO, PsycARTICLES and ScienceDirect. Starting from Mayer's concept of emotional intelligence, the author defined four segments for the needs of empathic leadership. They are: (1) the ability to accept and understand one's own emotions and express emotions, (2) the ability to just get rid of negative emotions and create one's own positive emotions; (3) the ability to understand, accept and support the expression of positive emotions to employees and release them from negative emotions; (4) the ability to create emotional temperature and emotional contagion in the organization as a basis for empathic values and processes of compassionate leadership of employees. For this purpose, 16 statements were created (four for each empathetic level) that were used in the construction of the Likert scale. They are presented in Table 2.

**Tab. 2. Statements for the construction of the Likert scale**

Empathic level	Assertion	Source
1.	1. I think it's appropriate, useful and pleasant when people express their emotions freely at work	Baezinger, T. et al., 2009
	2. My feelings are not just my business and they reflect on how others feel	Brief, A.P. & Weiss, H.M. 2002
	3. I try to cry often, laugh and show all my other feelings, be they sad or happy	Baezinger, T. et al., 2009

	4. If someone I'm talking to starts crying or laughing, I'll start crying or laughing too	Doherty, R.W. 1997
2.	5. I try to fill every working day with good emotions and discard the bad ones	Matsumoto, D. &Hwang, H.S. 2011
	6. I get upset when I see employees suffering because of some difficult or sad news	Baezinger, T. et al., 2009
	7. I avoid meeting people who spread negative feelings and I like to hang out with people who have positive feelings	Doherty, R.W. 1997
	8. I learned how to adopt and maintain positive and avoid negative feelings when working with people	Matsumoto, D. &Hwang, H.S. 2011
3.	9. When someone smiles warmly at me, I smile too and feel the inner warmth	Doherty, R.W. 1997
	10. I always try to please the feelings of the people around me, because then I feel good myself	Brief, A.P. & Weiss, H.M. 2002
	11. I feel and understand the emotions of employees and help them spread positive and get rid of negative emotions	Chang, J.H. et.al., 2014
	12. I quickly notice when someone in the group feels uncomfortable and I don't remain indifferent to it	Matsumoto, D. &Hwang, H.S. 2011
4.	13. I'm willing to help most people with emotional difficulties, because ultimately that's when we all feel good	Chang, J.H. et.al., 2014
	14. When I induce smile and joy in other people, it also induces such moods in me	
	15. I am always ready to help people connect their work with their feelings better and more effectively	Brief, A.P. & Weiss, H.M. 2002
	16. Being around people who are depressed does nothing good for my mood and successful work	Doherty, R.W. 1997

Source: author's research

The Likert scale in the same form was distributed to both women and men with the aim of determining differences in claims and progress in empathic levels. Respondents' levels of agreement with the statements are: 1-do not agree at all, 2-disagree, 3-partially agree, 4-agree, 5-completely agree. The statements are weighted with weight ratios that have been established and identified with the respondents' scaling degrees. Statistical processing of the collected primary data was performed using the software packages Microsoft Excell and SPSS 21.0 (Statistical Package for Social Sciences).

There are several limitations related to the research and applied methodology that are worth highlighting. (1) There are no published studies on this topic and on the researched population (in selected counties in the Republic of Croatia). Therefore, it is not possible to compare the results obtained in this research with some of the earlier ones. (2) Due to limited resources, the author could not realistically choose a larger sample for the research and is aware that a larger sample would be desirable for a research like this. (3) The Likert scale for determining the differences between the sexes in the acceptance of a compassionate empathetic management style of employees was constructed by the author based on the exposed sources since, as far as she knows, the same or a similar scale has not been made known to the scientific public. It will be necessary, therefore, to confirm the validity and application of the same or to suggest a correction through subsequent research. The author believes that the stated limitations will not significantly affect the realization of the set hypotheses and research goal.

### 3. RESULTS AND DISCUSSION

The tables 3 and 4 present the average values of respondents' statements (a), variances (v), minimum values (min), maximum values (max) and Cronbach alpha indicators of consistency of statements (Ca).

**Tab. 3. Indicators of women's claims by empathic levels**

Empathic level	a	v	min	max	Ca
1	3,117	0,248	2,480	3,868	0,732
2	3,252	0,105	2,137	3,762	0,748
3	4,116	0,192	2,963	4,601	0,621
4	3,791	0,275	2,706	4,025	0,850

Source: author's research

**Tab. 4. Indicators of men's claims by empathic levels**

Empathic level	a	v	min	max	Ca
1	3,066	0,148	2,351	3,692	0,664
2	2,402	0,162	1,956	3,095	0,827
3	2,844	0,275	2,107	3,354	0,604
4	2,317	0,348	1,580	2,698	0,752

Source: author's research

Cronbach's alpha indicators of consistency of empathic levels in both tables are in the acceptable range and as such are suitable for further statistical analysis since these values range between 0.7 and 1.0 (Cronbach, L.J., 1950). Some values in this research only approximate this state.

The ability and willingness to accept one's own emotions as a natural component in the leader's behavior, to understand one's own emotions and to express them instead of suppressing them does not significantly differ between women and men, given that the average values of the four statements in the first empathic level are quite uniform. This knowledge provides enough arguments that the first hypothesis (H1) in the research cannot be accepted and should be rejected. Therefore, women leaders do not differ from men leaders in accepting and understanding their own emotions. This statement is different from the knowledge reached by Brody and Hull claiming that women experience their emotions more intensely than men. These values, however, are still in the zone of only partial agreement, which can be interpreted as the fact that there are still certain reservations in the respondents' attitudes towards their own emotions and empathic processes in the work and management of employees. This is nevertheless a valuable realization since in the not-so-distant past in the space and sample of the researched population, showing one's own emotions and emotional expression was mostly an undesirable form of organizational behavior and often stigmatized.

The second empathetic level, which implies the ability to only free the leader from negative emotions and create a nursery of one's own positive emotions, differs significantly between women and men. Among women, it is in partial agreement with the statements offered, while among men it is in the area of disagreement. This provides the basis for accepting the second hypothesis (H2), i.e. that female leaders are more likely than male leaders to develop the ability to free themselves from negative emotions and create their own positive emotions. This realization is almost identical to the one reached by the Plan by establishing that women express less negative emotions than men. It is not a good indicator for male managers, because the inability to get rid of negative emotions does not only paralyze the possibility of more intense creation of desirable positive emotions in work and management of employees, but also hinders further progress in empathic processes and in general the development of emotional intelligence in managing employees. And Shields found in his research that men

suppress their emotions at work more than women. Since it was not the goal of this research, it remains unexplored whether such a relationship of male managers towards their own emotions is based on the retention and suppression of negative emotions (because this is what the claims point to) and affects employees to feel less enthusiasm at work and more fatigue, as in their research claim Glaso et al. or is it, on the other hand, the result of privileged emotions characteristic of men that come from their status as leaders, as indicated by Tridens? The third empathic level presented through the ability to understand, accept and support the expression of positive emotions of co-workers and employees and to release them from negative emotions in women is in the area of clearly expressed acquired ability, as indicated by the average value of the presented claims, while this is not the case with male respondents. This allows us to confirm that it is realistic to accept the third hypothesis (H3). Female managers are more inclined than male managers to support employees to express their emotions at work. There is a similar process with the fourth empathic level, which consists of the ability to create emotional temperature and emotional contagion in the group of people he leads, and which forms the basis for empathic values and processes of compassionate leadership of employees, which makes it realistic to accept the fourth hypothesis set forth in this research (H4). As leaders, women are more likely than men to spread compassionate empathic values and flows among employees.

For a better understanding and interpretation of these trends, it is worth looking at the interdependence between the respondents' empathic levels, which are shown in tables 5 and 6.

**Tab. 5. Partial correlation coefficients of empathic levels in women**

	1	2	3	4
1	0			
2	0,4713	0		
3	0,7294	0,3810	0	
4	0,6075	0,2975	0,6448	0

Source: author's research

**Tab. 6. Partial correlation coefficients of empathic levels in men**

	1	2	3	4
1	0			
2	0,3053	0		
3	0,4628	0,4966	0	
4	0,2716	0,2559	0,4607	0

Source: author's research

The correlations in Tables 5 and 6 show that there are different factors (latent constructs) of emotional intelligence between men and women and it would be interesting to find out. It is possible that the number of these latent constructs is different from those listed. This is, of course, possible in one of the following studies.

In men, there is no visible interdependence between empathic levels, which is to some extent expected since, apart from the first empathic level, almost no significant shift in the development of compassionate empathy in the management of employees was observed. In women, this interdependence is visibly expressed and is of medium intensity between the first and fourth and third and fourth levels. Thus, women managers express their ability to accept and understand their own emotions and express emotions through their ability to understand, accept and support the expression of positive emotions to their employees and help them to free themselves from negative emotions. Likewise, they do not only dwell on this acquired ability to understand, accept and support the expression of positive emotions to their employees and help them get rid of negative emotions, but transfer it through the ability to create emotional temperature and emotional contagion into empathic values and processes of

compassionate leadership of employees. The interdependence between the ability to accept and understand one's own emotions and express these emotions and understanding, accepting and supporting the expression of positive emotions to employees and helping them to free themselves from negative emotions is more intense. This knowledge is identical to that expressed by Goleman, who claims that good leadership is not only focused on controlling one's own emotions, but also on understanding the emotional states of one's followers and helping them to solve their emotional difficulties.

## **CONCLUSION**

This research indicates that both men and women can contribute to the intellectual capital of organizations, although each in a different way. Based on the selected sample, it can be concluded that in the researched population of employee managers, there is a first empathic level in both sexes of respondents, which implies the ability and willingness to accept and understand one's own emotions and release them instead of suppressing negative emotions. The first hypothesis, according to which women as managers are more inclined than men to accept and understand their own emotions, cannot be accepted. The second empathic level implies the ability to free the leader from negative emotions and create a nursery of his own positive emotions and is significantly different in women than in men so that the second hypothesis can be confirmed. The third empathetic level presented through the ability to understand, accept and support the expression of positive emotions of co-workers and employees and in freeing women from negative emotions is in the area of a clearly expressed acquired ability, which provides sufficient support for the acceptance of the third hypothesis. It is also possible to confirm the fourth hypothesis, since it was established that there is an ability among the respondents, i.e. women, for empathic values and processes of compassionate management of employees. Also, the set goal of the work was fulfilled, since more significant differences between the genders of managers were found in the acceptance of a compassionate, empathetic leadership style of employees that benefit women. Working through established findings indicates that the implementation of a compassionate leadership style of employees is a demanding and complex process, the success of which will depend on the readiness of the management of the observed economic entities to accept emotional training through an interdisciplinary approach as a way to acquire the second, third and fourth empathic levels and emotional intelligence. This is a confirmed basis through the findings presented in a series of earlier researches for compassionate and successful empathic management of employees. It is also necessary to make a turnaround in the existing concept of human resources management, both in terms of content and organization.

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# Importance of domestic tourism consumption and its connection to tourism employment

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**Abstract:** Recovery of tourism worldwide will be dependent on domestic tourism as it is stated by many world institutions engaged in tourism development. The aim of this paper is to determine the relationship between tourism consumption and its parts and tourism employment. For the purpose of this paper, the employment generated by tourism consumption is calculated and examined. The first step on the way to fulfill the aim of the paper was the correlation between employment in tourism industries and tourism consumption provided. Consecutively, based on the result from correlation, the following calculation of employment generated by tourism employment was provided. As there was found strong correlation between the variables, the inner analysis of the correlation was provided. Domestic expenditures as one of the major parts of tourism consumption, were compared with tourism employment. The main results show how domestic tourism expenditures influence the existence of placement in tourism industries. Results also offer different scenarios in post-pandemic recovery of tourism in Slovakia with a huge dependence on domestic tourism.

**Keywords:** domestic tourism, tourism consumption, tourism employment, expenditures

**JEL Classification codes:** O18, O20, J21

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## INTRODUCTION

Until the beginning of 2020, tourism was characterized by the attributes of the most dynamically developing, continuously growing, potential sector of the world economy. The continuous growth of tourism in the last ten years has been higher than the growth of the overall world economy (UNWTO, 2020a). Tourism ranked third in the ranking of the highest export category and accounted for up to 50% of total exports for small developing countries (UNWTO, 2020a). According to the WTTC (2020b), the tourism industry was one of the best partners of governments in terms of creating new jobs and thus fighting unemployment. In 2019, tourism contributed 10% of the world GDP annually and generated one in five new jobs (WTTC, 2020a).

The turning point came in early 2020, when the influx of tourists worldwide dropped in connection with the spread of the COVID-19 virus. The year-round decline in foreign arrivals exceeded -74% compared to 2019 (UNWTO, 2020a). In 2020, global tourism was affected by the following steps: the WHO declared the spread of COVID-19 a global threat, the WHO declared COVID-19 a pandemic, the introduction of travel restrictions in all countries, 27% of the world maintained full border closures for other UNWTO countries (2020a). UNWTO (2020a)

predicts that tourism performance will return to the pre-thirty years ago, to 1990 levels. It also predicts a 70% to 75% drop in arrivals and the associated decline in spending of € 1.1 trillion and more than 100 million directly at-risk tourism jobs. Predictions of tourism development performance indicators were also published by the WTTC (2020c). The decrease in the arrivals of foreign tourists is estimated by the WTTC (2020c) at -41% to -73%, domestic tourists - 26% to -63%, and a decrease in jobs from 98 to 198 million.

The UNWTO (2020a) anticipates that inbound tourism will return to its original performance no earlier than 2024 while adding that the solution to overcoming the post-pandemic crisis is to support domestic tourism (UNWTO, 2020b). Several authors and world institutions, such as Altuntas & Gök (2021), Assaf & Scuderi (2020), Binggeli et al. (2020), Canh et al. (in press), OECD (2020), Škare et al. (2021), WTTC (2020c), endorse this view as well. Škare et al. (2021) state, in their research, that the greatest negative effects on employment and GDP in tourism will be felt in the first year of the pandemic, which will decrease in the following years. They expect tourism to start fully revitalizing five years after the pandemic.

The importance of domestic tourism is confirmed by many European and world countries. According to the World Travel & Tourism Council (WTTC, 2020a), up to 71% of activities in 2019 were domestic tourism, and according to the OECD (2020), up to 75% of tourism expenditures in the OECD countries come from domestic tourism and in Europe, expenditures on domestic tourism accounts for 1.8 times the cost of inbound tourism. Within the European Union, the share of domestic journeys in total journeys increased by 33% between 2005 and 2019 (Eurostat, 2020). In the global ranking of countries with the highest share of domestic expenditures in total tourism expenditures, it is Germany with a share of more than 85%. Domestic tourism is also thriving in countries such as Italy, with a share of domestic expenditures of more than 75%, and France with 65% (WTTC, 2020a). Since 2014, domestic tourism in European countries has contributed to the creation of GDP in tourism with a share of more than 67% (Statista, 2021). The trend of a growing share of domestic tourism can be expected in the forthcoming years as well.

In terms of the number of day trips and overnight stays, domestic trips in Slovakia covered 61% of all holiday and business trips in 2018 (The Statistical Office of the Slovak Republic (SOSR) - Satellite account of tourism in the Slovak Republic, the years 2013-2018, 2020). The share of expenditures in domestic tourism is 42% of total expenditures, which represents the largest contribution of expenditures to the economy among inbound, outbound, and domestic tourism (SOSR - Tourism Satellite Account of the Slovak Republic, the years 2013-2018, 2020). In terms of comparing the number of domestic and foreign visitors only in accommodation establishments, the share of domestic tourism is increasing. The share of domestic overnight stays in accommodation establishments exceeded 63% in 2018 and 65% in 2019 compared to foreign overnight stays (SOSR - Visitors and turnover of accommodation facilities by regions, 2021).

An employee working in the tourism sector usually serves both domestic and foreign tourists, as well as other users of the sector's services. Therefore, this paper uses the calculation of employment generated by tourism consumption to analyze the impact of tourism consumption on tourism employment in the case of the Slovak Republic. The paper aims to express the dependence between domestic tourism and tourism employment. Part of the contribution is the quantification of the annual consumption to maintain one job and the necessary number of domestic visitors to keep one tourism job and also a comparison of these data in the V4 countries.

## 1 LITERATURE REVIEW

The inflow of tourists, whether foreign or domestic, is related to the amount of total tourism consumption, which affects the revenues of tourism enterprises and, in connection with this, employment in tourism industries. The influence of the number of tourists on tourism employment was dealt with, for example, by Dimoska (2016) and Mustafa (2019). They examined the correlation between the number of visitors and tourism employment. Dimoska's research (2016) showed a significant impact of the number of tourists on employment in tourism industries. With her research, she confirmed that there is a very strong correlation between the number of tourists and employment in tourism industries with  $r = 0.95$ . There is a direct relationship between the number of visitors and the number of jobs, which suggests that new jobs are being created as the number of tourists increases. Based on these results, we expect a comparatively strong correlation between visitors' tourism consumption and tourism employment. This relationship is examined in more detail in this paper.

The influence of performance indicators on the economic growth of the country was dealt with by numerous authors such as Bento (2016), Eugenio-Martin et al. (2004), Holzner (2011), Kubičková et al. (2015), Lanza & Pigliaru (2000), Lee & Chang (2008), Nayaran et al. (2013), Tsung-Pao & Hung-Che (2020), and Tu & Zhang (2020). Lanza & Pigliaru (2000) examined whether the size of a country is related to economic growth due to tourism development. Canh & Su (2020) focused on the influence of domestic tourism consumption and the incomes of the country's population and found that the influence of domestic tourism has a positive effect, especially in low- to middle-income countries, but declines in high-income countries. Mora-Rivera et al. (2019) assess the influence of additional foreign income on the effect of domestic tourism consumption. Bazargani - Kiliç (2021) confirmed that competition in tourism is one of the most important drivers for the tourist influx and increasing GDP in tourism in all countries of the world. An overview of selected literature, dealing with the relationships between performance indicators for the development of domestic tourism in particular and tourism employment, is presented in Tab. 1.

**Table 1 Overview of selected literature dealing with the relationships between performance indicators in tourism**

Author	Method used	Coverage	Expected causalities	Main conclusions
<i>Canh et al. (in press)</i>	Theory of reasoned action (TRA), panel data estimation, PCSE model	124 countries over the period 1996–2017	economic uncertainty >> domestic tourism versus outbound tourism and countries with different income levels	Economic uncertainty encourages domestic tourism while reducing outbound tourism in the global sample
<i>Dimoska (2016)</i>	Linear regression and correlation	Macedonia	number of tourist >> total number of employees	Increase of the tourism visits in the Republic of Macedonia results with increased total employment as well as increased employment in the sector of accommodation and food service activities
<i>Hernández-Martín (2004)</i>	Keynesian multipliers and input-output analysis	Canary Islands	tourism consumption >> import	Tourist consumption generates an external injection of expenditures that is transformed into domestic production and value added

<i>Lee &amp; Chang (2008)</i>	Heterogeneous panel cointegration technique	OECD and non OECD countries, 1990-2002	tourism >> economic growth	On the global scale a cointegrated relationship between GDP and tourism development is substantiated. Tourism development has a greater impact on GDP in non OECD countries than in OECD countries
<i>López &amp; Arreola (2019)</i>	Panel data and cointegration panel data	32 states of Mexico for the period 1999-2014	tourism >> employment	Domestic tourism is the variable with the greatest impact on the generation of direct employment in the tourism sector
<i>Mora-Rivera et al. (2019)</i>	Propensity Score Matching (PSM) and Inverse Probability Weighting (IPW)	Mexico, 2010-2016	international remittances >> domestic tourism consumption	Reception of remittances has a positive impact on domestic tourism spending
<i>Mustafa (2019)</i>	Correlation Analysis, Multiple Regression, and Residual test.	Sri Lanka, 1978-2017	tourism arrivals >> tourism direct employment and tourism earnings	Tourism direct employment and Tourism Earnings are directly related with tourists' arrivals
<i>Bento (2016)</i>	Time series cointegration methods	Portuguese regions	domestic and foreign tourist >> economic growth	Results are indicative of a causal link amongst domestic tourists and economic growth, and therefore this study confirms that tourism is an important source of economic growth

Source: Authors' own

The influence of tourism consumption on tourism development in the country was discussed by the authors, of which we mention: Bazargani & Kiliç (2021), Canh et al. (in press), Canh & Su (2020), Hernández-Martín (2004), Micháľková & Naňáková (2019), Mora-Rivera et al. (2019), Seghir et al. (2015). Seghir et al. (2015) examined the relationship between tourism consumption and the country's economic growth and found that tourism consumption has a significant impact on the country's economic growth.

As tourism consumption has an impact on economic growth, it is associated with employment and unemployment rates, thus the influence on the number of visitors and their tourism consumption should also affect the development of jobs in the destination. The impact of domestic tourism performance on tourism employment was also examined by López & Arreola (2019). Their research found that among the seven variables examined: number of domestic tourists, number of foreign tourists, occupied rooms, GDP development, exchange rate, average annual temperature, and human development index, the number of domestic tourists has the most statistically significant effect on job generation and economic growth.

Due to the specific nature of the tourism sector and the industries of which it is composed, there are many different interpretations of tourism employment. For the purposes of this paper, we follow the Tourism Satellite Account (TSA) methodology: Recommended Methodological Framework 2008 (OECD, 2017) and International Recommendations for Tourism Statistics 2008 (UNWTO, 2010), which define the sectors belonging to tourism stated in Tourism Satellite Account of Slovakia (SOSR, 2020) as follows:

Characteristic industries of tourism according to the methodology of TSA: IRTS 2008 (The International Recommendations for Tourism Statistics 2008) are defined in categories 1 to 10: 1...Accommodation for visitors, 1a...Accommodation services for visitors other than 1b, 1b...Accommodation services associated with all types of vacation home ownership, 2...Food- and beverage-serving activities, 3-6...Passenger transport services, 7...Transport equipment

rental, 8...Travel agencies and other reservation services activities, 9...Cultural activities, 10..Sports and recreational activities.

The quantification of employment in the tourism industries is based on the methodology of the TSA. The methodology of satellite accounts defines employment as the number of jobs in the tourism industries (\* in the following text only employment in tourism industries) compiled as the sum of jobs in individual tourism industries, regardless of whether the services were provided to a domestic or foreign tourist. This is direct employment in tourism, it does not include secondary or induced employment in tourism (SOSR, 2020). Tourism consumption is the sum of expenditures on domestic tourism, expenditures on inbound tourism, domestic part of expenditures of tourists traveling abroad, and other components of consumption, such as imputed rents, social and natural transfers of government or non-profit organizations (SOSR, 2020).

By linking tourism consumption and employment in the tourism industries, we obtain employment generated by tourism consumption. In the results of this paper, we consider the employment generated by tourism consumption. It explains how many jobs exist due to the presence of visitors and their consumption in the tourism industries. This is the estimated part of employment in tourism industries, which corresponds to the consumption of products in tourism by visitors. The case studies of OECD countries presented in the publication *Measuring Employment in the Tourism Industries - Guide with Best Practices* (UNWTO & ILO, 2014) provide an overview of methodologies for compiling tourism employment according to the basic TSA methodology and their methodological deviations in regard to used input data and methodology adaptation to the country conditions. Some countries publish, in the tourism satellite accounts, employment in the tourism industries, and others publishing employment generated by tourism consumption, respectively both. Examples of countries that publish employment generated by tourism consumption are Czechia, Austria, Canada, Switzerland, the United Kingdom of Great Britain and Northern Ireland.

Employment generated by tourism consumption is calculated after compiling the supply side, otherwise called tourism consumption, and the demand side of tourism products using symmetric input-output tables (SIOT). The essence of the employment calculation lies in two assumptions:

- a) Expenditures on tourism are allocated to each industry on the assumption that the expenditures on tourism for a given commodity are proportional to its supply in all industries. This assumption is the supply/demand ratio.
- b) Consequently, the employment attributable to tourism demand in each tourism industry is calculated using the same ratios from point a). If, for example, the demand ratio in tourism at the outputs of the industry to its total gross output (at basic prices) is e.g. 50%, half of the industry's employment is allocated to tourism (UNWTO & ILO, 2014). This methodology reflects the use of demand shares in industry outputs in the formula no.2 ( $k_1$  to  $k_{9-10}$ ).

## 2 METHODOLOGY

The paper presents hypotheses and a research question.

*Null hypothesis:  $H_0$ : Tourism employment is not dependent on tourism consumption.*  
 $r \neq (0; 1)$

*Alternative hypothesis:  $H_A$ : Tourism employment depends on tourism consumption.*  
 $r = (0; 1)$

*V1: How does domestic tourism affect the existence of jobs in tourism in quantitative terms?*

The application part of this paper is divided into three parts. The first part contains a correlation analysis between the various parts of tourism consumption and employment in tourism industries. The second part is focused on the design of a methodology and quantification of employment generated by tourism consumption. The third part analyzes the dependencies between employment generated by tourism consumption and tourism performance indicators with a focus on domestic tourism.

To confirm the relationship between tourism consumption and employment in tourism industries, which is key to the acceptance of the methodology for calculating employment generated by tourism consumption, we subjected H0 and H1 to statistical proof using the Pearson correlation coefficient. Correlation analysis was performed using Pearson correlation coefficient according to the formula:

$$r = \frac{N \times \sum x \times y - (\sum x) \times (\sum y)}{\sqrt{[N \times \sum x^2 - (\sum x)^2] \times [N \times \sum y^2 - (\sum y)^2]}} \quad (1)$$

*Notes:*

*r.... Pearson correlation coefficient*

*N.... number of observations*

*$\sum x \times y$ ...the sum of the multiplied values of x and y*

*$\sum x$ ...the sum of x-values*

*$\sum y$ ...the sum of y-values*

*$\sum x^2$ ... the sum of the square of x-values*

*$\sum y^2$ ... the sum of the square of y-values*

For Pearson correlation coefficient, if its value is (Lomax et al., 2013):

- between 0.0 and 0.3 .... low dependence
- between 0.3 and 0.5 ... moderate dependence
- from 0.5 ... high dependence

Six correlation analyses were performed. The first is the correlation between employment in tourism industries and tourism consumption, the second is the correlation between employment in tourism industries and expenditures in domestic tourism, and the third one is the correlation between employment in tourism industries and expenditures in inbound tourism. The following three correlation analyses were performed after converting employment in tourism industries into employment generated by tourism consumption. The analysis was performed to prove the relationship between tourism consumption and employment in tourism industries, reject hypothesis H0 and thus confirm the alternative hypothesis H1. Confirmation of hypothesis H1, and thus the dependence of tourism consumption on employment in tourism industries, allows the application of the calculation of employment generated by tourism consumption. According to the methodology (UNWTO & ILO, 2014), we created a formula for the conversion of employment in tourism industries grouped by NACE Rev.2 codes of economic activities in tourism to employment generated by tourism consumption in characteristic tourism industries - internationally comparable according to TSA SR as follows:

$$Z_p = z_1 \times k_1 + z_2 \times k_2 + z_{3-7} \times k_{3-7} + z_8 \times k_8 + z_{9-10} \times k_{9-10} \quad (2)$$

*Notes:*

*$Z_p$ ...employment generated by tourism consumption in characteristic industries of tourism internationally comparable*

*$z_1$ ... employment in tourism industries - accommodation services*

*$k_1$ ... ratio of demand in the outputs of the accommodation services industry*

*$z_2$  ... employment in tourism industries – food-and beverage- serving activities*

*$k_2$  ... ratio of demand in the outputs of the food-and beverage- serving activities industry*

*$z_{3-7}$ ... employment in tourism industries – passenger transport and transport rental services*

*$k_{3-7}$ ... ratio of demand in the outputs of the transport and rental services industries*

*$z_8$  ... employment in tourism industries - travel agencies and other reservation services*

*$k_8$ ... ratio of demand in the outputs of the travel agencies and other reservation services industry*

*$z_{9-10}$ ... employment in tourism industries - cultural, sports, and recreation services*

*$k_{9-10}$ ... ratio of demand in the outputs of the cultural, sports, and recreation services industry*

Data on employment in the tourism industries were obtained from the tables of the Tourism Satellite Account of the Slovak Republic (SOSR, 2020) and the ratios of demand in the outputs of the industries obtained on request from the SOSR. Available data are for the years 2013 to 2018.

The third part analyzes the dependencies between employment generated by tourism consumption and performance indicators of domestic tourism. To compare the data on the required annual consumption in tourism per job, the number of visitors needed to maintain one job, we chose a comparison in the V4 countries.

We chose the following comparative criteria in the time series 2013-2018:

- Tourism consumption according to the TSA methodology.
- Expenditures in tourism according to the TSA methodology (same-day visitors and overnight visitors) in the division of domestic and outbound tourism.
- Average expenses per visitor, which result from the total number of tourists (same-day and overnight ones) according to the TSA methodology.
- Employment in the tourism industries and employment generated by tourism consumption according to the TSA methodology.

These calculations were compared with Czechia as the only country from the V4 countries with the data according to the TSA methodology in the required structure. At the end of the paper, attention was also paid to the calculation of employment indicators generated by tourism consumption and tourism consumption in the post-pandemic period.

### **3 RESULTS AND DISCUSSION**

The basic premise for defining and quantifying employment generated by tourism consumption is well-known employment in tourism industries according to the TSA definition, which is the input variable of formula no.2. This employment is available from the Slovak Tourism Satellite Account. In this case, it is the employment in tourism industries, regardless of whether it was

created by the influence of tourism consumption or the consumption outside tourism. To declare the dependence between tourism consumption and employment in tourism industries and the use of the formula for calculating employment generated by tourism consumption for the case of the Slovak Republic is the dependence between the variables tourism employment, tourism consumption, and incoming and domestic tourism expenditures, which are the main components of consumption, subjected to a correlation analysis using the Pearson correlation coefficient. In this section, we do not take into account other parts of tourism consumption.

The dependent variable  $y$  in the formula is employment in tourism industries. The independent variable  $x$  is tourism consumption, in the next step, it is changed to inbound tourism expenditures and domestic tourism expenditures. The results of this analysis are contained in Tab. 2.

**Table 2 Results of application of Pearson correlation coefficient**

<i>Y = employment in tourism industries</i>	<i>Pearson correlation coefficient</i>	
	<i>r</i>	
<i>for X = tourism consumption</i>	0,86	
<i>for X = inbound tourism expenditures</i>	0,73	
<i>for X = domestic tourism expenditures</i>	0,86	

Source: The SOSR data (2020), authors' own calculations

Based on the results of the Pearson correlation coefficient, the expected correlation between employment in the characteristic tourism industries and tourism consumption is very strong. All coefficients reach values above 0.5, even above 0.7, which means a very strong dependence. The limits of this comparison are the number of observations, which is equal to 6, justified by the existence of a time series from 2013 to 2018.

In terms of comparing the correlation of employment in tourism industries with the inbound and domestic tourism expenditures, we can see that domestic tourism has a higher correlation than inbound tourism, although both types of expenditures have strong correlations above 0.7. The correlation between the number of visitors and the number of employed persons was also dealt with by Dimoska (2016) and Mustafa (2019) with comparable strong correlations reaching values above  $r = 0.9$ .

The hypothesis  $H_0$  is rejected by the strong dependence between employment in tourism industries and tourism consumption variables confirming the alternative hypothesis  $H_1$ . By confirming the correlation between employment in tourism industries and tourism consumption, we continue to calculate employment generated by tourism consumption according to formula no.2. This is the part of employment in tourism industries (Table 2) that is in contact with the visitor and is, therefore, the result of the consumption of products in tourism. Employment in tourism industries is a larger set, which also includes the part of employment that is employed in tourism industries but does not come into contact with the visitor (visitor's consumption in tourism). The calculation of employment generated by consumption in tourism industries is contained in Tab. 3.



**Table 3 Results of calculation of employment generated by tourism consumption in the Slovak Republic, 2013-2018**

<b>EMPLOYMENT</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>generated by tourism consumption</b>						
<b>Characteristic tourism industries (comparable internationally)</b>	<b>64 075</b>	<b>63 478</b>	<b>67 517</b>	<b>69 671</b>	<b>71 635</b>	<b>76 250</b>
<i>1 – Accommodation services</i>	12 422	12 958	13 760	14 767	15 351	16 131
<i>2 - Food-and beverage- serving activities</i>	30 363	30 299	31 469	31 098	32 849	35 346
<i>3 to 7 - Passenger transport and transport rental services</i>	13 561	13 437	14 984	15 877	15 491	16 843
<i>8 - Travel agencies and other reservation services</i>	2 667	2 624	2 567	3 060	2 816	3 068
<i>9 to 10 - Cultural, sports, and recreation services</i>	5 062	4 159	4 738	4 868	5 128	4 861

Source: The SOSR data (2020), authors' own calculations

In terms of the total number of employment generated by tourism consumption, there were 76,250 jobs in the tourism industries in Slovakia in 2018, which represents 3% of the total employment of the Slovak economy in 2018. Most jobs were in food-and beverage-serving activities with a ratio of 46% of employment in characteristic tourism industries. The lowest number of jobs was in travel agencies and other reservation services (4%). The number of jobs was comparable in accommodation services (21%) and the transport ones (22%). The number of jobs decreased slightly in 2014 but has been growing since 2015. This decrease was mainly due to a significant decrease in cultural, sports, and recreation services. In 2014, the food-and beverage-serving activities as well as the transport ones also decreased, and there was also a slight decrease in the services of travel agencies. Since 2013, only the accommodation services industry has seen a continuous increase in jobs.

In the next step, we compare the employment generated by tourism consumption with tourism consumption. This employment is analyzed first by tourism consumption and then by individual parts of consumption, i.e. inbound tourism expenditures and domestic tourism expenditures. In terms of the vertical axis of employment calculations (by tourism industries), according to the tourism satellite account, it is not possible to compare individual industries with tourism consumption, which are calculated in relation to the horizontal axis (tourism products) of symmetric input-output tables (SIOT).

We examine the effect of tourism consumption on employment in tourism industries using the Pearson correlation coefficient according to formula no. 1. The calculations are contained in Tab. 4.

**Table 4 Results of the application of Pearson correlation coefficient**

		<i>Y = employment in tourism industries</i>	<i>Y = employment generated by tourism consumption</i>
		X = tourism consumption	X = tourism consumption
<i>Pearson Coefficient</i>	<i>Correlation</i>	0,86	0,89

Source: authors' own calculations

From the results, we see that the correlations between tourism consumption, employment in tourism industries, and employment generated by tourism consumption are very high and when converted to employment according to formula No. 1, the degree of this correlation increases. We state that tourism employment is significantly affected by visitor consumption in the destination, in our case in the Slovak Republic. In the following table, we observe the effect of inbound and domestic tourism expenditures on employment generated by tourism consumption.

**Table 5 Results of the application of Pearson correlation coefficient**

		<i>Y = employment in tourism industries</i>	<i>Y = employment generated by tourism consumption</i>
		X = inbound tourism expenditures	X = domestic tourism expenditures
<i>Pearson Coefficient</i>	<i>Correlation</i>	0,75	0,94

Source: authors' own calculations

From the point of view of comparing the effect of expenditures on employment generated by tourism consumption, we see that expenditures on domestic tourism have a much higher correlation with employment generated by tourism consumption than expenditures on inbound tourism. The relation between domestic tourism expenditures and employment generated by tourism consumption is stronger and thus, the changes in domestic tourism expenditures have a greater effect on employment generated by tourism consumption than the changes in inbound tourism expenditures.

The subject of the following comparison is the effect of tourism consumption on employment generated by tourism consumption, as well as expenditures on domestic tourism and the ones on inbound tourism as the main parts of tourism consumption. By applying formula no. 2 we get the results for the years 2013 to 2018 contained in Tab. 6.

**Table 6** Calculations of tourism consumption and its parts per one job

<b><i>Slovakia – P.A.</i></b>	<b><i>2013</i></b>	<b><i>2014</i></b>	<b><i>2015</i></b>	<b><i>2016</i></b>	<b><i>2017</i></b>	<b><i>2018</i></b>
<i>Tourism consumption per 1 job position</i>	<b>58</b> <b>181</b>	<b>59</b> <b>274</b>	<b>68</b> <b>888</b>	<b>74</b> <b>495</b>	<b>70</b> <b>769</b>	<b>68</b> <b>456</b>
<i>Average tourism consumption per 1 visitor</i>	86	84	87	86	91	86
<i>Average expenditures of domestic tourism(DT) per 1 visitor</i>	66	61	64	63	69	66
<i>Average expenditures of inbound tourism (IT) per 1 visitor</i>	93	102	96	105	101	105
<i>Number of visitors needed to cover 1 job position</i>	<b>677</b>	<b>703</b>	<b>795</b>	<b>863</b>	<b>776</b>	<b>798</b>
<i>Number of DT visitors needed to cover 1 job position</i>	882	979	1 073	1 188	1 020	1 037
<i>Number of IT visitors needed to cover 1 job position</i>	629	583	717	713	699	651

Source: The SOSR data on Slovakia (2020), authors' own calculations

To compare the results of this paper, we have chosen a comparison with the V4 countries, as the countries that are closest to Slovakia in economic and geographical terms. Examining the data and methodologies of individual indicators in the V4 countries, we found that the only country that meets the comparison criteria is Czechia. In the case of Hungary, we lack information on the total number of visitors, same-day and overnight visitors, and the average expenditures per visitor according to the TSA methodology, as well as an incomplete time series ending in 2017. From Poland point of view, data on employment in the tourism industries and employment generated by tourism consumption, average expenditures per visitor according to the TSA methodology and an incomplete time series ending in 2015 are missing.

The results of calculations applied to the data of Czechia are part of Tab. 7.

**Table 7** Calculations of tourism consumption and its parts per one job

<b><i>CZECHIA-P.A.</i></b>	<b><i>2013</i></b>	<b><i>2014</i></b>	<b><i>2015</i></b>	<b><i>2016</i></b>	<b><i>2017</i></b>	<b><i>2018</i></b>
<i>Tourism consumption per 1 job position</i>	<b>51</b> <b>646</b>	<b>52</b> <b>743</b>	<b>55</b> <b>713</b>	<b>59</b> <b>956</b>	<b>66</b> <b>587</b>	<b>66</b> <b>385</b>
<i>Average tourism consumption per 1 visitor</i>	84	83	86	86	92	94
<i>Average expenditures of domestic tourism(DT) per 1 visitor</i>	45	44	48	50	55	57
<i>Average expenditures of inbound tourism (IT) per 1 visitor</i>	194	191	185	179	186	181
<i>Number of visitors needed to cover 1 job position</i>	<b>615</b>	<b>636</b>	<b>647</b>	<b>701</b>	<b>726</b>	<b>707</b>
<i>Number of DT visitors needed to cover 1 job position</i>	1 136	1 190	1 150	1 199	1 202	1 162

<i>Number of IT visitors needed to cover 1 job position</i>	266	276	301	335	358	367
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Source: Data of Czechia from the Czech Statistical Office-CZSO (2021)

## DISCUSSION

Tourism consumption generated by the purchase of tourism products defined by the TSA methodology in 2018 had a total value of 5.2 billion EUR. According to our calculations, the total employment generated by this consumption in 2018 represents 76,250 jobs in industries characteristic (internationally comparable) in tourism. In 2018, the annual tourism consumption per job was EUR 68,456. From the TSA SR (SOSR, 2020), we know the average tourism consumption per visitor, which in 2018 reached 86 EUR. If we compare the annual tourism consumption per job with the average tourism consumption per visitor, we get an indicator that tells us about the required number of visitors to cover the tourism consumption per 1 job. In 2018, 798 visitors were needed annually to cover one job in the characteristic tourism industries. If we exchange tourism consumption for expenditures on domestic tourism in this calculation, we find out what number of visitors in domestic tourism would be needed to cover one job in the absence of other effects. In 2018, 1,037 visitors in domestic tourism would be needed annually to cover one job in the tourism industries. The calculation applied by the same principle for the expenditures from inbound tourism gives us the required annual number of visitors 651 to cover one job in the characteristic tourism industries.

In comparison with the data of Czechia and Slovakia within the calculation of tourism consumption per one job, both countries have relatively the same values of this indicator in terms of monitoring developments over time. When comparing the main outputs of Tab. 6 and 7, we see slight disproportions in inbound tourism in terms of the number of visitors needed to cover 1 job. In terms of the total number of visitors needed to cover one job with tourism consumption, it is equal to 707 for Czechia and 798 for Slovakia. Significant disproportions can be observed within individual types of tourism. Within Czechia, 1162 visitors of domestic tourism would be needed in 2018 and 1037 would be needed in Slovakia to cover one job in tourism, on the contrary, in terms of inbound tourism, only 367 visitors would be needed in Czechia and 651 in Slovakia, which is 40% more than in Czechia. This disparity can be attributed mainly to higher average expenditures per foreign visitor in Czechia, which in 2018 was up to € 76 higher compared to Slovakia. In Czechia, in 2021, this disparity can significantly affect the struggle of the tourism industries with the post-pandemic situation in tourism. Czechia benefits from inbound tourism to a greater extent than Slovakia and the precondition for the renewal of tourism is the dominance of domestic tourism and its economic strength (Assaf - Scuderi, 2020; Binggeli et al. 2020; Canh & Su, 2020; WTTC, 2020c; OECD, 2020; Altuntas et al., 2021; Škare, 2021).

If we calculated the data on the number of visitors needed for the existence of one job to the current situation in 2021 during the COVID-19 pandemic, then in the absolute absence of inbound tourism in Slovakia, tourism consumption would have to be covered by more than 79 million visitors in domestic tourism and in Czechia by about 200 million visitors in domestic tourism or the average expenditures per visitor in domestic tourism would have to increase rapidly. Calculating the data for 2018, the average expenditures in Slovakia would have to increase to € 140 per domestic visitor, in Czechia to € 133, in order to maintain the number of jobs in tourism in the absence of inbound tourism. If we take into account the decrease in the number of foreign visitors in Slovakia by about 60% (SOSR, 2021) and in Czechia by less than 70% (ČSÚ, 2021), then the share of foreign visitors would have to be covered by domestic tourism, and as a result the average expenditures on domestic tourism in Slovakia would have to be increased to approximately € 123, and in Czechia to € 110, to cover tourism consumption

while maintaining the number of domestic visitors. For Slovakia, this would mean an increase in average expenditures on domestic tourism by 83% and in Czechia by 133%.

In terms of this analysis and the absence of other influences, the following hypothetical situations could occur in Slovakia:

1. Average expenditures per visitor will increase at least twice, which causes a price increase of tourism products.
2. Domestic tourism will be increased and supported to the maximum and at least twice the number of Slovaks will travel within the country.
3. The number of domestic visitors will increase and the prices of tourism products will rise slightly.
4. The enterprise will diversify its business activity and the employment generated by tourism consumption will be covered by the consumption of other products outside tourism.
5. The government will give maximum support to entrepreneurs through aid schemes and will ensure only modest to no redundancies in the tourism industries, which have been most affected by the pandemic among all sectors of the economy.
6. Full redundancies in tourism staff will occur.

## **CONCLUSION**

The answer to the research question "How does domestic tourism affect the existence of jobs in tourism?" is that domestic tourism accounts for a significant share of tourism consumption and thus affects the existence and maintenance of jobs in tourism. In terms of comparing annual consumption per job, we found that, in the absolute absence of inbound tourism, 1037 domestic visitors are needed per year to maintain 1 job in tourism with an average expenditure on domestic tourism of € 66 per visitor. Increasing average expenditures would also reduce the potential number of visitors needed to maintain a tourism job. Compared to Czechia, the need for visitors is lower, which indicates a higher tourism consumption of Slovaks on domestic roads than Czechs in Czechia.

From the point of view of correlation analysis, we can say that the employment generated by tourism consumption is highly dependent on tourism consumption and records very high values of correlation coefficients, especially in expenditures on domestic tourism. Its values reach more than 90%, which means a highly dependent relationship between variables. During the COVID-19 pandemic and subsequently after its overcoming, domestic tourism will play an integral role in the recovery of tourism in Slovakia. Great emphasis will be placed on the increased number of domestic visitors as one of the essential variables for saving jobs in the tourism sector.

The limits of the research problem in the part of the calculation of employment generated by tourism consumption per job are the impossibility of comparing the effect of tourism consumption according to tourism products on individual tourism industries. This comparison is not possible due to the different axes of the individual input variables in terms of the construction of SIOT tables. Tourism consumption is measured on horizontal axes by tourism products and employment on vertical axes by tourism industries. Another limit in connection with tourism consumption is the individual parts of consumption, a special part of which consists of other consumption items, which we did not take into account in this paper. When calculating consumption per job, we took into account only the presence of domestic and foreign visitors, we did not deal with other influences. Another limitation of meeting the sub-

target was the missing data for Hungary and Poland, to create a complete comparison of the V4 countries.

Since the results of this paper refer only to the direct effects of employment due to tourism consumption, we would suggest, in the follow-up research, also to the indirect and induced effects of employment generated by tourism consumption, which would create a comprehensive view of the effect of tourism consumption on the employment of the Slovak economy.

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# International diversification of business: The literature review

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**Abstract:** In the context of international diversification in times of crisis, this article reviews the literature that describes the geographical diversification of the companies' assets and activities and the impact of such diversification on their economic performance. There is a lot of research aimed at studying the links and dependencies between the level of diversification of various aspects of companies' activities and their financial and other indicators. Most studies show the effectiveness of diversification strategies without considering the impact of crisis conditions. In this context, crisis, as an external factor, can be not only a risk factor for a company but also an incentive for a successful diversification project. For this article, studies that show different spectra of the impact of international diversification were chosen in order to identify the most significant areas for future research, which may also include mentioned crisis factors.

**Keywords:** international diversification, crisis, globalization, literature review

**JEL Classification codes:** F23

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## INTRODUCTION

Under the conditions of globalization of the world economy, acceleration of the pace of scientific and technological progress, and aggressive competitive environment as well, companies from various sectors are diversifying their economic and financial activities. Nowadays, one of the successful business strategies in dynamic and highly competitive markets is for companies to focus on multiple products, services, industries, or markets (Dhir et al., 2015).

This study aims to review the literature on international and geographical diversification of firms and the impact of crisis factors on diversification performance. Geographic diversification is a potentially successful strategy for firms seeking to expand their area of operations and reduce their dependence on a single market or region. By expanding into new markets, firms can gain access to new customers, increase their revenues, and reduce the risks associated with operating in one market. In addition, this strategy allows the firm to realize economies of scale and scope (Lu & Beamish, 2004; Contractor, 2007). Barney (1991) also explains that one of the reasons for diversification is the opportunity to maintain the company's long-term competitive advantage through a strategic pool of heterogeneous resources. Factors that influence diversification decisions include not only the mentioned competition (Fiss and Hirsch, 2005; Meyer, 2006; Vidal and Goetschalckx, 2001) and the economic environment (Sundaram & Black, 1992) but also risk management attitudes (Wang & Barney, 2006), technological discontinuity (Miller & Douglas, 2006) and the motives of company managers (Tihanyi et al., 2000).

Researchers from all over the world conduct research and study the effectiveness of international diversification not only as a stand-alone company strategy but also evaluate the

impact of various internal and external factors on the performance of this strategy. This paper describes studies that focus both on the impact of international diversification itself on companies and studies that show how the financial crisis has affected the performance of diversified companies (Lu and Beamish, 2004; Delios & Beamish, 1999; ). This paper provides an overview of such studies, their results, and a selection of literature describing different approaches to the study of this issue. After presenting the literature, I analyze the results of the works described and identify a relevant topic for further research in the field of international and geographical business diversification.

## **1 LITERATURE REVIEW**

In recent years, there has been a growing body of research on the impact of geographic diversification on firm performance, risk, and value (Hilmersson, 2014; Lu and Beamish, 2001; Zahra et al., 2000). One of the main findings in the literature is that geographic diversification can have a positive impact on firm performance. For example, in a study published in 2010 by Nick and Zhao, the authors investigated the relationship between geographic diversification and the performance of European firms and found that diversification into new markets was positively associated with improved firm performance. In addition, various older studies also show that a higher level of geographic diversification can have a positive effect on firm performance (Delios & Beamish, 1999; Errunza & Senbet, 1984) and create the opportunity for companies to grow (Contractor, 2007; Ruigrok and Wagner, 2003). Similarly, Li and Chen (2013) found that geographic diversification has a positive effect on firm value in emerging markets, and according to Chakrabarti et al. (2007), international companies can get primary benefits from imperfections of these markets.

Lu and Beamish (2004) in their study investigated the relationship between international diversification and firm performance on a sample of 1489 firms from Japan over the period of 12 years. The authors tested the "S-curve hypothesis" and found a relationship between international diversification and firm performance, with firms experiencing a decline in performance initially and then a gradual improvement as they gained more experience in the international market. Furthermore, the authors also found that the relationship between international diversification and performance was stronger for firms in industries with a high level of experience and knowledge. In an earlier study by Lu & Beamish (2001), the results showed a U-shaped relationship in medium and small firms that had little experience with internationalization early in the process. Some studies in previous decades showed an inverted U-shaped relationship between firm internationalization and productivity using a sample consisting of large firms with high levels of internationalization, where the rising costs of coordinating their activities were taken into account (Geringer et al., 1989; Hitt et al., 1997).

Despite research showing the positive impact of diversification, one of the key challenges associated with geographical diversification is the need to manage the various cultural (Mihov & Naranjo, 2019; Grinblatt & Keloharju, 2001), legal (Mihov & Naranjo, 2019; Sundaram & Black, 1992) and economic (Hitt et al., 1994) differences between markets. For example, a company that plans to enter a new market may need to adapt its products and marketing strategies to meet the unique and different needs and preferences of customers in that market (Mihov & Naranjo, 2019). Because of various factors that can have a significant impact on the results, different studies can have opposite results (Contractor et al., 2003; Glaum and Oesterle, 2007; Annavarjula & Beldona, 2000; Lu and Beamish, 2004). Some studies have shown a negative relationship between the level of geographical diversification and firm performance (Tallman & Olsen, 2000; Denis & Yost, 2002). Li and Chen (2015) found that geographic diversification is positively related to increased firm risk, suggesting that firms that diversify into new markets may expose themselves to more risk than when operating only in a local market.

The next important factor in the literature review in this area is the impact of crisis factors on the performance of internationally diversified enterprises (Purdy & Wei, 2014). External crises can have a negative impact on the company and reduce the effectiveness of the diversification strategy in all or part of the markets in which the company operates. In this context, research will focus on the financial crisis of 2008 as it is the closest historically global crisis that has impacted businesses around the world but is distant enough to be able to assess its impact and conduct some research on this topic. The impact of the financial crisis on companies has been complex and varied, with some companies suffering significant losses (Blankenburg & Palma, 2009; Arner, 2009; Kotz, 2011), while others managed to survive the events relatively well and without major losses.

## **2 METHODOLOGY**

The purpose of this paper is to explore the literature in the field of international geographical diversification of companies, as well as studies aimed at the impact of the crisis on the performance of diversified enterprises. In order to achieve this objective, it was necessary to conduct a thorough analysis of works and studies specializing in the impact of diversification strategies on companies' success, profits, and overall financial performance. The studies should also present the main metrics and indicators by which scholars have identified the level of international diversification of companies, as well as criteria for comparing their results.

Online resources such as JSTOR and ProQuest were used in the literature selection. In addition to these portals, the online Google Scholar database and a general search were also used to cover as many resources as possible that were potentially useful for the research question posed. The main focus was on research carried out since the mid-1990s, but given the long-term relevance of the topic, theoretical background from earlier significant research on international diversification was also included in order to provide a broader view of the issue.

In the course of this study, it was important to identify the main lines of inquiry into the topic in question and to find key findings and approaches in dealing with diversification. It is important to understand that the term diversification itself can be used in different contexts, and therefore the criteria to be met by the selected works were defined at the beginning of the study. The main inclusion criteria for selecting the study were the focus on international business diversification, including a sample of companies operating in several countries. Excluding criteria were a narrow or very specific field of business, as well as companies operating in specific markets. The next exclusion criteria were the study of business diversification in specific and non-standard conditions beyond the crisis, which may have different purpose of the study. The last exclusion criteria were geographical diversification within a single country, divided only by regions, areas, or cities in that country.

Using the criteria described above, articles were selected to further examine them, compare the results and identify areas with potential for new research in the future. The results of the relevant literature review are presented in the next chapter of this paper.

## **3 RESULTS AND DISCUSSION**

After reviewing the selected literature, the main areas in which the authors consider the impact of international diversification on companies were identified. The papers compare not only a company's revenue and profitability but also many studies focus on a company's risk share, value, and measures such as return on assets (ROA) (Qian et al. 2010), return on equity (ROE) (Mihov & Naranjo, 2019), return on capital (ROC) (Purdy & Wei, 2014), or gross profit margin (GPM) (Purdy & Wei, 2014). Some papers also present measures of corporate social

responsibility (CSR) (Attig et al., 2016) and the impact of a company's international diversification on it. Most studies use large samples of publicly traded companies and publicly available financial data about these companies for analysis.

In the following, we present a selection of relevant papers that meet the criteria set out and from which it is possible to identify key areas for further research. This description provides information on the authors' working methods and main conclusions.

In the study "International Diversification and Firm Performance: The S-Curve Hypothesis" (Lu & Beamish, 2004), the authors investigated the nature of the relationship between regional diversification and firm performance in firms with different assets and at different stages of internationalization. They found that geographic diversification has a non-linear relationship with firm performance. The degree of geographic diversification had an inverse correlation with firm success at high and low levels of internationalization but was positively correlated with a performance at moderate levels of internationalization. In addition, firms that had made large investments in intangible assets such as technology and advertising saw an increase in profits as a result of increased foreign direct investment. The study analyzed company data over 12 years on a sample of 1,489 Japanese companies. The authors used return on assets (ROA) and Tobin's Q to measure financial performance. To calculate internationalization, the authors used the number of foreign subsidiaries as well as the number of countries in which the company has subsidiaries. The main limitation of this study was that it was conducted on a sample of companies from one country, while not taking into account other factors, such as organizational design in the company and the effectiveness of employees in implementing a diversification strategy. Future research could be carried out in different countries, taking into account local characteristics, as well as using more variables that affect the success of such a strategy.

The next example of research in this area is "Corporate internationalization, subsidiary locations, and the cost of equity capital." by Mihov, A., & Naranjo, A. (2019). This study looks in detail at the relationship between the level of internationalization of companies and the cost of equity and the indicators in which this relationship manifests itself. The research used comprehensive data from Exhibit 21 in companies' 10-K reports, which covered the foreign countries where U.S. multinational companies had material operations during the period from 1996 to 2012. The study showed that market conditions and the financial strength of the company have a significant impact on the cost of equity capital and can increase or decrease the cost of equity capital, depending on the country in which they operate, as well as the impact of the crisis. Furthermore, directing this diversification into countries with similar cultures, strong governments, and stable financial markets is likely to further reduce the cost of equity capital. According to the study, the benefits of diversification played a particularly large positive role in the 2008 crisis.

The performance implications of intra- and inter-regional geographic diversification. Qian et al. (2010) analyzed the performance implications of intra- and inter-regional geographic diversification in a sample of 127 US-based multinational enterprises. The study used inter-regional sales figures as well as the presence of foreign subsidiaries. ROA was used as a comparative variable. The study found that geographic diversification does have a positive effect on a company's financial performance, but depending on the type of this diversification, this indicator may change for the better or for the worse over time. Intra-regional diversification allows firms to improve their performance in a linear fashion while facing limited market opportunities. Inter-regional diversification yields a U-shaped curve, meaning that this strategy can have a growing positive effect, but only in the limited level of its application and worsens the financial performance of the firm over time. Authors note that future studies may aim to cover the limitations of this research, which is the analysis the relationship between financial performance and time-series, that can show how companies have reacted to past

experience and how this has influenced their diversification decisions. In addition, future research may use other ways to define regions, such as cultural regions. In this study, only the division into geographic regions was used. Another potential direction for future research would be to analyze companies based in other countries and with more markets involved.

The following study aims to investigate the impact of foreign ownership on various measures of international firm performance under the impact of the 2007-2008 crisis factors. This study is included in this article because it shows how the impact of the crisis on local companies differs from the impact on companies that are part of internationally diversified structures. In this study named "Surviving the Global Financial Crisis: Foreign Ownership and Establishment Performance" (Alfaro & Chen, 2012), the authors made a comparison using company data from 2005-2007 as a benchmark of company performance before the crisis and data from 2007-2008 to compare the change in company performance under the impact of the global financial crisis. One of the most important aspects of this comparison was the separation of the performance of globally diversified subsidiaries, which may have affected their economic performance and stability from the changes directly caused by the crisis. This was done by comparing local companies with subsidiaries of international companies with as similar economic characteristics as possible and operating in the same industry and country. In this way, the researchers were able to separate the effect of other factors on company performance during the crisis from the effect of foreign capital, which made it possible to study this effect based on the differences in the performance of subsidiaries and their local counterparts. The results of this study confirm some of the already mentioned hypotheses about the positive impact of international diversification while adding a crisis factor to the initial situation. In this paper, the researchers pointed out that, on average foreign-owned subsidiaries were more resilient during the crisis than their local counterparts. When comparing the advantage of foreign ownership over local ownership, it was found that under normal conditions it was not as pronounced as under economic crisis conditions. Vertical and horizontal production and financial relationships between subsidiaries and parent companies were also factors with a significant impact on the financial performance of the studied companies. Based on the study, vertical financial and production linkages between these companies could mitigate the effects of the economic crisis. In future research, the authors may explore how, in times of crisis, international linkages can serve as international transmission mechanisms (Alfaro & Chen, 2012).

The next factor that can be influenced by a company's international diversification is access to sources of foreign financing in the form of corporate bonds and bank loans (Jang, 2017). This is the area Yeejin Jang explored in his 2017 study "International Corporate Diversification and Financial Flexibility", in which he described opportunities to access foreign capital using a sample of U.S.-based corporations for the period 2000-2010. The sample includes 3,850 domestic companies and 2,353 multinational companies. The hypothesis in this study was that corporations with subsidiaries in other countries outside the U.S. are more flexible in terms of external financing than their counterparts operating only in the local market. In addition, this work also examined the impact of the crisis factors on the capital market between 2007 and 2009. The crisis was seen as a shock that adversely affected the supply of capital within the U.S. and hampered access to capital by local and international companies. The study found that, under such circumstances, internationally diversified companies had more opportunities to borrow from foreign banking institutions. Moreover, investments by U.S. companies with subsidiaries abroad were less affected during the crisis than those of purely local companies, partly because of the greater use by international corporations of the foreign bond markets to which they had access. This study only uses a sample of U.S. companies, which is a major limitation that could be expanded in future studies. When examining a sample from other countries, the results may also be affected by the conditions for issuing bonds in other states, as well as the specifics of the legislation in these countries.

Purdy & Wei's (2014) "Another Look at the Case for International Diversification" is another significant study of the impact of international diversification on firm performance. This paper fits very well with the criteria defined for reviewing the literature in this area, as the authors use a large sample of the world's top 500 companies from the 2011 Fortune Global 500, including companies from different business sectors. Furthermore, the analysis is carried out on 5,000 companies over a 15-year period from 1996 to 2010. The advantage of working with data from this period is also that it includes not only economic growth, which could have a positive impact on business, but also the period of the economic crisis in 2008. Two indicators were used to determine the level of diversification of companies: the share of the company's assets allocated overseas and the share of revenue that companies generate overseas. For the purposes of this study, overseas was defined as a region outside the company's home region. In this case, such regions were not defined by the borders of a specific state but rather by the economic dimensions of certain parts of the world. That is, Canada and the U.S. were considered North America, but Mexico was not included, while the European region included the European Union. Return on capital (ROC), gross profit margin (GPM) as well as total company revenues were used to assess the performance of the companies. The study also takes into account factors that influence a company's financial performance beyond diversification. These factors include the market capitalization of companies, the size of the home market as well as the volatility of companies' stocks. The overall results of the study show that international diversification has a positive effect on the financial performance of the studied companies, but this effect may not be noticeable immediately after the implementation of this strategy. The results show that both diversification of a company's revenue sources and its assets may not cause an increase in profits. When comparing the two strategies, it was found that diversification of revenue sources abroad can produce quick results while having a negative impact on the profit margin in the long run. International asset diversification, although not significant in terms of its impact on revenue and may be overhead in the short term, can improve both the company's profit margin and competitiveness in the long term. According to the authors of the study, the results will be more relevant for large international companies, since the study used a sample of large diversified companies from the Fortune Global 500 list. These companies are generally successful in their industry and many other factors influence their results, in addition to international diversification. This limitation could be covered by a similar study but for smaller businesses.

The following study, which I review in this paper, aims to examine the impact of international diversification on firm performance risk, including the impact of firm resources. Capar et al. (2015) conducted this study titled "Effects of International Diversification and Firm Resources on Firm Performance Risk" using a sample of 258 U.S. manufacturing companies in different industries, operating internationally, existing at least for six years and having minimum average annual sales of \$100 million. The authors studied data for the period from 2009 to 2013. An important feature of this study, which distinguishes it from many others, is that it includes an examination of the impact of companies' resources, which can play a key role in the effectiveness of international diversification (Elango & Pattnaik, 2007; Kotabe et al., 2002). In doing so, the paper has limitations that relate primarily to the type of activity of the companies, although the selected manufacturing companies operate in 13 different industries. The ratio of foreign sales to total sales (FSTS) was chosen as the criteria for determining the international diversification of a company. To measure performance risk, the authors used return on assets (ROA) ratio. The authors chose innovation assets (R&D intensity), marketing assets (advertising intensity), and various control variables (financial leverage, industry effects, and size of the company) as indicators of company resources. The study found that when company resource variables were added, international diversification had no significant effect on firm performance risk, and no linear or non-linear relationship between firm performance and international diversification was found. However, the following limitation in the study is observed here, namely measuring international diversification by only one indicator FSTS.

Regarding the impact of resources on productivity risk, the authors found that a statistically significant negative impact on this indicator is a company's marketing assets, and a statistically significant positive impact is R&D intensity. In addition to using a single indicator to measure the level of diversification, this study has the limitation of using a sample of only U.S. manufacturing companies.

The studies described above have, in one way or another, examined the impact of diversification on indicators related to the financial and economic performance of firms. The next study, titled "Firm Internationalization and Corporate Social Responsibility" (Attig et al., 2016), examines the impact of a company's level of international diversification on its corporate social responsibility (CSR) rate. This study is different from all of those described above, but it is also an important indicator that international business diversification can matter not only in the context of the impact on financial performance, but also other aspects of companies, including social. In this paper, the authors conducted a study using two samples from U.S.-based international companies as well as companies from around the world. The first sample consisted of 3,040 U.S. companies and 16,606 firm-year observations over a 19-year period from 1991 to 2010. The second sample comprised companies from 44 countries with 11,077 observations over the period 2002-2010. To measure the level of internationalization, the authors used the following indicators: ratio of foreign sales to total company sales (FS/S), ratio of foreign assets to total assets (FA/A), entropy index (Hitt et al., 1997), and sales Herfindahl index (Black et al., 2014), profitability (EBITDA to ROA), ratio of total debt to total assets (leverage - LEV), market-to-book ratio (MTB) and long-term institutional ownership (LTIO). The results showed that the internationalization of firms has a statistically significant positive effect on the level of CSR in diversified firms. The authors also found that because of internationalization, only large multinational companies increase their investment in CSR. A further finding was that companies with subsidiaries in countries with a strong legal and regulatory system have a higher CSR rating.

Thus, based on the above studies, it can be concluded that international diversification affects very different areas of a company, affecting not only its financial performance but can also influence the social aspects of a company and help the business to be more resilient under the influence of crisis factors.

## **CONCLUSION**

This article researched papers on the topic of international business diversification, as well as the effectiveness of such diversification in the crisis, using the example of the 2008 financial crisis. The purpose of the paper was to investigate articles over the past 25 years that focus on the effectiveness of international diversification and its impact on the financial performance and other indicators of companies. The reviewed literature includes studies focused solely on international business and does not investigate geographic diversification within a specific country. Internet sources such as JSTOR, ProQuest, and Google Scholar were used to analyze the required literature.

As a result of the literature review on this topic, the main areas of research in the field of international business diversification were identified, the specific methodologies and data used in the research were identified, and the key findings of these studies were described. The main area of research can be defined as the study of the impact of international diversification on several key metrics in business, such as gross profit margin (GPM), return on capital (ROC), total revenue, and return on assets (ROA), which is, based on this analysis, the most used metric to assess the impact of diversification on company performance. To determine the level of company diversification, most of the authors in the described studies used the FSTS ratio as well as the presence of subsidiaries in other countries or economic areas.

The main conclusions that have been drawn from the studies described are the overall positive impact on the financial performance of companies. Those studies that have examined other areas, such as the advantage of access to foreign capital markets or CSR, have also shown a positive effect of internationalization on business. Those studies that have also described negative effects are generally limited to the time frame of this negative effect or attribute these results to the influence of additional factors such as company resources.

At this stage of the literature review, we can conclude that in the field of international diversification, there are many directions and additions that can affect the results of research on the effect of this strategy. One of these directions can be the study of the effectiveness of the redistribution of company resources between subsidiaries during the crisis and its effectiveness as a stabilizer of the financial performance of the company. In addition, a possible direction of research is to add variables related to the costs of physical business security in riskier regions, as well as take into account the measurement of risk in international diversification. Studies of diversified companies during a crisis can include separating the specific effects of the economic crisis on the activities of multinational companies and comparing them with similar effects on local businesses, which will identify the most significant tools that can be used by those or other companies in the event of a crisis. The results of such studies can be effectively applied in practice by managers of multinational corporations as part of anti-crisis planning.

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# Application of natural language processing to enhance qualitative research used for marketing

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**Abstract:** Understanding consumer behavior can help improve marketing of the products. Market research normally applies conventional qualitative analysis to discover the reasons why consumers act and purchase products in a certain way. However, qualitative analysis with small samples is insufficient to make population-level summaries. On the other hand, qualitative analysis with large samples is time consuming. In addition, poor quality of qualitative research due to human error and bias from the researcher can lead to misleading findings. Therefore, to overcome these problems, Natural Language Processing is applied to extract consumer behaviors from large-scale samples of product reviews. The result from 809 product reviews (source: CarMax in US) of preowned luxury cars (Mercedes-Benz) indicates top 10 relevant keywords "ride", "smooth", "luxury", "nice", "feature", "excellent", "beautiful", "comfort", "style", and "expect". These terms correlate with consumer perceived emotional, social, and quality values that could positively influence customer purchase intention toward preowned luxury cars.

**Keywords:** consumer behaviour, consumer perceived value, qualitative analysis, natural language processing, topic modelling

**JEL Classification codes:** C55

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## INTRODUCTION

Understanding consumer behavior is one of the most important tasks for marketing. Knowledge derived from consumer behavior helps marketers understand what customers want and need and enables them to appropriately offer products and services that match their target audience (Radu, 2022). It also helps marketers to market and position their products or services successfully (Hampasagar, 2021). In recent years, consumer purchase intention toward luxury brands is one of the most prominent areas in marketing research. Many researchers have investigated components that can influence consumer purchase intention toward luxury products. It was found that attitude, past purchase experience, perceived behavioral control, perceived emotional value, perceived social value, perceived quality value, and perceived green value can influence the intention to purchase toward second-hand luxury products (Lou et.al., 2022) (Stolz, 2022).

To understand why a consumer has acted and purchased in a certain way, the marketers frequently use qualitative research to analyze and interpret their data. The typical data used in qualitative research is non-numerical, contextualized, and unstructured such as open-ended questionnaires. Conventional qualitative research is criticized as an overly subjective research method partially due to the use of unstructured or semi structured data (Abram et al., 2020). This method is time and cost consuming, especially for large-scale data. Poor quality of

qualitative research can lead to misleading findings (Abram et al., 2020). Furthermore, qualitative research with small samples is insufficient to make population-level summaries. Other than that, qualitative research has many limitations including potential bias in answers, self-selection bias, and potentially poor question from researcher (Abram et al., 2020).

Natural language processing (NLP) is a branch of Artificial Intelligence (AI) concerned with giving computers the ability to understand human language. NLP utilizes computational linguistics and statistical analysis and machine learning. These technologies enable computers to process human language in the form of textual data and to understand its meaning, intent, and sentiment. Recently, NLP has been used for qualitative research with many types of data sources such as open-ended feedback from a customer satisfaction survey, notes in an electronic medical record (EMR) (Abram, 2018, 2020). These studies suggest that NLP could capture the over-all thematic descriptions and analyze content from large-scale unstructured data. NLP could save time and cost of analytical processes as well.

Therefore, NLP can be considered a potential AI technology that can be applied to marketing research (Gkikas, 2022) (Jarek et.al, 2019). As a pilot study of application of NLP to marketing research, eight hundred and nine product reviews of preowned luxury cars (Mercedes Benz) were downloaded from a popular used car dealer website (carmax.com) in U.S. Then, NLP was applied to enhance qualitative analysis and extract terms related to consumer behaviors from this large-scale unstructured data. Finally, the consumer perceived values toward luxury cars derived from this method were examined and compared to the previous findings from other groups.

## **1. LITERATURE REVIEW**

### **1.1 Consumer Perceived Value (CPV)**

Recently, consumer perceived value has become a popular topic in marketing (Lou et.al., 2022). Consumer perceived value refers to consumers' overall assessment of the utility of a product based on their perceptions. Perceived Value Scale (PERVAL) was developed to assess customers' perceptions of the value of a consumer durable good at a brand level (Sweeney et. al., 2001). PERVAL consists of four value dimensions: emotional value, social value, economic value, and quality value. These perceived values have been recognized as crucial dimensions for luxury consumption. Accordingly, this study adopted these four value dimensions and formulated corresponding hypotheses as follows.

### **1.2 Economic Value**

Financial benefit has been widely cited as a critical driver of purchasing behaviors. The lower price of preowned cars is a frequently mentioned reason why consumers buy preowned cars rather than new ones. New luxury products are considered needlessly expensive. Therefore, economic aspects may influence the intention to purchase preowned luxury products. In general, pre-owned luxury cars have a financially lower price than brand-new luxury cars. The affordability of preowned luxury provides consumers with the opportunity to save their money and obtain financial benefits. Thus, the following hypotheses were proposed:

**Hypothesis 1 (H1).** *Economic value positively affects consumers' purchase intentions toward luxury cars.*

### **1.3 Emotional Value**

Emotional value refers to emotional perceptions consumers may have while using or shopping for products such as love, empathy, pride, happiness, and nostalgic pleasure. Attitudes toward luxury itself and luxury brands may influence the purchase intentions of luxury cars. Therefore, the following hypothesis was proposed:

**Hypothesis 2 (H2).** *Emotional value positively affects consumers' purchase intentions toward luxury cars.*

#### 1.4 Social Value

Social value refers to a product's ability to gain favorable evaluation from people in society. It incorporates several aspects such as social image, identification, and status. Consumers with a high need for status tend to spend their money conspicuously on luxury products to display their wealth and purchasing power. In addition, as luxury brands frequently enclose prestigious values, the possession of luxury products serves as a symbolic sign of group membership and as a means of improving individuals' social standing. Thus, the following hypothesis was proposed:

**Hypothesis 3 (H3).** *Social value positively affects consumers' purchase intentions toward luxury cars.*

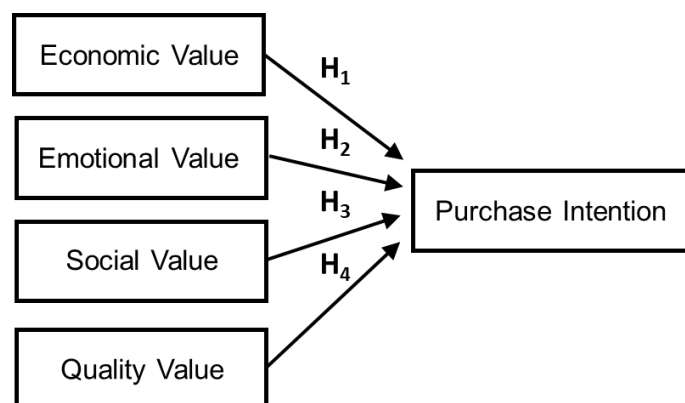
#### 1.5 Quality Value

Perceived quality is defined as the consumer's judgment about the overall excellence of a product. As luxury products are considered to have a top quality and perpetual design, this leads to a perception of a long-life cycle and not being affected by short-term fashion trends. The exceptional quality of luxury products is not only related to the components and materials used but also to the high level of skills and processes involved in the craftsmanship. High-quality consciousness is identified as one of the shopping style dimensions in the context of preowned luxury. Therefore, the following hypothesis was proposed:

**Hypothesis 4 (H4).** *Quality value positively affects consumers' purchase intentions toward luxury cars.*

Based on the literature review above, the following research model was developed. As shown in Fig. 1, consumers' perceived economic value, perceived emotional value, perceived social value, and perceived quality value were proposed to influence their purchase intentions toward preowned luxury cars.

**Fig. 1 Hypotheses of this study**

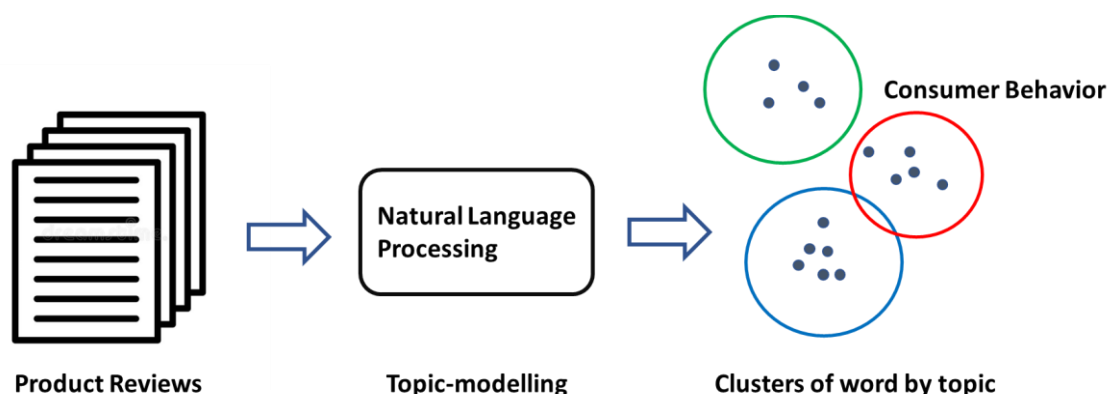


Source: Author, 2022

## 2. METHODOLOGY

Fig. 2 shows the basic concept of this study. Firstly, product reviews associated with luxury cars are collected from a website of a preowned luxury car dealer. Secondly, these data are processed using topic modelling techniques in Natural language processing. Finally, the topics associated with consumer behavior are identified and their clusters of words are analyzed.

**Fig. 2 Basic concept of this study**

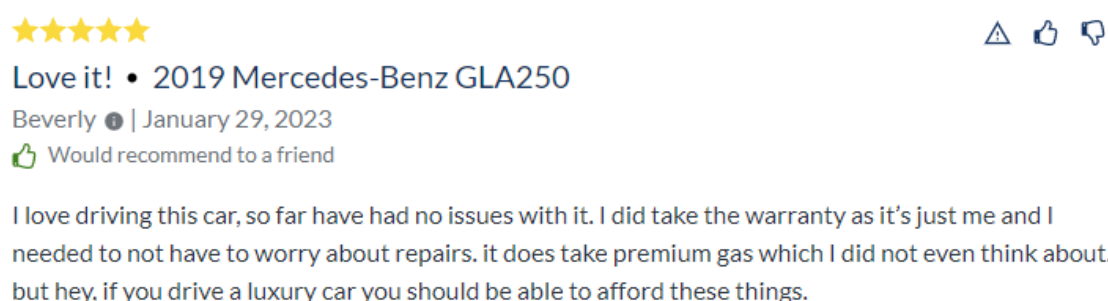


Source: Author, 2022

### 2.1 Data collection

The raw data set was collected from 809 product reviews of a luxury car (Mercedes-Benz) from a website of Carmax, Inc. in 2022 (<https://www.carmax.com/reviews/mercedes-benz>). CarMax Inc. is the largest retailer of preowned vehicles in the U.S. Their website provides large-scale product reviews of cars grouped by brand to the public. The number of product reviews collected from this website is sufficient to make a population-level summary for this study. Furthermore, this data set is appropriate for this study because the preowned luxury car consumption could represent a segment in the luxury car market.

**Fig.3 Example of raw data**



Source: [www.carmax.com/reviews/mercedes-benz](https://www.carmax.com/reviews/mercedes-benz), 2022

## 2.2 Topic Modelling

Topic modelling is used to extract useful information related to customer behavior from product reviews data. Topic modelling automatically counts and group similar word patterns from unstructured data to topics. For example, normally, if a marketer wants to know what his customers are saying about particular features of their products, he will have to manually find texts that are related to his topics of interest from product reviews and manually analyze them. However, by detecting patterns such as word frequency and distance between words, a topic modelling can automatically cluster parts of product reviews that are similar, and words and expressions that appear most frequently. With this technology, topic modelling can save processing time, especially with large-scale data (Texttrics, 2023).

## 2.3 Latent Dirichlet Allocation

The algorithm used to model topics in this study is Latent Dirichlet Allocation (LDA) (Blei et. al., 2003) (Ma, 2019). The purpose of LDA is to group relevant documents in the corpus into a set of topics which covers the majority of the words in those documents (MonkeyLearn, 2023). LDA identifies latent topics within a corpus by estimating the probability that each document is generated by any specific topic and the probability that any word is generated by a specific topic. Once the LDA model is optimized, researchers can examine the words that are most probabilistically related to each topic to derive topic meaning and understanding of their large-scale textual data (Hagg et. al., 2022).

## 2.4 Pre-processing and processing

The research methods were conducted in two stages: (1) preprocessing where the data were prepared for analysis using standardization and formatting and (2) processing where the data is actually analyzed. The original data was collected in Excel format and then converted to JSON format. The primary packages and modules used in this study includes: numpy, gensim, nltk, pyLDAvis, Jupyter Notebook and Python. In the first stage, the standard data preprocessing methods for NLP were employed and included: text case standardized to lower, removal of stop words (e.g., "and," "or," "but," "the") punctuation removal and word stemming (removal of word endings allowing a focus on the word root). Excluding words which do not contribute to the identification of relevant themes is a standard process in many approaches to qualitative research. Fig. 4 shows an example of data after preprocessing.

**Fig.4 Example of data after preprocessing**

```
[['start', 'small', 'car', 'wife', 'think', 'pick', 'wife', 'love', 'car', 'european', 'delivery', 'program', 'rear', 'seat', 'truck', 'kind', 'small', 'comfort', 'performance', 'quality', 'appearance', 'space', 'lastly', 'more', 'type', 'average', 'acceleration', 'cylinder', 'vehicle', 'rear', 'dry', 'good', 'class'], ['vehicle', 'good', 'vehicle', 'bulky', 'especially', 'well', 'buy'], ['trade', 'car', 'small', 'slightly', 'well', 'mileage', 'drive', 'luxury', 'think', 'always', 'think', 'comfort', 'performance', 'l', 'mileage', 'own', 'excellent', 'auto'], ['crossover', 'small', 'large', 't', 'space', 'mercede'], ['love', 'car', 'month', 'ownership', 'fairly', 'awesome', 'balanced', 'nice', 'smooth', 'ride', 'compact', 'mind', 'hint', 'casionally', 'haul', 'kid', 'perfect', 'gas', 'mileage', 'great'], ['edit', 'rt', 'edition', 'edition', 'drive', 'living', 'room', 'road', 'mercede', 'ct', 'shape', 'sale', 'great', 'love', 'new', 'car'], ['wife', 'rent', 'we', 'wear', 'interior', 'all', 'impressive', 'rental', 'performance', 'surfic', 'type', 'average', 'mpg', 'right', 'estimate', 'great', 'provide', 'buying', 'fantastic', 'car'], ['think', 'costly', 'vehicle', 'cheaply', ']]
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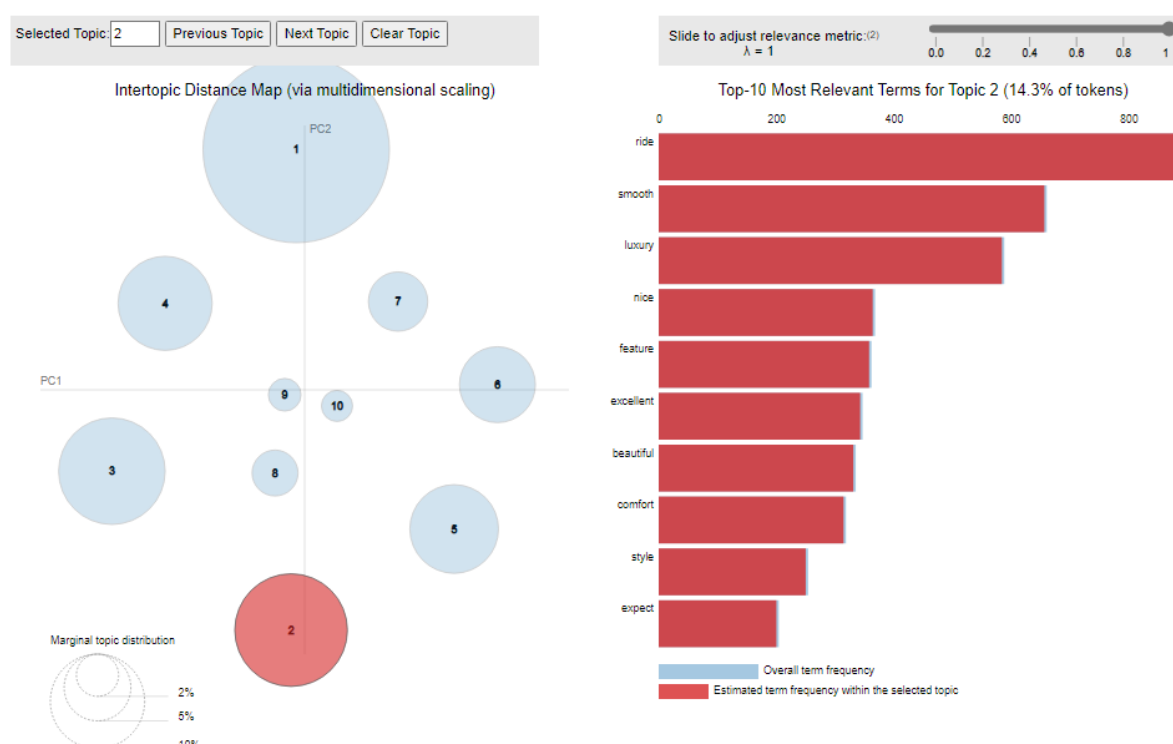
Source: Author, 2022



In the data processing stage, Latent Dirichlet Allocation (LDA) from Genism library was used for topic modeling. To conduct the qualitative assessment, the LDA output was used to develop topic themes and an overall theme for the data. The topic that was the most relevant to consumer behavior was selected for further analysis and interpretation. In addition, LDAvis is used to visualize topics estimated by LDA (Sievert et al. 2014). This visualization tool provides a global view of the topics while at the same time allowing for a deep inspection of the terms associated with each individual topic.

### 3. RESULTS AND DISCUSSION

**Fig. 5 Result from LDA topic modelling**



Source: Author, 2022

#### 3.1 Results

Fig. 5 consists of two basic components. Firstly, a global view of the topic model is displayed on the left panel where the bubbles represent the topics. Positions of centers are determined by computing the distance between topics. The size of each circle represents each topic's prevalence, and the topics are sorted in decreasing order of prevalence (Sievert et. al., 2014). Secondly, the right panel of this visualization depicts a horizontal bar chart whose bars represent the individual terms that are the most useful for interpreting the currently selected topic on the left. These terms can indicate the meaning of each topic (Sievert et. al., 2014).

The topics can be viewed as underlying constructs measured by the combination term frequency and distance between terms. By inspecting each of the LDA topics, the pattern can be identified. Since the topic of this study is related to consumer perceived value, topic 2 was selected. This topic contains of terms: "ride" (verb), "smooth" (adverb), "luxury" (adjective), "nice" (adjective), "feature" (noun), "excellent" (adjective), "beautiful" (adjective), "comfort"

(verb), "style" (noun), and "expect" (verb) as shown in Fig. 5 - all of which point to the underlying concept of consumer behavior. In addition, terms of "ride", "smooth" and "luxury" are dominant (top 3 terms) according to the estimated term frequency within the selected topics.

### 3.2 Discussion

**Table. 1 Summary of top 10 keywords and their corresponding category (H<sub>1</sub> – H<sub>4</sub>)**

Category	Keyword and Rank
Economic value (H <sub>1</sub> )	
Emotional value (H <sub>2</sub> )	nice (#4), beautiful (#7), comfort (#8), style (#9)
Social value (H <sub>3</sub> )	luxury (#3), excellent (#6),
Quality value (H <sub>4</sub> )	ride (#1), smooth (#2), feature (#5), excellent (#6), beautiful (#7), expect (#10)

Source: Author, 2022

The current study investigated top 10 keywords extracted using NLP and answered a question of whether customers' perceived values including economic, emotional, social, and quality values can positively influence their purchase intentions. Based on a complex purchasing behavior of expensive product, we could also presume that the customers who created these product reviews were highly involved in the decision making process and considering factors such as cost, return on investment, durability, usability, feedback, recommendations while comparing among different options before finally making a purchase. Table 1 summarizes keywords and rank by their corresponding category (hypothesis) as follows.

#### 3.2.1 Economic value (H1)

Surprisingly, this topic has no keyword related to economic value. Thus, perceived economic value was found to have no positive influence on consumers' purchase intentions toward luxury cars. This indicates that the luxury car market is well-established. The price is no longer the primary reason for consumers to buy luxury cars. This finding is also in agreement with a previous study from a different group (Lou et.al., 2022).

#### 3.2.2 Emotional value (H2)

According to the number and rank of keywords in this topic, emotional value has the 3<sup>rd</sup> strongest influence on purchase intention. Therefore, perceived emotional value can positively influence consumers' intentions to purchase preowned luxury cars. This result is consistent with a previous study (Lou et.al., 2022) suggesting that secondhand luxury shopping provides consumers with joy. Feeling joy and pleasure is an important stimulus for an individual to perform a certain behavior. The terms "nice", "beautiful", "comfort", "style" could express consumers' experience of using their luxury cars.

#### 3.2.3 Social value (H3)

According to the number and rank of keywords in this topic, social value has the 2<sup>nd</sup> strongest influence on purchase intention. Thus, consumers may strongly believe that ownership of

luxury cars can show their social status, which supports the prior studies (Lou et.al., 2022). This finding reinforces the understanding that individuals are concerned about their social identities and tend to choose luxury products to create and maintain a desirable self-image that they can display to the public. The terms "luxury" and "excellent" could express consumers' social status of owning their luxury cars.

#### **3.2.4 Quality value (H4)**

According to the number and rank of keywords in this topic, quality value has the 1<sup>st</sup> strongest influence on purchase intention. The symbolic meanings associated with luxury products includes exclusiveness, high quality, aesthetics, prestige, and craftsmanship. This finding correlates with previous studies (Lou et.al., 2022). The terms "ride", "smooth", "feature", "excellent", "beautiful" and "expect" could express quality value of the luxury cars.

We concluded that these keywords have positive influences on the consumer's purchase intention. Moreover, attributes associated with each keyword could provide further insight into its corresponding perceived value. For example, "smooth" could provide a specific feeling of quality value. According to our findings, the quality value is the 1<sup>st</sup> strongest influencer on purchase intention toward luxury cars. Thus, providing the best quality product is the most important in marketing them. After the quality value, development of a positive social status associated with luxury cars is the 2<sup>nd</sup> most important. Finally, development of positive emotion associated with luxury cars is the 3<sup>rd</sup> most important. There are numerous applications emerging from this finding. For example, marketers could use these keywords as a guideline to create their advertisements. Designers could design and optimize their products based on these keywords and their ranks.

#### **3.2.5 Advantages and limitations**

The common sources of large-scale data used in topic modelling research are social media such as forums, Twitter, Facebook, Instagram and databases such as scientific literatures, and formal documentations such as reports, clinical notes, health records, summary statements, letters of recommendation (Hagg et al. 2022). Past studies demonstrate that topic modelling provides researchers with unique flexibility in selecting the type of textual data that can best answer their research questions. Thus, the selection of textual data for analysis plays an influential role in analysis outcomes, as such it is imperative that researchers clearly specify their data inclusion and exclusion criteria to ensure reproducibility. For instance, researchers can utilize either original posts obtained from social media alone to discover a broad overview of topics within a forum/group, or original posts with their subsequent comments (Hagg et al. 2022).

By integrating an NLP into the same qualitative research analysis scheme used in a previous study, and then comparing the original findings using a conventional qualitative analysis (Abram 2018) to new findings using NLP (Abram et al. 2020), a consistent replication of the same results was demonstrated. There are many positive implications of integrating NLP approaches into qualitative research including cost and time savings. For this study, the primary topics were identified within 5 minutes of analysis. The findings from this study were in good agreement with previous studies at hypothesis level (Lou et.al., 2022). While previous studies could not provide insights into the perceived values because limitations of their methods, our method could provide relevant keywords associated with each perceived value.

Although LDA could model the topics from the raw data, it could not provide any descriptions that described the meaning of each topic. The researchers will have to identify the topic and describe the meaning based on their knowledge. Other than that, there is a limit to the number of topics LDA can generate. LDA assumes that words are exchangeable and sentence structure

is not modeled. Moreover, correlation among topics and temporal information are ignored in the topic modelling.

## CONCLUSION

Consumers' desire to purchase preowned luxury cars is complex and multifaced. This pilot study applied NLP to extract consumer behavior related to purchasing intentions toward a preowned luxury car. The results showed that consumer's perceived emotional value, perceived social value and perceived quality value positively influence their intentions to purchase preowned luxury cars. Furthermore, major keywords found in this study could provide further insights into their corresponding perceived values. Thus, the ability to efficiently and cost effectively extract meaningful information using NLP represents a promising opportunity for marketing research. Future research should extend this method to extract different information useful for marketing and other areas.

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# Safe-haven currency behavior in crisis periods: The U.S. dollar, the Japanese yen, and the Swiss franc

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**Abstract:** A flight to quality occurs from risky currency assets to safe-haven currency assets in heightened volatile markets of crisis periods. A safe-haven currency gains its value against other currencies in such crisis periods. Traditionally, the U.S. dollar, the Japanese yen, and the Swiss franc have been long times considered safe-haven currencies in the investment community. We study the intra-safe haven currency behavior between these currencies in crisis periods including the Ukraine war period. Our study is motivated by the weakness of the Japanese yen during the Ukraine war in 2022. We find that the intra-safe haven currency behavior depends on whether the crisis is a financial or real (energy-related) one.

**Keywords:** flight to quality in currency markets, intra-safe haven behavior, interactive crisis dummy variables, financial crisis versus real crisis

**JEL Classification codes:** G01, F31

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## INTRODUCTION

Investors expect that safe-haven currencies would gain in value against other currencies in financial and/or geopolitical crisis periods. The safe-haven currency assets denominated in yen or Swiss franc typically yield low-interest rates. Investors borrow (short-sell) them and invest (take a long position) in high-interest-rate currency assets. Because of this carry trade, the safe-haven currencies depreciate in normal times. In times of stress, however, a flight to quality occurs from risky currency assets to safe-haven currency assets and investors unwind the carry trade position causing the safe-haven currencies' appreciation. We observe that on average, the safe-haven currencies depreciate in non-crisis periods and appreciate in crisis periods.

The U.S. dollar (USD), the Swiss franc (CHF), the Japanese yen (JPY), and to a lesser extent, the British pound (GBP), and the Euro (EUR) have been long time considered safe-haven currencies in the investment community. There are some studies in the literature which support this investment community's view (e.g., Rinaldo and Soberlind, 2010; Coudert et al., 2014; Fatum and Yamamoto, 2016).

The prior literature examined safe-haven currency behaviour during the global financial crisis period. We study intra-safe haven currency behavior in times of global stress, including the Ukraine war of 2022. Our study's period spans from 2000 to 2022. Our analysis focuses on the intra-safe haven currency behavior of three stress times: the global financial crisis period of 2007-2009, the early Covid-19 pandemic period of 2020, and the early Ukraine war period of 2022. By doing so, we extend the prior study of intra-safe haven currency behavior

to the Covid-19 pandemic and the Ukraine war episode.

Our study is motivated by the weakness of the Japanese yen relative to other currencies right after the Ukraine war outbreak in late February of 2022. This weakness of the JPY in times of global stress came as quite a surprise to the investment community (endnote 1), considering the prior studies that the JPY is the “safest” of the safe currencies in the foreign exchange market (e.g., Ranaldo and Soberlind, 2010; Fatum and Yamamoto, 2016).

In this paper, we present an econometric model to study the intra-safe haven behavior across different times of stress. A novelty is that we include the dummies which interact with market volatility in crisis periods in our regression equations. The underlying premise is that the prices of the safe-haven currencies respond more to the change in volatility in crisis periods than in non-crisis periods. We find that the intra-safe haven currency behavior changes over time and depends on whether the crisis is financial or real (energy-related). We contribute to the literature because we offer a new finding on the intra-safe haven currency behavior across different times of stress in the foreign exchange market.

Our paper is organized as follows: Section 2 reviews the related literature to our study. Section 3 describes our data and conducts a preliminary study of the intra-safe haven currency behavior in crisis periods. We present an econometric method for our analysis in Section 4. We report our empirical results in Section 5. We discuss them and conclude our remarks in Section 6.

## **1 LITERATURE REVIEW**

The safe-haven currency literature is closely related to the flight to quality literature. The safety-haven notion comes from the phenomenon that investors choose to park their wealth in assets that preserve their values in times of market stress. Hence, we observe that a flight to quality occurs from risky assets to quality/safe assets in crisis periods.

One strand of the flight to quality literature studies the negative relationship between stock and bond returns in crisis periods. Several researchers (e.g., Andersson et al., 2008; Baur and Lucey, 2009; Connolly et al., 2005) find that capital is moved from stock (risky asset) to bond (safe asset) in advanced economies in periods of elevated stock market uncertainty, and attribute the movement to the flight to the quality phenomenon. Studying emerging market economies, on the other hand, Johansson (2010) and Park et al. (2019) find that the flight to quality phenomenon in emerging markets differs from that in advanced economies. Johanson (2010) argues that the flight to quality occurs from domestic assets to foreign assets in emerging economies while Park et al. (2019) show that it depends on the origin of risk triggering the crisis in the emerging economies: Global risk versus local risk.

Some researchers also examine gold as a flight to safety asset in crisis periods (e.g., Beckmann et al., 2015; Akhtaruzzaman et al., 2021), and find that gold serves as a safe-haven asset for stock markets during the early Covid-19 pandemic phase.

The safe-haven currency literature studies the flight to quality phenomenon in the currency market that capital is moved from risky currency assets to safe-haven currency assets in times of stress. As a result of this flight to quality phenomenon in the currency market, the safe-haven currency gains its value against other currencies.

Using the data from 1993 to 2008, Ranaldo and Soberlind (2010) document that the CHF

and the JPY perform best among 6 currencies (CHF, DEM, EUR, JPY, GBP, and USD) in times of global financial stress, and the JPY's safe-haven properties are strongest during the global financial crisis period of 2007-2009. Coudert et al. (2014) find that the JPY and the USD displayed safe-haven properties among 26 currencies from 1999-2013. Fatum and Yamamoto (2016) study the intra-safe haven currency behavior between the USD, the JPY, and the CHF, and find that the JPY is the "safest" of safe currencies during the global financial crisis period.

## 2 DATA AND PRELIMINARY ANALYSIS

Our datasets span from January 2020 to June 2022. They include the daily spot rates of the USD, the JPY, and the CHF in terms of the KRW (Korean won). These spot rates measure the prices of three currencies, i.e., the USD, the JPY, and the CHF in terms of the common unit, the KRW. A safe-haven currency is a currency that gains its value against other currencies in crisis periods. We choose the KRW as the common unit considering that the KRW is a freely floating currency in the foreign exchange market and trades in a good market depth. The KRW is considered a relatively risky currency and tends to lose its value against safe-haven currencies during crisis periods. Hence, comparing the prices of the USD, the JPY, and the CHF in terms of the KRW is a good way to examine the intra-safe haven currency behavior between these currencies in crisis periods. (Endnote 2)

Our dataset also includes the daily VIX, the measure of market volatility implied from the S&P 500 index option. We use the VIX to proxy the extent of market uncertainty/stress (e.g., Fatum and Yamamoto, 2016).

Other data are the daily interest rates and WTI crude oil spot price. The interest rates are the rates on the 3-month eurodollar deposit, the 3-month euro yen deposit, the 3-month euro Swiss franc deposit, and KORIBOR. KORIBOR is a short-term won interest rate, a counterpart to LIBOR in Korea. These are the control variables of our regression equations for robustness check.

The data sources are: (1) the daily spot exchange rates data from the website ([www.investing.com](http://www.investing.com)); (2) The VIX from the website ([www.macrotrends.net](http://www.macrotrends.net)); (3) The euro rates from the homepages of global-rates.com and Swiss National Bank; (4) KORIBO from the Bank of Korea's homepage; (5) WTI crude spot oil price from the website ([www.investing.com](http://www.investing.com)).

Table 1 shows the summary statistics of the VIX for the whole period 2000-2022, the global financial crisis period (08/01/2007-01/30/2009), the early Covid-19 pandemic phase (01/02/2020-06/05/2020) and the early Ukraine war period (02/24/2022-06/30/2022), respectively. (Endnote 3) As we can see from Table 1, the VIX rose in three crisis periods. The means of the VIX are 25.8%, 32.7%, and 27.4% during the global financial crisis period, the early Covid-19 pandemic phase, and the early Ukraine war period, respectively. These means of the VIX in three crisis periods are much higher than the VIX's mean of 20.06 % for the whole period 2000-2022.



**Table 1 The Summary Statistics of the VIX**

Period	whole period (01/03/2000- 06/30/2022)	Global financial crisis (08/01/2007- 01/30/2009)	Covid-19 pandemic (01/02/2020 06/05/2020)	Ukraine war (02/24/2022- 06/30/2022)
Start of period	24.21%	12.00%	12.47%	30.32%
End of period	28.71%	44.84%	24.52%	28.71%
Percent change	18.59%	274%	96.63%	-5.31%
Mean	20.06%	25.84%	32.69%	27.35%
Maximum	82.69%	80.86%	82.69%	36.45%
Minimum	9.140%	9.89%	12.10%	18.57%
Std.Dev.	8.71%	14.46%	17.50%	4.37%

Note: The VIX measures the S&P 500 index's volatility per annum in percent.

Table 2 shows the intra-safe haven currency behavior in three crisis periods. During the global financial crisis period of 2007-2009, the JPY gained the most among three safe-haven currencies, the USD, the JPY, and the CHF. The JPY's rate went up by 45.63% annual rate while the USD's and the CHF's rates increased by 22.85% and 27.18%, respectively. The JPY's rate change was twice as much as the USD's rate change, and a little less than twice the CHF's rate change. Because of this intra-safe haven currency behavior during the global financial crisis period, Fatum and Yamamoto (2016) claim that the JPY is the "safest" of the safe currencies in the foreign exchange market.

During the early Covid-19 pandemic period, the USD's, the JPY's, and the CHF's rate changes were 9.42%, 7.08%, and 11.08% in annual rates, respectively. All three currencies gained their values against KRW, and indeed, acted as safe-haven currencies. However, it is not apparent which currency is dominantly the safest of the safe currencies during the early Covid-19 pandemic phase.

During the early Ukraine war phase, the USD's, the JPY's, and the CHF's rate changes were 20.28%, -26.01%, and 11.56% in annual rates, respectively. The USD and the CHF acted as safe-haven currencies, but the JPY lost its value against KRW by a large amount. The USD was the "safest" of safe-haven currencies, but the JPY even lost its safety-haven currency status during the early Ukraine war period.

**Table 2 The Summary Statistics of the Prices of the USD, the JPY, and the CHF****Panel A The Price of the USD (KRW/USD)**

Period	whole period (01/03/2000- 06/30/2022)	Global financial crisis (08/01/2007- 01/30/2009)	Covid-19 pandemic (01/02/2020 06/05/2020)	Ukraine war (02/24/2022- 06/30/2022)
Start of period	1,127.50	938.10	1,157.35	1,206.05
End of period	1,287.51	1,381.50	1,202.02	1,287.51

Percent change	14% (0.65%)	47% (22.85%)	4% (9.42%)	7% (20.28%)
Mean	1130.86	1027.50	1206.43	1248.74
Maximum	1570.65	1511.50	1272.50	1301.90
Minimum	900.80	900.80	1153.95	1197.57
Std.Dev.	99.18	155.48	26.84	28.82

Note: The numbers without % are in Won (the Korean currency unit). The percent changes without and with parenthesis are the percent changes over the period, and per annum, respectively. We convert the percent changes over the periods into the annual rates by multiplying the conversion factor, i.e., the number of days over the period/365.

#### Panel B The Price of the JPY (KRW/100 JPY)

Period	whole period (01/03/2000- 06/30/2022)	Global financial crisis (08/01/2007- 01/30/2009)	Covid-19 pandemic (01/02/2020) 06/05/2020)	Ukraine war (02/24/2022- 06/30/2022)
Start of period	1109.85	789.98	1065.99	1044.02
end of period	948.58	1533.47	1096.93	948.58
Precent change	-15% (-0.69%)	94% (45.63%)	3% (7.08%)	-9% (-26.01%)
Mean	1073.02	953.58	1113.51	988.44
Maximum	1642.71	1605.79	1173.42	1068.73
Minimum	745.58	745.58	1049.71	936.24
Std.Dev.	171.32	231.64	32.84	33.23

Note: The numbers without % are in Won (the Korean currency unit). The percent changes with parenthesis are those in annual rates. We convert the percent changes over the periods into the annual rates by multiplying the conversion factor, i.e., the number of days over the period/365.

#### Panel C The Price of the CHF (KRW/CHF)

Period	whole period (01/03/2000- 06/30/2022)	Global financial crisis (01/08/2007- 01/30/2009)	Covid-19 pandemic (01/02/2020) 06/05/2020)	Ukraine war (02/24/2022- 06/30/2022)
Start of period	720.54	758.55	1191.67	1302.57
end of period	1348.32	1184.72	1248.98	1348.32
Percent change	87% (4.04%)	56% (27.18%)	5% (11.80%)	4% (11.56%)
Mean	1043.66	906.61	1246.36	1308.01
Maximum	1501.24	1270.46	1301.48	1362.96
Minimum	622.05	746.31	1188.78	1274.91
Std.Dev.	195.52	152.13	29.51	18.70

Note: The numbers without % are in Won (the Korean currency unit). The percent changes with parenthesis are those in annual rates. We convert the percent changes over the periods into the annual rates by multiplying the conversion factor, i.e., the number of days over the period/365

### 3 METHODOLOGY

Baur and Lucey (2010), and Baur and McDermott (2010) define a safe-haven asset as “an asset that is uncorrelated or negatively correlated with another asset (e.g., stock) in times of market stress”. This definition of a safe-haven asset is used when one examines gold and/or bond as a safe-haven asset for stock markets in times of market stress.

The foreign exchange rate is the relative price of currency A against currency B. Hence, an increase in currency A's value means a decrease in currency B's value. We define a safe-haven currency as a currency that gains its value against other currencies in times of market stress. This definition is more operational in examining the safe-haven currency property and is also consistent with Baur and Lucey's (2010) and Baur and McDermott's (2010) safe-haven asset definition.

Using our definition of safe-haven currency, we expect a positive relationship between the price of safe-haven currency and market volatility as follows:

$$\Delta \ln S_t = a_0 + a_1 \Delta VIX_t + a_2 \Delta \ln S_{t-1} + u_t, \quad (1)$$

where  $\Delta \ln S_t$  is the log difference of the price of the safe-haven currency in terms of the KRW, and  $\Delta VIX_t$  is the first difference of the VIX.  $u_t$  is an error term. We take the difference in variables for the stationarity of the time series. We include the lagged dependent variable,  $\Delta \ln S_{t-1}$  as an explanatory variable to mitigate the endogeneity problem due to an omitted variable in the error term. We apply OLS with heteroscedasticity- and serial-correlation consistent standard error (HAC) to estimate (1).

Our primary interest is to study the change in the intra-safe haven currency behavior across different times of market stress. For that purpose, we offer the following econometric model of the interactions between dummy variables and quantitative variables  $\Delta VIX_t$  across different times of stress (endnote 4):

$$\begin{aligned} \Delta \ln S_t = & a_0 + a_1 \Delta VIX_t + a_2 D_1 \Delta VIX_t + a_3 D_2 \Delta VIX_t \\ & + a_4 D_3 \Delta VIX_t + a_5 \Delta \ln S_{t-1} + u_t, \end{aligned} \quad (2)$$

where  $D_1$  takes 1 during the global financial crisis period and otherwise 0;  $D_2$  takes 1 during the early Covid-19 pandemic phase, and otherwise 0;  $D_3$  takes 1 during the early Ukraine war period, and otherwise 0.

The underlying premise of (2) is that the price of safe-haven currency responds more to the change in market volatility during crisis periods than in normal times. The interactive terms in (2) capture an extra safe-haven currency effect during each crisis period. We expect that the signs of  $a_2$ ,  $a_3$ , and  $a_4$  are positive.

For robustness, we further include the control variables to (2) as follows:

$$\begin{aligned}\Delta \ln S_t = & a_0 + a_1 \Delta VIX_t + a_2 D_1 \Delta VIX_t + a_3 D_2 \Delta VIX_t \\ & + a_4 D_3 \Delta VIX_t + a_5 \Delta X_{1,t} + a_6 \Delta X_{2,t} + a_7 \Delta \ln S_{t-1} + u_t,\end{aligned}\quad (3)$$

where  $\Delta X_{1,t}$  and  $\Delta X_{2,t}$  are the control variables of interest rate differentials between the safe-haven currency and the Korean won, and the change in WTI crude oil spot price, respectively. Interest rate differential supposedly influences the exchange rate via its effect on capital accounts. Crude oil price affects trade accounts, and hence the exchange rate. In early 2022 the Ukraine war, crude oil prices jumped to over \$100 per barrel, which pushed Japan into a big trade deficit. For the interest rate variables, we use the 3-month rates on the eurodollar deposit, euro yen deposit, and euro Swiss franc deposit. For the Korean short-term interest rate, we use KORIBO which is a counterpart in Korea to LIBOR

#### 4 EMPIRICAL RESULTS

Table 3 reports the regression results of (1), (2), and (3) for the USD (Panel A), the JPY (Panel B), and the CHF (Panel C). In Table 3, we name (1), (2), and (3) as model 1, model 2, and model 3, respectively. First, we look at model 1's results for the USD (Panel A), the JPY (Panel B), and the CHF (Panel C). The coefficient  $a_1$  of the regressor  $\Delta VIX_t$  is all statistically significant at the 1% level ( $p < 0.01$ ) for the USD, the JPY, and the CHF. The sign of  $a_1$  is all positive as we expect. The volatility increases more; the safe-haven currency gains its value at a higher rate. Specifically, when the volatility increases by one percentage point, the USD's, the JPY's, and the CHF's values go up, on average, by 0.077%, 0.170%, and 0.099% during the whole period 2000 January-2022 June, respectively.

Now we turn to model 2 in Table 3. Model 2 differs from model 1 in that it includes the dummies which interact with the volatility in each crisis period. These interactive terms pick up an extra effect on intra-safe haven currency behavior during the crisis periods. Notice that the coefficient  $a_1$  of the regressor  $\Delta VIX_t$  is again all statistically significant in model 2 at the 1% level ( $p < 0.01$ ) for the USD, the JPY, and the CHF. The magnitudes of  $a_1$  in model 2 are slightly less than those in model 1 for the USD, the JPY, and the CHF. This is due to the absorbing effects of the interactive terms on the exchange rate changes during the crisis periods. The coefficient  $a_2$  of the interactive term  $D_1 \Delta VIX_t$  is statistically significant ( $p < 1\%$ ) for the JPY, but not statistically significant for the USD and the CHF. This implies that the JPY is the safest of the safe currencies during the global financial crisis period (e.g., Fatum and Yamamoto, 2016). The sum of  $a_1$  and  $a_2$  in model 2 is 0.0029 for the JPY during the global financial crisis period. The JPY gains its value by 0.29% for a one percent increase in volatility during the global financial crisis period. However, the JPY lost the safest of the safe currencies status during the early Ukraine war. The coefficient  $a_4$  of the interactive term  $D_3 \Delta VIX_t$  is not statistically significant for the JPY. This time, the coefficient  $a_4$  is statistically significant ( $p < 1\%$ ) for the USD. The sum of  $a_1$  and  $a_4$  in model 2 is 0.00147 for the USD, which is slightly greater than  $a_1$  in model 2 for the JPY. It suggests that the JPY is no longer the safest of the safe currencies during the early Ukraine war period. All coefficients of the interactive terms are not statistically significant for the CHF, and hence we do not reject the hypothesis that the CHF has no extra effect during the crisis

periods.

Model 3 in Table 3 is for robustness check and includes two control variables  $\Delta X_{1,t}$  the interest rate differentials and  $\Delta X_{2,t}$  the changes in the crude oil price. Controlling the effects of  $\Delta X_{1,t}$  and  $\Delta X_{2,t}$  on  $\Delta \ln S_t$ , we find that the overall relationships between the changes in volatility and the prices of the USD, the JPY, and the CHF are largely unaltered in model 3. The coefficient  $a_1$  of the regressor  $\Delta VIX_t$  is all statistically significant at the 1% level ( $p < 0.01$ ) for the USD, the JPY, and the CHF. The magnitudes of  $a_1$  in model 3 are slightly less than those in model 1 for the USD, the JPY, and the CHF. The JPY has an extra safe-haven currency effect during the global financial crisis period, and the USD has an extra safe-haven currency effect during the early Ukraine war period. The coefficient  $a_2$  of the interactive term  $D_1 \Delta VIX_t$  is statistically significant at the 1% level ( $p < 0.01$ ) for the JPY, and the coefficient  $a_4$  of the interactive term  $D_3 \Delta VIX_t$  is statistically significant at the 5% level ( $p < 5\%$ ) for the USD. The control variable  $\Delta X_{2,t}$  has a negative effect on the JPY ( $p < 0.01\%$ ) and the USD ( $p < 0.01\%$ ). The U.S. and Japan are both sensitive to energy prices. We do not find any statistically significant effect on the CHF of the two control variables.

**Table 3 Empirical Results for the USD, the JPY, and the CHF**

**Panel A Regression Results for the USD**

	Model 1		Model 2		Model 3	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
Coefficient	0.00002 ( 8.E-05 )	0.763	0.00002 ( 8.E-05 )	0.774	0.00005 ( 9.E-05 )	0.956
$\Delta VIX_t$	0.00077 ( 8.E-05 )	0.000	0.00070 ( 7.E-05 )	0.000	0.00076 ( 9.E-05 )	0.000
$\ln S_{t-1}$	0.02077 ( 0.036 )	0.560	0.01947 ( 0.034 )	0.569	0.03317 ( 0.041 )	0.420
$D1 * \Delta VIX_t$			0.00033 ( 2.E-04 )	0.156	0.00025 ( 2.E-04 )	0.231
$D2 * \Delta VIX_t$			-0.00016 ( 1.E-04 )	0.129	-0.00028 ( 1.E-04 )	0.016
$D3 * \Delta VIX_t$			0.00076 ( 3.E-04 )	0.003	0.00071 ( 3.E-04 )	0.040
$\Delta X_{1,t}$					-0.00485 ( 7.E-03 )	0.517
$\Delta X_{2,t}$					-0.00045 ( 1.E-04 )	0.000
R-squared	0.049		0.052		0.083	
Adjusted R-squared	0.048		0.051		0.081	
F-statistic	143.883		61.179		51.345	
Prob(F-statistic)	0.000		0.000		0.000	
Durbin-Watson stat	2.065		2.077		2.088	

Note: The dependent variable  $\Delta \ln S_t$  is the log change of the price of the USD in terms of the KRW.  $\Delta VIX_t$  is the change in volatility.  $D_1$ ,  $D_2$  and  $D_3$  are the dummy variables for the global financial crisis period, the early Covid-19 pandemic phase, and the early Ukraine war period, respectively. The control variable  $\Delta X_{1,t}$  is the 3-month eurodollar rate minus KORIBOR. The control variable  $\Delta X_{2,t}$  is the change in the WTI crude spot oil price. The numbers in parenthesis are the heteroscedasticity- and serial-correlation consistent standard error (HAC) of the

coefficients.

### Panel B Regression Results for the JPY

	Model 1		Model 2		Model 3	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
Coefficient	-0.00002 (1.E-04)	0.795	-0.00030 ( 9.E-05 )	0.727	-0.00014 (1.E-04)	0.250
$\Delta VIX_t$	2.E-03 ( 1.E-04 )	0.000	0,00145 ( 1.E-04 )	0.000	0.00161 (2.E-04)	0.000
$\ln S_{t-1}$	-0.00515 ( 0.034 )	0.878	-0.00590 ( 0.030 )	0.846	0.02853 ( 0.036 )	0.430
$D1 * \Delta VIX_t$			0.00142 ( 3.E-04 )	0.000	0.00119 (3.E-04)	0.000
$D2 * \Delta VIX_t$			-0.00005 ( 2.E-04 )	0.981	-0.00023 (2.E-04)	0.327
$D3 * \Delta VIX_t$			0.00048 ( 4.E-04 )	0.215	0.00048 (5.E-04)	0.360
$\Delta X_{1,t}$					0.01050 (9.E-03)	0.257
$\Delta X_{2,t}$					-0.00055 (1.E-04)	0.000
R-squared	0.141		0.156		0.202	
Adjusted R-squared	0.140		0.155		0.201	
F-statistic	461.314		208.158		144.502	
Prob(F-statistic)	0.000		0.000		0.000	
Durbin-Watson stat	2.078		2.109		2.113	

Note: The dependent variable  $\Delta \ln S_t$  is the log change of the price of the JPY in terms of the KRW.  $\Delta VIX_t$  is the change in volatility.  $D_1$ ,  $D_2$  and  $D_3$  are the dummy variables for the global financial crisis period, the early Covid-19 pandemic phase, and the early Ukraine war period, respectively. The control variable  $\Delta X_{1,t}$  is the 3-month euro yen rate minus KORIBOR. The control variable  $\Delta X_{2,t}$  is the change in the WTI crude spot oil price. The numbers in parenthesis are the heteroscedasticity- and serial-correlation consistent standard error (HAC) of the coefficients.

### Panel C Regression Results for the CHF

	Model 1		Model 2		Model 3	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
Coefficient	0.00012 (1.E-04)	0.241	0.00012 ( 1.E-04 )	0.249	0.00016 (1.E-04)	0.187
$\Delta VIX_t$	0.00099 ( 9.E-05 )	0.000	0.00092 ( 1.E-04 )	0.000	0.00083 (1.E-04)	0.000
$\ln S_{t-1}$	-0.05021 ( 0.028 )	0.076	-0.05071 ( 0.028 )	0.067	-0.02655 (0.034)	0.432
$D1 * \Delta VIX_t$			0.00031 ( 3.E-04 )	0.251	0.00047 (3.E-04)	0.084
$D2 * \Delta VIX_t$			-0.00002 ( 2.E-04 )	0.886	0.00007 (2.E-04)	0.669
$D3 * \Delta VIX_t$			0.00011 ( 4.E-04 )	0.766	0.00020 (4.E-04)	0.607

$\Delta X_{1,t}$			0.00318 (7.E-03)	0.646
$\Delta X_{2,t}$			0.00005 (1.E-04)	0.638
R-squared	0.046	0.047	0.049	
Adjusted R-squared	0.045	0.046	0.047	
F-statistic	135.093	54.948	29.367	
Prob(F-statistic)	0.000	0.000	0.000	
Durbin-Watson stat	2.048	2.053	2.062	

Note: The dependent variable  $\Delta \ln S_t$  is the log change of the price of the CHF in terms of the KRW.  $\Delta \text{VIX}_t$  is the change in volatility.  $D_1$ ,  $D_2$  and  $D_3$  are the dummy variables for the global financial crisis period, the early Covid-19 pandemic phase, and the early Ukraine war period, respectively. The control variable  $\Delta X_{1,t}$  is the 3-month euro Swiss franc rate minus KORIBOR. The control variable  $\Delta X_{2,t}$  is the change in the WTI crude spot oil price. The numbers in parenthesis are the heteroscedasticity- and serial-correlation consistent standard errors (HAC) of the coefficients.

## DISCUSSION AND CONCLUSION

Many researchers think that low-interest rates, higher liquidity, and net foreign investment positions are the common fundamental factors determining the safe-haven status of the JPY and the CHF. The U.S. owes a large foreign debt, but the USD is an exception to the above statement because it is the international reserve currency.

Several researchers claim that the JPY is the safest of the safe currencies in the foreign exchange market (e.g., Ranaldo and Soberlind, 2010; Fatum and Yamamoto, 2016). They draw the claim from the evidence during the global financial crisis period. In this paper, however, we show that the JPY is no longer the safest of the safe currencies during the early Ukraine war period.

Our premise is that the price of safe-haven currency is more sensitive to the change in volatility in crisis periods. We model this by incorporating the dummies which interact with volatility in the crisis period into our regression equations.

Conducting a regression analysis of our model, we find that the safe-haven currency status changes across different crisis times. The JPY is the safest during the global financial crisis period, but the USD is much safer than the JPY during the early Ukraine war period. The energy price went up over \$100 per barrel in the early Ukraine war period. Japan is known for its largest net foreign investment position. At the same time, Japan is heavily dependent on oil imports from abroad, and hence greatly sensitive to energy prices. Japan is strong in the global financial crisis but weak in the energy-related crisis. The JPY was the strongest during the global financial crisis period, but the weakest during the early Ukraine war among the USD, the CHF, and the JPY. We conclude that the intra-safe haven currency behavior depends on whether the crisis is a financial one or a real (energy-related) one.

## Endnote

1. An investment bank's analyst even says that the JPY may be no longer a safe-haven currency.
2. The safe-haven currency literature examines the exchange rates in terms of the USD (e.g., Fatum, R., Yamamoto Y., 2016). In that event, the price of the USD measured in dollars is

always one. When one compares the prices of the USD, the JPY, and CHF to examine the intra-safe haven currency behavior including the USD itself, it is more sensible to measure the prices of three currencies in units of other (common) currency, e.g., the KRW.

3. The global financial crisis period from August 1, 2007, to January 31, 2009, follows the crisis period definition by Melvin and Taylor (2009). Fatum and Yamamoto (2016) use the same definition to set the global financial crisis period. The Covid-19 pandemic and the Ukraine war are still ongoing events. The VIX dropped to a normal level sometimes after two crises broke out. We choose the early phases of two crises during which the VIX stayed at a higher level for our analysis.

4. For example, Fair (1996) applied an econometric model of interactions among qualitative (e.g., dummy) and quantitative variables.

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# The Microfinance Discourse

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**Abstract:** This paper analyzes the microfinance discourse. It focuses on the main elements of this discourse, namely: the urgent need that led to the emergence of the microfinance discourse, the formation of objects, and the formation of enunciative modalities within the discourse. These rules of formation are chosen because of their importance. The methodology is based on Foucault's archaeological method. The analysis shows that the urgent need includes the need for capital to embed itself at the local level that objects are formed on the basis of the institutional success of microfinance and the enunciative modalities give advantage to the dominant actors.

**Keywords:** microfinance, discourse, development, need

**JEL Classification codes:** L31

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## INTRODUCTION

Education, infrastructure, and women's rights. There are many discourses that together form the development discourse, but there is yet another panacea that is supposed to lead to the eradication of poverty – microfinance. A consensus among scholars and practitioners has been buttressed by the Nobel Peace Prize awarded to microfinance guru Muhammad Yunus in 2006. Much of the consensus is due to a powerful discourse that to a great extent silences critical voices. The success of microfinance is based on one indicator – the repayment rate. However, a much more complex reality is hidden behind this indicator. Critical analyses enable me to reconstruct important elements of the microfinance discourse.

I first show the urgent need for the microfinance discourse in different fields of various powerful actors (such as the capital or the development organizations) that led to its emergence together with a vast microfinance apparatus. Then I engage with the discourse itself. This analysis is based on secondary sources and creates a detailed picture of the microfinance discourse. I will show the surfaces where objects appear through particular grids of specifications, such as institutional success rather than social impact. Afterwards I present the enunciative modalities of the microfinance discourse, which follow very similar modalities as the general development discourse.

## 1 LITERATURE REVIEW

There is scant literature focusing on the microfinance discourse. The poststructuralist analyses of the microfinance mainly engage with the question of female subjectivities, neoliberal elements in the microfinance governmentality, or the issue of depoliticization. I try to put

together all these and other elements into a coherent picture of the microfinance discourse based on Foucault's archaeological method (see below).

There are however sources on development discourses that serve as the precursor to the analysis of the microfinance discourse. The first analyses included the analyses by Escobar (1984, 1987), which culminated in his book *Encountering development* (Escobar, 1995). Escobar presents the development discourse from a Foucauldian perspective analysing, among other things, the professionalization and institutionalization of development discourse. Various elements of development discourse were analyzed by Sachs and his colleagues (Sachs, 1992). In the form of a dictionary, these analyses offer a detailed focus on issues such as poverty, needs, or the environment. Development discourse was further analyzed also in a methodologically more rigorous manner (see, e.g., Ziai 2014).

Other analyses of development discourse included a not so critical focus on various buzzwords and fuzzwords (Cornwall – Eade 2010), an analysis oriented more specifically on the power of development (Crush 1999), a sociological analysis of knowledge (Cooper – Packard 1996) and a historical analysis of the doctrines of development (Cowen – Shenton 1996). All of these analyze the development discourse from one angle or the other laying the ground for more specified analyses which occurred later as the discourse of development disintegrated into further subdiscourses.

The microfinance discourse is part of the development discourse and its analysis should contribute to the academic field analysing this more general development discourse.

## 2 METHODOLOGY

The aim of this analysis is to analyze selected rules of formation of the microfinance discourse starting with the urgent need for the emergence of the microfinance discourse. Foucault's archaeological method follows a set of questions, which are asked with regard to the issue of microfinance, and together they create the microfinance discourse. The collection of data is, in this case, based on a reading of the current research on microfinance, which will enable me to put it together into a metaanalysis of the microfinance discourse. Such a broad analysis enables one to engage in a generalization, which would be impossible with a very particular and focused form of analysis.

The goal of this paper is to analyze the rules of formations i.e. "the conditions to which the elements of this division [or dispersion] (objects, mode of statement, concepts, thematic choices) are subjected (...). The rules of formation are conditions of existence (but also of coexistence, maintenance, modification, and disappearance) in a given discursive division" (Foucault, 2002). This abstract definition is explained in more concrete terms as the rules of formation are divided into the formation of objects, enunciative modalities, concepts, and strategies. Due to space restraints, this analysis focuses only on the formation of objects and enunciative modalities. These are further specified below.

Foucault asks how is it possible that certain objects appear as objects. "Is it possible to lay down the rule to which their appearance was subject?" (Foucault, 2002). His analysis is concerned with two main aspects. The first is the objects and the second is the relations between them. First, he wants to map "the surfaces of their emergence" (ibid.), he wants to show where they can emerge as certain objects. Further, Foucault wants to describe "the authorities of delimitation" (Foucault, 2002). He also analyzes "the grids of specifications" (ibid.). These grids are the systems that divide, contrast, relate, regroup, and classify objects of the discourse. Who are the authorities that delimit the objects as objects. Foucault also asks, "Who is speaking?" (Foucault, 2002) as he deals with the issue of enunciative modalities. "Who... is accorded the right to use this sort of language (langage)? ... What is the status of the individuals who — alone — have the right, sanctioned by law or tradition, juridically defined

or spontaneously accepted, to proffer such a discourse?" (Foucault, 2002). He also asks what is his/her "institutional site"? It is the institutional site "from which this discourse derives its legitimate source" (ibid.). Foucault also focuses on the library or the documentary field, which includes "the mass of statistical information" (ibid.: 57). Finally the question of the subject becomes crucial as well. Is it the subject interrogated, listened to or observed? S/he can be the "the emitter and receiver of observations, case-histories, statistical data, general theoretical propositions, projects, and decisions" (ibid.: 58). All these questions used by Foucault are in one way or another employed in the meta-analysis of the microfinance discourse.

In what follows, after briefly analyzing the urgent need for the emergence of the microfinance discourse, I focus on the formation of objects in the microfinance discourse and after that on the formation of enunciative modalities of the microfinance discourse. The conclusion summarizes the main elements of the discourse.

### **3 RESULTS AND DISCUSSION**

#### **3.1 The urgent need for the emergence of the microfinance discourse**

Just as with the emergence of other development apparatuses, in the case of microfinance, there also existed needs that led to its creation. Powerful actors needed something like microfinance to emerge without this being an original intention of anyone. Enabling factors that allowed the microfinance apparatus to form were also non-negligible. I will briefly present those as well.

But first, it is necessary to realize that microfinance has a much longer history than the one beginning with Yunus giving "the first" microloan to Sufia Bugum in Jobra, Bangladesh, in 1976. Not only do we know about five thousand years of a history of debt that at times demonstrated striking similarities with its current version (Graeber, 2011), but there are positive examples of microlending in the past – e.g. the Irish Loan Fund in the 18th century (Hollis – Sweetman, 1997).

The form of microfinance varies throughout history. "[T]he uniqueness of a given program of credit at a given moment can best be defined by the context within which it evolved and is embedded" (Fernando, 2006a). Fernando therefore speaks of a "credit regime" (ibid.) as an analytical category. The current regime is in accordance with the main tenets of its context – the neoliberal form of capitalism – as it prevails in Bangladesh and elsewhere. This will be explained further in the text, for now, suffice it to say that the neoliberal context is at the roots of the urgent capitalist need that requires a regime of credit in accordance with this context. Microfinance's "rise to mainstream prominence as a development strategy (...) coincides with the recent resurgence of neoliberal economic ideology" (Rankin, 2006).

Fernando thus explains the (re-)emergence of microcredit in its current form by pointing at the need for capitalism to expand (Fernando, 2006a). Since capital is not an entirely homogenizing force (Fernando, 2006a) and allows for highly diverse and fluid social relations to exist, microfinance can emerge as one particular way to discipline and manage labor and extract surplus from it. Simply put, microfinance offers yet another sector into which capital can invest its surplus to extract even more surplus that will be reinvested again.

Microfinance thus brings the informal sector into the formal sector through microfinance institutions. The informal sector has been largely ignored by financial institutions and had to turn to moneylenders. The recognition of this sector grew with the dismantling of the state since the 1980s required a different strategy than to enlarge the absorptive capacity of the formal sector. The rise of informal sector called for a different relation with the formal sector than that of a labor pool. Microfinance was the answer. In fact, "[t]he very survival of the

formal sector now hinges on the market's friendly activities towards the informal sector" (Fernando, 2006a).

But there are other important needs to which microcredit was a reply. Unsurprisingly, after decades of failure, the development discourse needed a new approach that would allow it to point to yet another missing link in the "development" endeavor. Microcredit discourse explained that the lack of access to credit was behind the previous failures and that through credit, people would pull themselves out of misery with their until then unused entrepreneurial capacities.

The development failures of the past were then attributed to their connection to the state and NGOs providing microcredit were supposed to overcome state limitations (Fernando, 2006a). By privileging NGOs, microcredit was well adapted to the new wave of non-state actors as well as to the demise of the state since the 1980s that accelerated after 1989.

By focusing on the people and their capacity to help themselves out of poverty, microcredit was also an answer to the popular protests against the structural adjustment programs (SAPs) (Weber, 2006). The crisis of legitimacy of these policies was followed by an adjustment with a human face and microfinance fit well with its capacity to reconcile neoliberal policies and popular expectation, at least at the rhetorical level, and at the same time legitimized the policy by making poverty reduction its core objective (Weber, 2006).

The choice to lend money to women proved right not only in relation to their malleability to discipline, but also in relation to the mainstreaming of gender in development. Microfinance could thus claim that its focus truly is the poorest of the poor – the women (Fernando, 2006b). The mainstreaming of gender was an important aspect of microfinance and its success owes a lot to the focus on women.

Finally, microcredit enabled the consolidation of the assumption that "development" can be achieved within the confines of neoliberal capitalism, rather than alternatives to it (Fernando, 2006b). With the end of the Cold War, there was a need for a clear capitalist strategy that would create a connection between capitalism and the social situation in the global South. Microcredit seemed to be the perfect instrument.

This is connected to the never-ending need to reinvest profits. Bankers found yet another sphere for their surplus and subsequent collection of further profits. Not only microfinance solidified "development" as reasonable within the capitalist system, but for many, microfinance was and still is just as important part of this system as e.g. the housing industry or the derivatives. (A large part of) microfinance is capitalism.

### **3.2 Formation of objects in the microfinance discourse**

The main objects as well as subjects of the microfinance discourse are the women. This was a clear choice due to their submissiveness. Unlike men, who were the main targets in the 1970s, constructed as "small farmers" (Rankin, 2001), women became "the primary target of the microcredit program because of their sociocultural vulnerability" (Rahman, 1999).

In relation to the formation of objects, Foucault writes about the "surfaces of ... emergence" (Foucault, 2002), i.e. places where objects can emerge as certain objects. How do women appear as objects at these surfaces of emergence? The surface is to be found within economics as the authority of delimitation (Foucault, 2002) rather than within anthropology. Even if both coexist in the discourse, economics dominate it. Due to critical analyses of the social impact of microfinance, the policymakers have decided to simply change the term of reference that "both avoids engaging with the social impact and implications and allows for a privileging analysis of the success of microfinance in terms of *institutional* success" (Weber, 2006). It is within economics that the social factors can be discarded and replaced with pure financial

indicators. The object – the poor women – gets lost in the financial statistical proxies that are supposed to be measured instead of the social objectives that microfinance sets to achieve.

This is not to say that other parts of lives do not get to be noted by researchers, microfinance field officers and, most importantly, fellow borrowers. Quite the contrary, the lives of the women and their families are watched very closely. But the information that emerges at the surfaces of emergence are those that are of interest to the bankers and those that can prove the success of microfinance.

More particular “grids of specification” again contain both. On the one hand we have here the usual abnormalities identified e.g., by Escobar (1995) that serve as a lack that needs to be rectified (most prominently of course the lack of access to credit). On the other hand, there is a particular methodology that enables particular visibility of the microfinance outcomes.

There are three levels in this methodology – normative, empirical, and analytical (Weber, 2006). “Normatively, there is the association of the notion of empowerment with the taking of credit by ‘the poor’ for investment purposes” (Weber, 2006). It is assumed that the women use the borrowed money for some kind of productive aim. Disregarding here the problematic notion of the term productive and its connection to empowerment as well as the non-participatory character of such an understanding, empirical evidence shows that men often control the loans taken by women and these are usually used for consumption rather than investments (Goetz – Gupta, 1996; Karim, 2011; Rahman, 1999). Thus, at this level the grids of specification connect microfinance to empowerment and portray this as investment.

“Empirically, the evidence mobilised in support of microfinance (...) is selective” (Weber, 2006). Mostly it measures the institutional success of microfinance, e.g. the credit repayment rates. According to Fernando (2006): “The organizational practices are hierarchically structured in response to loan repayment becoming the main determinant of the sustainability and credibility of organizations.” Here again, financial indicator serves as a proxy for social indicators. By focusing on the repayment rates, which reach very high levels (e.g. 98% in the case of Grameen Bank), powerful actors of the microfinance apparatus can claim success in non-financial areas, e.g. the empowerment of women. The empirical finding that repayment of microdebts is achieved due to the intensification of oppression of women (Bateman, 2010; Fernando, 2006; Goetz – Gupta, 1996; Karim, 2011; Rahman, 1999; Rankin, 2001) is excluded from the discourse. The grids of specification allow only certain financial indicators to reach the public.

At the analytical level, the problem of microfinance is that it focuses on the local. Not only the repayment rates but also other indicators remain spatially focused on the local thus foreclosing “the possibility of engaging the impact as well as implications of microfinance schemes as mediated in terms of sets of *social relations* generally, *and* in terms of their constitution within a *global* rather than *local* space” (Fernando, 2006a). The global system of governmentality that emerges with microfinance and NGOs as its integral and necessary parts thus remains outside the discourse that makes it legitimate. By focusing on the local we cannot see wider relations connected to the repayment rates or levels of default or the level of the saturation of the market.

The result of this specific methodological grid that allows the analysis of market imperfections “without sacrificing the fundamental ideological basis and methodological individualism of neoclassical economics” is “the marginalization of class, power, and conflict issues that are central to empowerment” (Fernando, 2006a). These issues are excluded from the discussions about market imperfections and the way these could be improved to work for the poor. Current studies “simply evaluate microcredit as a relationship between the borrowers and the NGOs” (Fernando, 2006b). They do not allow for the global political economy to appear in this relationship, despite the fact that in more systemic discourses, microcredit “mediates between

women borrowers, their household, and the local, national, and international environments that matter to their lives” (Fernando, 2006b).

Not only are there grids of specification that create particular visibilities, but at the same time, the practice of microfinance promotes particular grids. It leads to the commodification of relations and forces of production in response to the need to generate cash to repay loans (Fernando, 2006b). The exchange value gains precedence over the use value and commodification forces people to shop at the market as well. The discourse thus becomes a self-fulfilling prophecy. It selects commodified elements to promote the practice of commodification, which in turn commodifies ever more elements only to prove that indeed the grid of specifications was correct in its choice.

Most of the studies on microfinance are quantitative, measuring quantifiable aspects of peoples’ lives in relation to microfinance borrowing (Karim, 2011). This specific grid is biased against ethnographic studies that analyze kin obligations and other social relations.

There is a similarity between the practice of microfinance and the development discourse. Microfinance and the development discourse share a hierarchical structure between the self and the other. This development discourse is inscribed into the microfinance practice. It is entirely absurd to imagine in the industrialized countries of the global North that someone would be offered loans under the condition of forming a group and attending its weekly meetings being fined if s/he did not show up (Harper, 2007). Yet this is the general microfinance practice. Of course, one may object that there are objective reasons such as the lack of collateral. However, the point is that microfinance as a service is not comparable to what the people in the North are used to and it only reflects and reproduces the binary division between “developed” people with “normal” financial services and underdeveloped people with “not normal”, microfinancial services.

### **3.3 The formation of enunciative modalities in the microfinance discourse**

The enunciative modalities of the microfinance discourse are similar to those of the general development discourse. We encounter the same people “who speak” and the same “institutional sites”. But there are some specificities of the microfinance discourse.

Again, NGOs are important places from where the discourse is made. But these are fundamentally contradictory spaces. On the one hand, NGOs seem to be opposed to neoliberalism in their emphasis on community and opposition to the World Bank and IMF, on the other, the notion of civil society and local level organization of citizens that eschews the involvement of state bureaucracies is broadly consistent with the IFIs policies (Brigg, 2001). Therefore “NGOs should not necessarily be read as emancipatory” as they “enable a greater penetration of power into the Third World through the development *dispositif*” (Brigg, 2001). They are part of the neoliberal governmentality that becomes most visible with microfinance. According to Karim, dominant NGOs even function “as a shadow state in the rural economy” (Karim, 2011).

However, here my focus is not on the way they function as vehicles of this governmentality by e.g. using the “economy of shame” (Karim, 2011) to pressure women to repay their debts, but “only” on the way these NGOs create the microfinance discourse, which is merely one part of this governmentality. According to Karim, the leading NGOs in Bangladesh, such as Grameen Bank, BRAC, and Proshika, are “discursive epistemic machines” (Karim, 2011). They have their research wings that together form “a vast knowledge-making machine” (Karim, 2011). These research wings produce newsletters, brochures, journals, reports, research monographs, dissertations, flip charts, posters, and videos (Karim, 2011). But the research produced is not neutral (as it cannot be) but a form of advocacy with clear objectives: “to replicate the program, garner more funds, increase visibility, and satisfy one’s sponsors” (Karim, 2011).

Sponsors are crucial to the understanding of the behavior and the discourse of NGOs. Money connect these two actors. International donors thus constitute another institutional site from where the discourse is created. There is a network of development institutes that dominate the microfinance discourse in Bangladesh. Karim mentions Sussex, Manchester, Bath, Copenhagen, and Hague. Donors hire consultants from these institutes and the knowledge produced by them becomes the truth about the microfinance reality in Bangladesh. Local NGOs then create a certain type of discourse to satisfy donors, but "Western aid agencies and their officers were equally invested in the maintenance of these hegemonic scripts of microfinance and women's empowerment" (Karim, 2011). They need successful stories for their governments. A symbiosis between local and international actors is created.

These two levels meet at conferences or workshops and similar events. The dominance of the donor level is reflected for example in the language of these conferences. Even if only one or two people were Western-donor representatives, the language used at the conferences is English. The most important asymmetry is created by the money donated from one actor to another. Karim offers an anecdote similar to experiences of the critics of racism in the development cooperation (White, 2002). A Western anthropologist with a six-month course in anthropology was to be assisted by a local anthropologist with 7 years of experience. The Westerner, however, was from a North American University. The two levels thus act on the one hand together to create "the hegemonic scripts" of microfinance, on the other, the local level is subordinated to the international level through the existing asymmetries of power.

These two sets of actors exclude the object of development discourse – the poor women who are to be empowered. Planning, implementation, and evaluation of credit programs get to be decided at the meetings of the NGOs' top-level management and international donors. "In the final analysis, NGOs are primarily accountable to the international donors" (Fernando, 2006b). They disregard the needs of their "beneficiaries" in order to secure their own existence vis-à-vis the donors.

One should not forget the government agencies that act together with the national NGOs and international donors. They participate in this microfinance governmentality. As Karim shows, however, NGOs are capable of exercising power through donors over the state (Karim, 2011). Even though it may seem that they are the weakest part of the existing governmentality, they are actually quite powerful.

To populate the international site and answer the question "Who speaks?", it is necessary to include the army of NGO researchers, consultants, field officers, government officials, university professors, etc.

At the local level, the research produced by local researchers is very much influenced by their low income. "[W]orking as a consultant on an NGO project is a source of much-needed additional income for middle-class people" (Karim, 2011). The problem is that the rising prices make it difficult for the middle-class to maintain their lifestyle (Karim, 2011). Most of the university professors in Bangladesh come from this income stratum. Also, for the young researches, in a country with high unemployment, a job with an NGO is a way to secure one's living. Moreover, NGOs are the gates to the seducing international world (Karim, 2011).

The result of these motivations, as Karim suggests, is that researchers are inclined to adopt the methods and world views of their employers (who in turn are inclined to adopt the methods and world views of their donors, Karim, 2011). Therefore in NGO research "the distinctions between the categories scholar, consultant, and NGO employee get blurred" (Karim, 2011). The attempt at neutrality and unbiased perspective is compromised by the requirements of the employer and the donor. Even if many researchers in Bangladesh are skeptical about the research monographs that they produce, they self-censor themselves in order to keep their

job (Karim, 2011). The research they produce is self-referential, "the authors refer to their preexisting work to legitimize the development policy that funds their research" (Karim, 2011). In this circle of citations and legitimizations, the biography of authors is evicted. It is rarely clear whether they are from NGOs or the World Bank, or from universities and who paid for the research. Those who evaluate NGO projects have often worked as freelance consultants for the same NGO in the past (Karim, 2011).

There is thus a very close connection between research and the microfinance policy. Karim even gives five well-known examples of researchers and their monographs sponsored by microfinance institutions that are in a clear conflict of interest (Karim, 2011). But according to her, even if within this group of researchers, there was a range of feelings and motivations, "[t]hey were all well-intentioned people" (Karim, 2011). They were constrained by the conditions prevalent in Bangladesh, but still they were well-intentioned. As Karim studies governmentality, this information really is not important for her research, just as it is not important for Ferguson and his study of a development project in Lesotho (Ferguson, 1994). The current research does not engage in discussing the morality of the actors (with the exception of Heron, 2007), but if field officers see the damage they cause to the poor women and if researchers self-censor themselves, we should question their intentions. It might be inappropriate from my affluent position to judge decisions of people who are worse off than I am, but at least one might say that they are not well-intentioned and then ask, who is to blame? The question of intentions gains prominence in relation to the most powerful actors within the discourse. If those people get to hear critical voices and yet disregard them, it might be fruitful to investigate their intentions and judge them.

Even if the discourse in general expresses a positive attitude towards microfinance, there are counter voices. However, the mechanisms of exclusion work against these voices. It is "the vernacular press [that] is a rich source of the critiques of NGOs and development" (Karim, 2011). These sources are often overlooked by foreign researchers as they do not read Bengali.

Another form of exclusion is related to the way knowledge is being produced in Bangladesh. There it is not necessary to publish a paper to get intellectual recognition, it is sufficient to present it at a conference or another public event (Karim, 2011).

The "growing and robust critique concerning the activities of NGOs" (Karim, 2011) in Bangladesh is produced by two types of local researchers. The first consists of socioeconomically privileged English-language educated researchers (mostly developmental economists) who are former members of the communist or socialist parties of Bangladesh. The second type are researchers "because of lack of employment opportunities" (Karim, 2011). They are the "real raw researchers" (Karim, 2011), who go to the field to gather data. They know quite well about what is going on in the field, but they are being silenced by the discourse and cannot express their more radical observations.

Furthermore, alternative sites of engagement critical towards the microfinance apparatus are emerging, such as citizens' groups and websites, especially blogs. In these clearly lower ranking spaces, critical citizens can express their voices (Karim, 2011). However, it seems to me that this is not an instance of a break in the discourse on microfinance (as the scant critical literature is), but a confirmation of the discursive power. The actors are capable of excluding the critical voices to the position that is not acknowledged as the right type of knowledge, because it does not have a scientific label on it. Any blog can be discarded as non-scientific, without the proper (quantitative) methodology. That does not mean that these sites are not important as sites of resistance, only that one should be careful before rejoicing. Within the microfinance discourse, they do not count as relevant voices, only outside of it or within a discourse with different rules of formation.

Regarding dissent, Karim explains, how it is silenced by the discourse (and by the actors through whom the discourse is expressed). Highly respected leftist theoreticians in Bangladesh



simply do not get to be invited to the seminars “because of their criticism of NGOs and microfinance” (Karim, 2011). I already mentioned that the dissenting voices are silenced within the researchers as they self-censor themselves in order to keep their jobs as consultant for the NGOs that secure an important part of their income. The example of Aminur Rahman’s problems with publishing his book (Rahman, 1999), one of the first critical accounts of microfinance, reveals that there are forces also at the publishing stage of knowledge production that may attempt to prevent critical knowledge from being produced. The findings of his research were taken off the website of the Institution of Development Research Canada “because IDRC officials felt that they might embarrass Canadian aid officials who were supporting microfinance initiatives in Bangladesh” (Karim, 2011). In Bangladesh, the only English-language academic publishing house (University Press Limited) refused to publish it despite the fact that it was previously published by Westview. One may argue that this is a solitary case, but the obvious counterargument is that we do not know how many other authors have been prevented from publishing their critical research due to the obstructive mechanisms working within the microfinance apparatus. Moreover, as I already said, the apparatus silences these critical voices already inside the subjects that could express them.

Another way to silence the critical local voices is by using English as the language at conferences and seminars. The use of English inhibits “many people from engaging in these so-called ‘dialogues’, which thus functioned as monologues” (Karim, 2011). Ordinary people are in this way separated from elite researchers.

Karim offers an example of a conference where the dissent from the public was too loud not to be heard and therefore she concludes that “the discourse of poverty, NGOs, Grameen, and microfinance are not hegemonic discourses. These discourses become hegemonic only in certain urban research spaces” (Karim, 2011). The problem here is the general strength of these urban spaces who are capable of silencing the counter-discourses outside their space of dominance. How far did those dissenting voices get? How did the critical discussion that made it through the controlling mechanisms of the apparatus at the conference appear in publications from the conference, if at all? There is never a full closure of discourse (as I claim in part on theory) and counter-hegemonic discourses are always present in one way or another. The strength of the microfinance apparatus is in its capacity to exclude them.

The microfinance discourse (just like the general development discourse) also works through creation of a library of statistical information. Whereas it bases its success on the high repayment rate, at the same time, it collects information about the habits, behaviors, manners, customs, leisure activities, living conditions, possessions, recreational choices, belief structures, the way people eat, drink, sleep, defecate, work reproduce and entertain themselves (Karim, 2011). The archive thus created can be used to various ends and with various consequences, “both anticipated and unanticipated” (Karim, 2011). The crucial technology for the archive is a computer that organizes, selects and categorizes all the collected information. This intimate knowledge is reorganized to be used as developmental knowledge and subsequently as the basis of the development policy. However, “[t]hese raw data are malleable, and can be interpreted in various ways to bolster one’s ideological position and to claim knowledge about what works in the amelioration of poverty” (Karim, 2011). As I hope is clear from the part on the post-development debate on the use of quantitative indicators, I concur with such a statement made by Karim. On the one hand, these data construct the poor in certain way and allow their management, on the other hand, this management, this conduct of conduct can be beneficial or emancipatory, just as much as it can be detrimental (as it seems to be the case right now). As Foucault reminds us, not everything is bad, but everything is dangerous and the conduct of conduct, e.g. between a

teacher and a student is acceptable and beneficial to the student. One therefore cannot exclude all power relations, but should be careful when evaluating them.

Still, it is questionable, and Karim does not elaborate on this point, whether we need to know some of that information. The fact that "not everything is bad" (Karim, 2011) and that Foucault was interested in the left art of government (Ferguson, 2011) does not mean that we may not wish to stop collecting some of those intimate information and refrain from governing ourselves through them. This is a debate that the microfinance and development apparatuses need to engage in. Maybe we just do not want to know the most intimate information, because there just should not be a public policy regarding certain matters.

Finally, the question of the subject is of great importance in the microfinance discourse. The governmentality here works not only through the objectification of subjects into numbers upon whom policy is to be performed, but also through the subjects themselves. The women change their behavior in accordance with the main tenets of the neoliberal microfinance discourse.

To trace the shift in the form of subjectification, it is necessary to first reproduce what Foucault says in his *Birth of Biopolitics* about the changes within the neoliberal governmentality. Foucault distinguishes German ordoliberalism from American liberalism. "Liberalism in America is a whole way of being and thinking" (Foucault, 2008). Whereas before, people were supposed to trade between themselves and the economic analysis since Adam Smith analyzed the mechanisms of exchange, now the "the worker himself appears as a sort of enterprise for himself" (Foucault, 2008). People are expected to treat themselves with the same economic rationality with which they treat the objects at the market. The theory of human capital enables capital to penetrate the formerly non-economic spheres. For example, a wage in neoliberal governmentality is considered to be "the income of capital" (Foucault, 2008). The capital is the human being itself. *Homo oeconomicus* is not a partner in exchange, but a firm doing business with him- or herself. Spending time with children is not an activity caused by parental love but an investment in their future.

Similar tendencies are decipherable within the microfinance discourse. "Through metaphors of individual and society, microcredit influences the way people construct themselves, their conduct and their relations as free individuals" (Seidel and Vidal in Fernando, 2006a). Rather than following other rationalities and motivations, poor women are governed to behave according to economic logic. Brigg sees in microfinance "striking parallels with the production of the liberal subjects as analysed by governmentality scholars" (Brigg, 2001). The discourse produces the version of subjectivity promoted through the Western social sciences, which enables subjects to generate and act upon their selves. This is then the basis for the governmentality through which the microfinance apparatus governs the subjects.

To create this subject however, the subject has to be persuaded to behave as such. Even if the discourse operates with the presumption of the neoliberal rational subject, the demand for a loan has to be created. "[L]ocal people need to be convinced of the need for Grameen involvement" (Brigg, 2001). The new rational subject can then be disciplined through peer pressure within the loan groups of five women. In the first stage, the period of training and self-learning about Grameen rules "serves to enroll subjects into Grameen entrepreneurialism" (Brigg, 2001), and in the second stage, this operation is linked to simultaneous discipline of both individuals and peers (Brigg, 2001).

Thus, as Rankin claims: "microcredit aims to cultivate a subjectivity of rational economic woman that might function efficiently and sustainably in the domain of the market" (Rankin, 2001) and this "promotion of entrepreneurial subjective modalities over other ways of being" (Brigg, 2001) results in deeper integration of the subjects of microfinance programs into the financial and economic markets (Fernando, 2006a), their own self-perception as rational

economic subjects in relation to other women (Karim, 2011)<sup>1</sup> and finally easier functioning of the neoliberal governmentality (Karim, 2011). The outcome is the perpetuation (or worsening) of unequal power relations.

## CONCLUSION

The aim of this paper was to analyze selected elements of the microfinance discourse. These included the urgent need for the emergence of the discourse, the formation of objects, and the formation of enunciative modalities.

The main answer to the question, why did the microfinance discourse and (apparatus) emerge as was the (urgent) need for the capital to embed itself at the local level thus connecting the formal with the informal sector. At the same time, it was a response to the failures of the previous “development” attempts as well as the critique of the state and its NGOisation.

Secondly, the meta-analysis focused on the way objects are formed within the discourse. The discourse forms its objects by focusing on the institutional success of microfinance rather than on the social impact. It highlights the repayment rates and disregards ethnographic research, which criticizes the impact of small loans on borrowers. This focus may lead to overlooking that the borrowed money is not used for investment purposes, but to ease everyday needs. In general terms, this can be translated into an omission of other than the basic lender-borrower relation. In other words, the question of why people are poor is not properly answered by the microfinance discourse and the issue of unequal power relations is not paid attention to.

Thirdly, the contribution focused on the way enunciative modalities are formed. The most important actors that speak within the discourse are the NGOs and the donors. The international – donor – level, however, dominates the national level of NGOs. Researchers who depend on their income from NGOs often self-censor themselves. The growing critique is published especially in lower ranking spaces such as blogs and thus confirms the primacy of the positive accounts coming mostly from NGO consultants. The discourse works through the neoliberal subject – a woman entrepreneur responsible for her actions. She is the main subject of the microfinance discourse.

Overall, the microfinance discourse has important effects in terms of power, which makes it an important object for examination. This examination shows in great detail how the discourse operates and why it emerged. Such an analysis can, in the next step, enable attempts to change the discourse.

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<sup>1</sup>I should add that women do not behave in a purely rational way as the microfinance model suggests. They adopted this identity if they are successful and especially when they are not constrained by men (Karim, 2011). Rankin's research in Nepal shows that “[t]he subjectivity of rational economic woman when imposed through microcredit programmes (...) proves elusive” (Rankin, 2001). The unequal gender relations prevent microfinance model from succeeding in changing the subjectivity of the subordinated women into purely rational actors.

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# Finding high export potential goods in the target market – The future prospect of Polish exports to the United States

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**Abstract:** One of the key tasks in economic policy is to properly identify industries and goods that have a high potential for sale in foreign markets to design the most effective supporting programs for exporters. The purpose of this paper is to define the tool for identifying the most promising industries in exports. For this aim, first, competitiveness evaluation is recognized on a basis of the revealed competitiveness index (RCA) by Ricardian trade theory. This is an examination of the supply side – the current export potential of a country and its competitiveness. Secondly, the demand side is examined. That part of the calculation model uses the data of import value and its dynamics. The empirical testing is conducted on a basis of Poland's exports RCA and data imports to the United States in 2017-2021 at the 4-digit level. The model results indicate export from Poland to the US, which characterizes a high potential growth.

**Keywords:** international trade, export, RCA

**JEL Classification codes:** F13, F14, F17

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## INTRODUCTION

Exports, which have recently been boosted by the decline in the value of the Polish currency, have had a very positive impact on GDP performance last year. Sales of Polish goods abroad increased by more than a quarter in 2021 compared to the previous year. However, this was not an easy result to repeat in 2022 due to rising production costs associated with the prices of fuel, energy, raw materials, as well as declining consumer demand. An additional factor significantly limiting sales of Polish goods are semiconductor shortages and production restrictions in the German automotive industry, for which Polish manufacturers are important component suppliers.

So far, more than 80% of Polish exports are received by EU member states and the United Kingdom. Such a high concentration of sales in Europe can mean that exporters are strongly dependent on the economic situation and demand in a particular region of the world, and this is not particularly safe for maintaining sales in the long term. Germany, the largest market for Polish manufacturers, recorded a very low industrial production growth index in the first quarter of this year, only 0.6. In Poland, it was 5.3 (OECD, 2022).

Therefore, the deteriorating economy and falling demand, combined with the problems of the automotive industry and the unstable geopolitical situation in Central Europe, give rise to the belief that Polish manufacturers need to increase their presence in non-European markets. An additional opportunity to establish a presence there is provided by the position of Asian

suppliers in world markets, including the US market, which has been severely weakened by the pandemic.

## 1 METHODOLOGY

The purpose of the following analysis is to identify the industries with the greatest export potential, and test that format for the identification of the most potential perspective Polish commodities in the US market. The calculation uses foreign trade data of Poland and the United States for 2017-2021 from the Comtrade trade database (source: UNCTAD). The statistics include 1,261 commodity groups according to the CN classification of the Combined Nomenclature at the 4-digit level.

To examine the demand side of the target market, data on commodity imports to the United States were used. Based on these, annual changes in the value of imports (V) were calculated, determining the average of these changes (k) from 2017 to 2021.

$$k = \text{av}(\frac{V_{2021} - V_{2020}}{V_{2020}}) \quad (1)$$

Next, it was necessary to identify commodities whose imports to the United States increased in 2021 compared to 2020 more than the growth trend in 2017-2021. To do this, the expected value (EV) in 2021 was calculated as the product of k and the actual value (RV) in 2020.

$$EV = k \cdot RV \quad (2)$$

Based on the difference between the actual value in 2021 and the expected value, commodities with higher-than-average growth in import demand in the US market were marked. Since the difference between the expected value and the actual value in 2021 for all U.S. imports was 15.5%, this value was taken as the cutoff value for determining the group of goods with the highest sales potential in the U.S. market (Williamson et al. 2005, 2006).

In the second stage, the most competitive Polish export commodities were determined, i.e.

the supply side of the assessed potential was determined. For this purpose, the Revealed Comparative Advantage (RCA) index, popularly known as the RCA index or Balassa index (hereafter: RCA index), was used (Balassa, 1965; Hoen, Oosterhaven, 2006), which is commonly used to assess whether a producer (exporter) of a given commodity is competitive with a country producing and exporting that commodity at or below the world average. The revealed comparative advantage in the product i ( $RCA_i > 1$ ) confirms the competitiveness of that product's exports (Hanson et al., 2015). The higher a country's RCA value for a product, the greater the strength of exports in that product. The above measure is used to assess the competitiveness of commodity exports and a country's comparative advantage by commodity group (Misala, 2011).

$$RCA_i = \frac{\frac{X_i}{\sum_{j \in I} X_j}}{\frac{X_i^*}{\sum_{j \in I} X_j^*}} \quad (3)$$

- $P$  is the set of all goods, where  $i \in P$ ;
- $X_{Ai}$  export of a good  $i$  and by country  $A$ ;
- $X_{wi}$  world export of a good  $i$ ;
- $\sum_j X_{Aj}$  denotes the total exports of country  $A$  (of all goods  $j$  from the set  $P$ ;
- $\sum_j X_{wj}$  denotes the total world exports (of all goods  $j$  from the set  $P$ );

## 2 RESULTS AND DISCUSSION

Based on the above formula, out of the 1,261 commodity groups analyzed, 252 groups of goods, for which  $RCA > 1$ , i.e. in which Poland achieves comparative advantages in international trade, were identified. At the same time, it is also worth noting the dynamics of change of the analyzed indicator, as on this basis it is possible to identify those goods whose export competitiveness has increased the most in recent years.

Table 1. presents a list of 20 Polish goods with the highest export potential to the United States. The above list was created based on the percentage difference between the expected (EV) and actual (RV) value of US imports in 2021(column [3]) and the index of revealed comparative advantage of RCA in the same year (column [4]). In addition, consideration was given to how the attractiveness of a given commodity in export markets changed between 2017 and 2021 (under the condition:  $1 < RCA_{2017} < RCA_{2021}$ ) (column [5]). However, this information is only an additional variable indicating how the export competitiveness of the commodities for which demand in the United States has increased the most has changed since 2017.

**Tab. 1 Commodities in manufacturing and export with the highest sales potential in the United States**

CN code	Product label	RV/EV w %	RCA2021	RCA2021/RCA2017 w %
1	2	3	4	5
89 05	Light-vessels, fire-floats, dredgers, floating cranes, and other vessels the navigability of ...	287,0%	2,55	1135%
89 01	Cruise ships, excursion boats, ferryboats, cargo ships, barges and similar vessels for the ...	122,7%	3,36	86%
72 11	"Flat-rolled products of iron or nonalloy steel, of a width of < 600 mm, hot-rolled or cold-rolled ...	102,9%	1,39	55%
72 13	Bars and rods of iron or non-alloy steel, hot-rolled, in irregularly wound coils	93,0%	1,65	-18%
27 07	Oils and other products of the distillation of high temperature coal tar; similar products ...	80,0%	1,32	367%



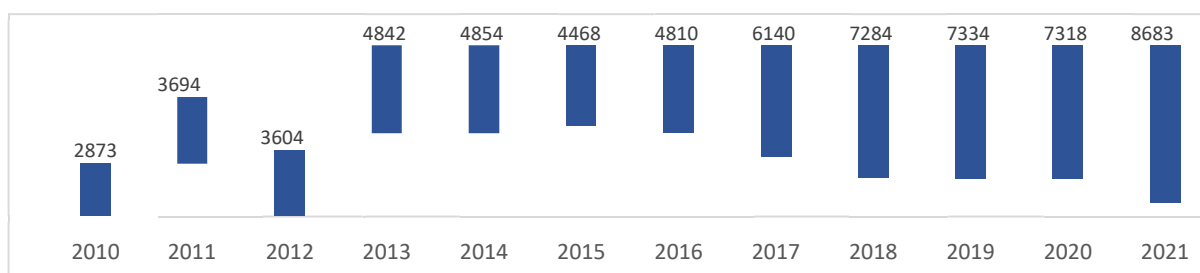
78 01	Unwrought lead :	78,2%	1,78	5%
73 06	"Tubes, pipes and hollow profiles ""e.g., open seam or welded, riveted or similarly closed"" , ...	77,0%	1,51	44%
91 03	Clocks with watch movements (excluding wrist-watches, pocketwatches and other watches of heading ...	76,7%	2,95	-62%
80 01	Unwrought tin	74,4%	1,56	420%
43 04	Artificial fur and articles thereof (excluding gloves made of leather and artificial fur, footwear ...	69,6%	1,03	389%
74 03	Copper, refined, and copper alloys, unwrought (excluding copper alloys of heading 7405)	68,1%	2,23	7%
72 14	Bars and rods, of iron or non-alloy steel, not further worked than forged, hot-rolled, hot-drawn ...	67,4%	1,67	-28%
72 16	Angles, shapes and sections of iron or non-alloy steel, n.e.s.	67,1%	3,93	8%
76 02	Waste and scrap, of aluminium (excluding slags, scale and the like from iron and steel production, ...	63,7%	1,83	-18%
31 02	Mineral or chemical nitrogenous fertilisers (excluding those in pellet or similar forms, or ...	62,0%	1,40	-5%
41 01	"Raw hides and skins of bovine ""incl. buffalo"" or equine animals, fresh, or salted, dried, ...	61,8%	1,73	36%
15 01	Pig fat, incl. lard, and poultry fat, rendered or otherwise extracted (excluding lard stearin ...	61,7%	2,29	44%
47 07	"Recovered ""waste and scrap"" paper or paperboard (excluding paper wool)"	59,5%	2,09	90%
44 10	"Particle board, oriented strand board ""OSB"" and similar board ""e.g. waferboard"" of wood ...	59,2%	2,00	11%
40 06	Rods, bars, tubes, profiles and other forms of unvulcanised rubber, incl. mixed rubber, and ...	56,85%	1,06	48%

Source: own calculations, based on Comtrade data

The United States has recently been identified by the Polish Economic Institute as the most promising market for Polish exports among non-EU markets (PIE, 2022). This export sales direction received the best result due to such characteristics as size, high growth dynamics and the value of Polish exports to date.

The United States is currently the 9th largest market for Polish exporters. In 2021, sales of goods from Poland to the US market increased by 19% from 2020, reaching \$8.7 billion. From 2010 to 2021, there was a threefold increase in the value of Polish exports to the US. Between 2010 and 2021, the average annual growth rate of these exports was 10.6%, significantly higher than for total exports in this period (6.6%).

**Fig. 1 Exports of goods from Poland to the United States between 2010 and 2021, USD million**



Source: Trade Map, International Trade Centre UNCTAD/WTO

According to the latest data covering trade in goods in 2021, published by UNCTAD, the most important group remained (as in previous years) Turbo-jets, turbo-propellers and other gas turbines, for which the United States is the first largest market. The value of these exports to the United States amounted to more than \$1 billion in 2021, over 12% of total Poland's exports to the U.S. market.

**Tab. 2 Commodity groups in Polish exports to the United States in 2021**

CN code	Product label	Export Share in total	
		export, in % (\$ thousands)	
8411	Turbo-jets, turbo-propellers and other gas turbines	1 049 065	12,08%
9021	Orthopaedic appliances; including crutches, surgical belts and trusses; splints and other fracture appliances; artificial parts of the body; hearing aids and other which are worn, carried or implanted in the body to compensate for a defect or disability	732 744	8,44%
9403	Furniture and parts thereof, n.e.c. in chapter 94	384 847	4,43%
7106	Silver (including silver plated with gold or platinum); unwrought or in semi-manufactured forms, or in powder form	354 101	4,08%
8708	Motor vehicles; parts and accessories, of heading no. 8701 to 8705	186 312	2,15%

8544	Insulated wire, cable and other electric conductors, connector fitted or not; optical fibre cables of individually sheathed fibres, whether or not assembled with electric conductors or fitted with connectors	184 771	2,13%
8803	Aircraft; parts of heading no. 8801 or 8802	181 763	2,09%
8483	Transmission shafts (including cam and crank) and cranks; bearing housings and plain shaft bearings; gears and gearing; ball or roller screws; gear boxes and other speed changers; flywheels and pulleys; clutches and shaft couplings	163 847	1,89%
8903	Yachts and other vessels; for pleasure or sports, rowing boats and canoes	160 408	1,85%
8481	Taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like, including pressure-reducing valves and thermostatically controlled valves	160 121 826	1,84%
9018	Instruments and appliances used in medical, surgical, dental or veterinary sciences, including scintigraphic apparatus, other electro-medical apparatus and sight testing instruments	136 100 700	1,57%
8507	Electric accumulators, including separators therefor; whether or not rectangular (including square)	126 604 898	1,46%
8413	Pumps; for liquids, whether or not fitted with measuring device, liquid elevators	122 411 278	1,41%
9401	Seats (not those of heading no. 9402), whether or not convertible into beds and parts thereof	116 873 745	1,35%
1806	Chocolate and other food preparations containing cocoa	112 109 727	1,29%
8426	Derricks, cranes, including cable cranes, mobile lifting frames, straddle carriers and works trucks fitted with a crane	109 364 830	1,26%
8517	Telephone sets, including telephones for cellular networks or for other wireless networks; other apparatus for the transmission or reception of voice, images or other data (including wired/wireless networks), excluding items of 8443, 8525, 8527, or 8528	97 030 550	1,12%
203	Meat of swine; fresh, chilled or frozen	90 842 340	1,05%
9027	Instruments and apparatus; for physical or chemical analysis (e.g. polarimeters, spectrometers), for measuring or checking viscosity, porosity, etc, for measuring quantities of heat, sound or light	87 601 304	1,01%
8431	Machinery parts; used solely or principally with the machinery of heading no. 8425 to 8430	75 633 249	0,87%

Source: Comtrade, UNCTAD

Comparing the results of current trade and the identified commodities with the highest export potential from Poland to the United States, there is no commodity group in the top 20 results that appears in both statements. In conclusion, it can be noted that in the set presented in Table 1. there are goods from groups so far not particularly popular in the US import from Poland (see Table 2).

Among the main commodity groups in Polish exports (2 digit), we have only one from which goods are in the designated set with high export potential - this is category 89, i.e. Ships, boats and floating structures, which includes two subgroups with the highest export potential, namely 89 05 and 89 01 (see Table 1) and 89 03 (see Table 2). At the same time, the value of the RCA indicates that these products have seen a significant increase in the value of their exports since 2017 compared to exports of other goods.

The occurrence of large discrepancies between the commodity groups in the Table 1. and Table 2. indicates that there is a wide spectrum of commodities whose exports from Poland to the United States so far are insignificant but can be considerably improved. Above that, the described summary clearly shows a strong differentiation of goods both in terms of technological sophistication, degree of processing or destination (consumer products, products for industry or construction).

Therefore, it is difficult to identify a narrow group of specialties for Polish exports in the future.

## CONCLUSION

The proposed analytical tool identifies export commodity groups with high sales potential in the target market. The proposed example identifies specific goods produced in Poland that are in increasing demand in the United States. At the same time, these goods show high competitiveness in foreign markets. The designated group of goods is characterized by high import potential in the US. Proper identification of goods with high export potential can help develop effective support tools as part of the country's pro-export policy. In the example presented, it can be assumed that the targeting of pro-export support towards Polish exporters will contribute to an increase in export revenues and give them long-term stability resulting from the diversification of markets.

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# Empirical evidence of the macroeconomic determinants of income inequality for Central and Eastern European countries

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**Abstract:** Income inequality has become an inevitable topic in every country regardless of its level of economic development. However, the increase of wealth with the outpouring of globalization has put a particular emphasis on the income inequality, especially for countries that were characterized as transition economies. Thus, the purpose of this study is to investigate the economic determinants of income inequality of Central and Eastern European countries (CEEC). The research methodology consists of panel regression analysis based on Least Squares Dummy Variable (LSDV) model. By adding the dummy for each country, we are estimating the pure effect of economic indicators (by controlling for the unobserved heterogeneity) on Gini index. Each dummy is absorbing the effects particular to each country. The dataset covers an unbalanced panel of 18 countries. The empirical results reveal that income inequality of CEE countries primarily depends on main macroeconomic indicators such that GDP per capita, unemployment rate, and inflation as well as general government consumption expenditures, current account balance, real interest rate and the population growth rate.

**Keywords:** income inequality, economic determinants, LSDV, CEEC

**JEL Classification codes:** E00, D6, D63

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## INTRODUCTION

While inequality is rightfully considered an important topic because of its economic and social repercussions, it has not been discussed, let alone studied as much as it should be among the circles of academia, in particular empirical studies lack. Basically, many scholars for long argued that questions of income distribution are poisonous and harmful to sound economics (Lucas 2004; Feldstein 1998). However, recently there has been an increase in interest on the research related to income inequality and its effects especially after the Global Financial Crisis of 2008. Those who have done research on income inequality such as Milanovic (2016) and Stiglitz (2012) view it as a major social ill that needs urgent address by policy makers, including governments and international organizations.

Central and Eastern European countries (CEEC)<sup>1</sup> have experienced major transformations in their ways of functioning in the last three decades and most of them are already members of the European Union. At the very beginning of the transition, they opened the doors to market economy and economic globalization as well as embracing democracy as a political force (Leitner and Stehrer, 2009). However, this path has not been so smooth, and it has been marked by various changes and fluctuations in the labor market, market efficiency, prices, and other factors. Nevertheless, CEEC opened to global trade and became increasingly export-oriented economies, experiencing noticeable profits from it, extending the role of private sector in the economy, dismantling the regulations that stiffen business development and by that matter, building institutions that support the newly created market systems (Estrin and Uvalic 2013). During that period some transition countries have been characterized by a sharp rise in income inequality, whereas Czech Republic, Hungary and Poland experienced more modest increases compared to others (Flemming and Micklewright, 1999). Thus, studying income inequality in CEEC and determinants that influence its rise or fall is important particularly because of the effect that income inequality has on these countries' economies. As seen in several contexts, income inequality has more severe effects on economic growth and development, especially in the transitioning economies and developing countries, because countries that are not still EU member states suffer from scrawny economies and increasing poverty rates. Income inequalities only exacerbate the economic development, stalling the progress and increasing inefficiencies and productivities within these countries.

Regarding the global income inequality, it has been on the rise until a period, as it witnessed first a plateau, and then a slight downward tendency mostly because of the economic progress made by China and India. Regardless of this decline, global inequality remains high, especially regarding within-country inequality (Cingano, 2014). Over the last six decades as income inequality has continuously risen, people's lifestyles have also changed. Technology has made transportation more cost-effective and has improved and advanced automation and communication considerably. These technological changes have been the driving force behind the opening of new markets within countries and across countries, providing chances for growth in wealthy and poor countries alike. As these changes have lifted multitudes of people out of poverty, income inequality has risen, reflecting changes in growth and its distribution effects.

## 1 LITERATURE REVIEW

It is well known that the income inequality is affected by political, social, and economic factors. An important factor is flexibility of labor market signifying that labor and workers' rights are continuously undermined, and the legislation passed by the politicians in power increasingly follows the rules and the desires set by the wealthy employers and owners of the job market. Fraser Institute (FI) compares the indexes of labor market regulations across many countries. The value of index ranges from 1 to 10, where 1 represents a strongly regulated labor market and 10 represents a reasonably flexible labor market. A striking fact that appears is that the index increased in the most of CEE countries, reaching an average value of 7.5 in 2020, which ultimately means that their labor legislation is much more favorable than in the first decade of transition. From this viewpoint, this would lead to potentially lower income inequality (Tjong and Schmillen, 2019).

In addition to flexibility of the labor market, there is also a dismantling and decreasing power of trade unions. As Frederiksen and Poulsen (2010) and Wilkinson and Pickett (2010) argue in

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<sup>1</sup> CEE comprises of 18 countries, namely, Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Kosovo, Latvia, Lithuania, Moldova, North Macedonia, Poland, Romania, Serbia, Slovak Republic, Slovenia, Ukraine.

their studies, a decline in trade and labor union power also means a decline in wage bargaining, and an increase in income inequality.

Another factor that increases the income inequality is the tax reform – the existence of flat taxation in the most of CEE countries only increases the chances of unequal income distribution. Corporations and companies are subject to a flat corporate tax. As extensive studies show the effects of progressive taxation in the equalization of income distribution, many CEE countries still use flat taxation. This type of taxation completely favors the rich, thus contributing to the widening gap between the rich and the poor and putting a heavier burden on the lower-income household.

According to Milanovic (2016) study, economic reform is heavily related negatively to the bottom 10 percent income shares, and positively with the income shares of the top 10 and 20 percent. Therefore, while social and economic reforms undertaken by many of the countries might spur economic growth within states, it is rather ambiguous who the benefiter of those reforms are.

The research conducted on FDI and its effects on income inequality are diverse. While it is impossible to summarize all that has been concluded, it is worth mentioning its effects on economic growth. FDI is prized and sought after because of its ability to channel technological spillover to a country's economy through forward and backward linkages. This technological progress is important because, it contributes, along with other factors to economic growth. Economic growth is an important aspect of income inequality, as has been maintained by many such as Milanovic (2016) or Kuznets (1955). However, if investment policies are not adequately oriented, as such is the case with the countries on many occasions, it may lead to "technology less" growth, and the benefits of the investment may accrue to foreign investors only, while the host country provides the cheap labor and other benefits.

Studies also show that there is a positive correlation between FDI and income inequality, and the FDI effect on income inequality is particularly present in the first years after transition. In CEE countries, FDI is highly prized for economic development and growth, although its effects are mixed (Carkovic & Levine 2002; Blomstrom & Kokko 2003). To attract inward foreign investment, the countries offer various privileges such as tax exemption and financial support and subsidies to the MNCs, which put foreign investors in more favorable standing than domestic investors. Mencinger (2012) argues that this process is a substitution of muddy privatization during the transition and offers a new way of selling the assets to foreigners, who are allowed a substantial market share dominance, usually in telecommunications, banking, and electricity. This does not allow for local economies to develop.

The consensus among many studies is that in transitioning economies privatization caused an increase in income inequality. The reasons vary and include the redistribution of assets, rent-seeking behavior (Stiglitz 2012) and non-wage income creation based on entrepreneurship. Whereas the explanations differ, the results are consistently similar. In a cross-sectional time-series analysis done by Bandelj and Mahutga (2010), a substantial positive correlation was found between income inequality as represented by the Gini coefficient, and privatization as represented by the size of the private sector of the economy. The study, while also including FDI inflows, showed that countries which preferred inward foreign direct investment to domestic investment, showed greater evidence of the increase in income inequality levels.

In this regard, these factors all affect many economic indicators that play a crucial role in the income inequality levels, including here GDP, GNP, inflation, or unemployment. Generally, GDP per capita is representative of the state of an economy, as higher GDP is commonly equated to higher standards of living. There are several aspects on the validity of GDP as a proper measurement of the health and strength of an economy, such as its inability to capture unpaid household work or counting economic activities that are damaging to the climate as contributing to economic growth. The assumption is that economic growth, represented by



these two indicators, may have a negative impact on income inequality for the fact that it is often associated with higher investment rates which generate higher employment levels, offering greater access to income generating activities and jobs to larger numbers of people. This consequently may lift all boats up, meaning increase incomes on all income percentiles and therefore reduce income inequality. As several studies including Causa et al. (2014) show, growth enhancing reforms in OECD countries contributed to lowering income inequality levels by delivering higher income gains for households at the bottom of the distribution. Another study conducted by Luan and Zhou (2017) concluded that higher GDP per capita leads to a decrease in the Gini coefficient, answering the question of whether economic development lowers income inequality. The growth enhancing reforms that lead to better income inequality outcomes include higher minimum wage, reduction of regulatory barriers to domestic competition, properly designed inward investment policies, better access to financial capital for lower percentiles of income distribution, better social welfare and so on.

## 2 RESEARCH METHODOLOGY

The methodology of this study consists of a panel regression model such as the least square dummy variable model (LSDV). By adding the dummy for each country, we are estimating the pure effect of industry growth (by controlling for the unobserved heterogeneity). Each dummy is absorbing the effects particular to each country. This method was chosen due to the missing data for Gini index for some years in some countries. Thus, because of that, we were not able to use a dynamic panel regression model.

The panel data has two dimensions, one as an individual index ( $i$ ), concretely the country ( $i$ ), and the other dimension is time ( $t$ ). The regression equation of the fixed effects regression model is:

$$y_{it} = \alpha + \beta' X_{it} + u_{it} , \text{ where } i = 1, \dots, N, \quad t = 1, \dots, T$$

However, this regression equation does not fulfil the conditions of Gauss-Markov theorem, as  $E u_{it} = \mu_i \neq 0$ . OLS may be biased, inconsistent, and even if it is unbiased, it is usually inefficient (Kunst, 2010). For this reason, we proceed the analysis by applying the LSDV (Least-Squares Dummy Variables).

Let  $Z_{\mu,it}^{(j)}$  denote a dummy variable that is 0 for all observations  $it$  with  $i \neq j$  and 1 for  $i = j$ .

Then, assembling  $Z_{\mu,it} = (Z_{\mu,it}^{(1)}, \dots, Z_{\mu,it}^{(N)})'$  and  $\mu = (\mu_1, \dots, \mu_N)'$ , the regression model

$$y_{it} = \alpha + \beta' X_{it} + \mu' Z_{\mu,it} + v_{it} , \quad i = 1, \dots, N, \quad t = 1, \dots, T,$$

fulfils all conditions of the Gauss-Markov Theorem. OLS for this regression is called LSDV (Least-Squares Dummy Variables), the within, or the Fixed Effects estimator. Assuming that  $X$  is non-stochastic, LSDV is unbiased, consistent, and linear efficient (Kunst, 2010).

The equation of the specified model for the fixed effects model becomes:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} + \dots + \beta_k X_{k,it} + \gamma_2 E_2 + \dots + \gamma_n E_n + u_{it}$$

Where  $Y_{it}$  is the dependent variable, in this case Gini index, where with  $i$  is denoted the country and with  $t$  the time.  $X_{1,it}$  represents the independent variables (described in Table 1 below), in this case the potential determinants of income inequality.  $E_n$  is the country  $n$ . Since they

are binary (dummies) we have  $n - 1$  entities included in the model.  $\gamma_n$  is the coefficient for the binary repressors (countries).  $u_{it}$  is the error term.

## 2.1 Data Description

The dataset covers an unbalanced panel of 18 CEE countries over the period 2003-2020 and the same are provided from the database of World Development Indicators – World Bank. The lack of data for GINI index before the year 2003 for this set of countries, limit the sample from 2003 to 2020. Even the last data is for the year 2020 for some countries, whereas for others 2019 and not afterwards. To prevent the loss of degrees of freedom because of those missing data, the moving average method (with factor 2) was used to supplement some of those missing observations, mostly for Gini index. This is one of the statistical techniques available for tackling issues with missing data, which is simple to apply, yet most suitable for this case.

Many economic variables are used in the models as control variables i.e., potential macroeconomic determinants of income inequality. These variables represent different factors related to the real sector, international trade, international integration, macro-financial stability, economic activity, and investment, as well as the government intervention.

The selection of the potential determinants is done by contemplating the most important macroeconomic indicators, and partially considering the empirical literature in the area. In its early phase, the analysis covered more than 15 control variables that potentially affect the income inequality, however, due to various reasons (missing data, or statistical insignificance), they were narrowed down to the following 12, presented in Table 1.

**Table 1: Description of variables**

Control variables	Indicator	Proxy indicator
Gini	Gini index	Income Inequality
GDP_pc	GDP per capita (constant 2010 US\$), t-1	Economic development
Unemp	Unemployment rate	
Inf	Inflation rate	
Cab	Current account balance (% of GDP)	International integration
Trade	Trade (% of GDP)	
Money	Broad money (% of GDP)	Financial stability
Rir	Real interest rate (%)	
FDI	Foreign Direct Investment, net inflows (% of GDP)	Investment
Gfcf	Gross fixed capital formation (% of GDP)	
Savings	Gross domestic savings (% of GDP)	Credit base

Gov_exp	General government final consumption expenditure (% of GDP)	Government intervention
Pop	Population growth rate	Population

The following Table 2 represents the descriptive statistics of the used variables in the empirical research.

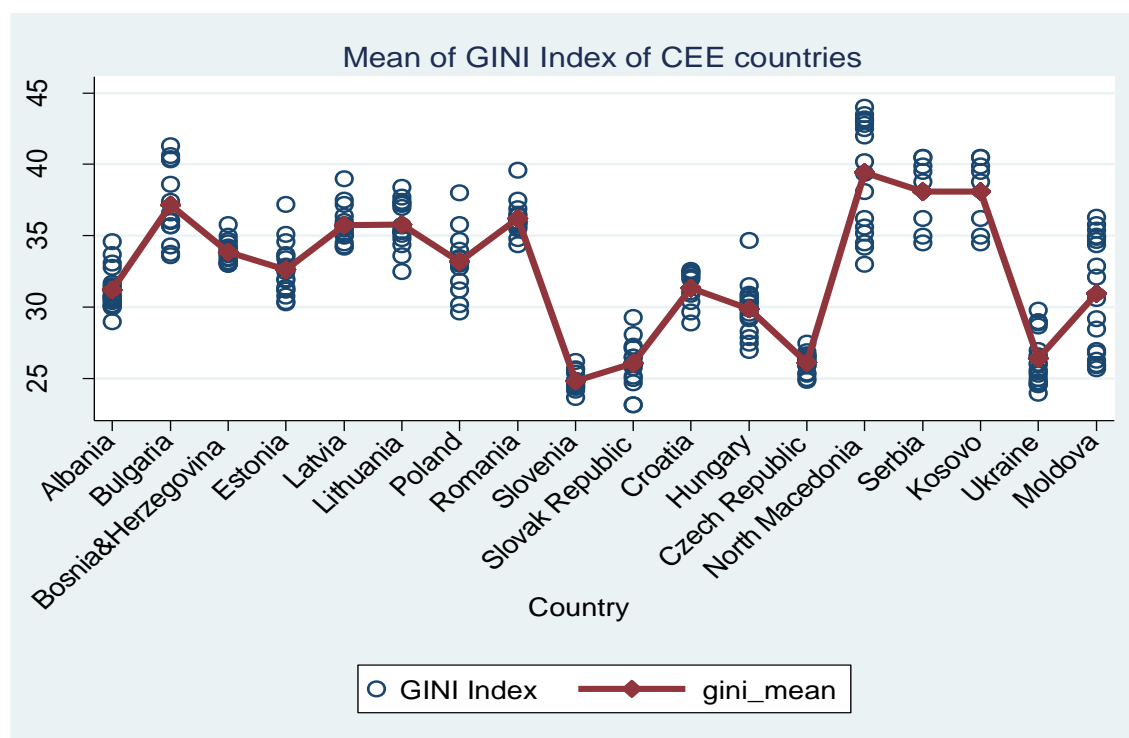
**Table 2: Descriptive Statistics**

Variable	Observation	Mean	St.Deviation	Min	Max
Gini	277	32.1768	4.8419	23.2	44
GDP_pc	354	9619.581	5840.439	1537.17	24744.84
Unemp	357	12.7934	9.2562	2.01	55
Inf	353	4.6275	5.3321	-9.6537	38.8816
Cab	349	-4.248908	5.5731	-25.74	10.2811
Trade	354	109.7159	31.4970	53.7102	189.804
Money	241	55.2410	15.9930	17.3587	94.2495
Rir	249	4.178772	5.0804	-13.5805	19.0926
FDI	349	5.4348	8.8920	-40.0866	106.6026
Gfcf	351	23.6114	4.7173	12.4354	38.0702
Savings	349	20.6339	5.1987	3.6798	32.7159
Gov_exp	354	18.1041	2.9085	10.1252	24.1865
Pop	360	-0.3918	0.6096	-3.7423	0.9038

Source: Author's calculations

In the Graph 1 is displayed the mean of Gini index as a measure of income inequality of CEEC for the period 2003-2020, observing for the country's heterogeneity. Based on the results in the graph, one can conclude that the countries with lower income inequality from this set of countries are Slovenia, Czech Republic, and Slovak Republic, followed by Ukraine, Croatia, Hungary, and Moldova, while the countries with higher income inequality are North Macedonia, Serbia, and Kosovo, whereas the other countries are in the middle of the pack. Most CEE countries have marked a decline in income inequality based on the last data. Trade openness and neoliberalism in general suggest that with growth, income distribution would also even out eventually, and so data shows that this holds for these countries.

**Graph 1. Mean of Gini Index of CEE countries for the period 2003-2020**



Source: Author's calculations

### 3 RESULTS AND DISCUSSION

From the obtained results of the model estimation, presented in the following Table 3, we can see that the unrestricted Model 1 for GINI index is statistically significant (F-statistics=44.42, with p-value=0) and it is well fitted (R-squared coefficient=0.8747 and Adjusted R-squared coefficient=0.8550). However, one can note that there are several insignificant variables in the unrestricted model, or variables whose coefficients have p-values greater than 0.05. Therefore, these variables are gradually excluded from the model, meaning that their coefficients are restricted to be equal to 0. After exclusion of those redundant variables, the overall statistical significance and model fit have not significantly changed. The F-statistics in the restricted Model 2 is 57.32, whereas the adjusted R-squared coefficient is 0.8545. According to the restricted (final) model, Gini index in the CEE countries primarily depends on factors related to economic development, general government consumption expenditures, current account balance, real interest rate, and the population. The coefficient of GDP per capita is negative and statistically significant, meaning that the increase of GDP per capita decreases the income inequality. Also, the findings of Causa et al. (2014) reveal that several growth-enhancing reforms contributed to contracted inequality by delivering stronger income gains for households at the bottom of the distribution compared with the average household, whereas Rubin and Segal (2015) find a positive relationship between growth and income inequality. Although countries of CEE show an increase in economic growth and income per capita over time, they would still experience Kuznets curve, which indicates that countries at the beginning of their growth will experience a high-income inequality, which should then be followed by a decline in it, as the economic growth starts to even out. Nevertheless, many of the countries have faced sustained lack of growth due to several factors. As growth is a prerequisite for improved standards of living, and decreasing inequality, according to Kuznets

(1955), there is a need to review determinants that contribute to the increasing income inequalities for the most of CEE countries. These include political instability, populism, poor educational indicators, and corruption.

The unemployment rate is positively related with Gini index, that means, for one unit increase of the unemployment rate, the income inequality increases by 0.15 units, holding the other factors unchanged. Sheng (2011) also finds a positive correlation between unemployment and income inequality. Inflation rate also increases the income inequality as its coefficient is positive and statistically significant. This result is in line with findings of Nantob (2015) that finds that higher inflation is associated with higher income inequality. Whereby general government consumption expenditures have significant negative impact, implying that the increase of government expenditures decreases the income inequality. Likewise, the findings of Sidek (2021) advocate that government expenditure shrink income inequality and results from developed countries support the inverted U-shaped Kuznet curve where higher government expenditure initially led to more inequality but would eventually bring about a positive effect after a certain threshold level. The real interest rate is positively related with Gini index, suggesting that the increase of real interest rate increases the income inequality. Similarly, Bozik (2019) finds that increase in the real interest rate leads to increase in income distribution and thus worsens income distribution in developed countries. Furthermore, the population growth rate is also positively correlated with Gini index, whereas current account balance has significant negative impact, with estimated coefficient of around 0.14. Broad money, gross fixed capital formation, FDI, savings and trade do not show any statistical significance for this sample of data. The relationships between Gini index and the estimated determinants can be further confirmed by the OLS plot and fitted lines for GDP per capita, unemployment rate, government expenditures, real interest rate, and current account balance displayed in Graph 2, respectively.

**Table 3. Panel regression results based on LSDV method**

<b>DV: Gini index</b>	<b>Model 1</b>		<b>Model 2</b>	
<b>Variable</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>
GDP_pcg	-1.2627	0.000	-1.2218	0.000
Unemp	0.1340	0.074	0.1463	0.016
Inf	0.2111	0.005	0.1460	0.021
Gov_exp	-0.5751	0.000	-0.6275	0.000
Cab	-0.2089	0.018	-0.1392	0.000
Rir	0.1830	0.019	0.1162	0.079
Pop	1.0007	0.026	1.0444	0.014
FDI	0.0093	0.576	-0.1992	0.132
Money	0.0314	0.261	-	-
Gfcf	0.0415	0.631	-	-
Savings	-0.1149	0.238	-	-
Trade	0.0145	0.378	-	-
Observations	316		316	
R-squared	0.8747		0.8697	

Adjusted R-squared	0.8550	0.8545
F-statistic	44.42	57.32
Prob(F-statistic)	0.0000	0.0000

Source: Author's calculation

The fixed effects for each country are presented in Table 4. The effects of independent variables, i.e., determinants are mediated by the differences across countries. By adding the dummy for each country, we are estimating the pure effect of independent variables (by controlling for the unobserved heterogeneity). Each dummy is absorbing the effects particular to each country. In the LSDV model we obtain a common intercept and  $n-1$  binary regressors, meaning that the first country's fixed effects are omitted in the estimation procedure. The source of binary regressors come from the unobserved variable  $Z_i$  that varies across states but not over time.

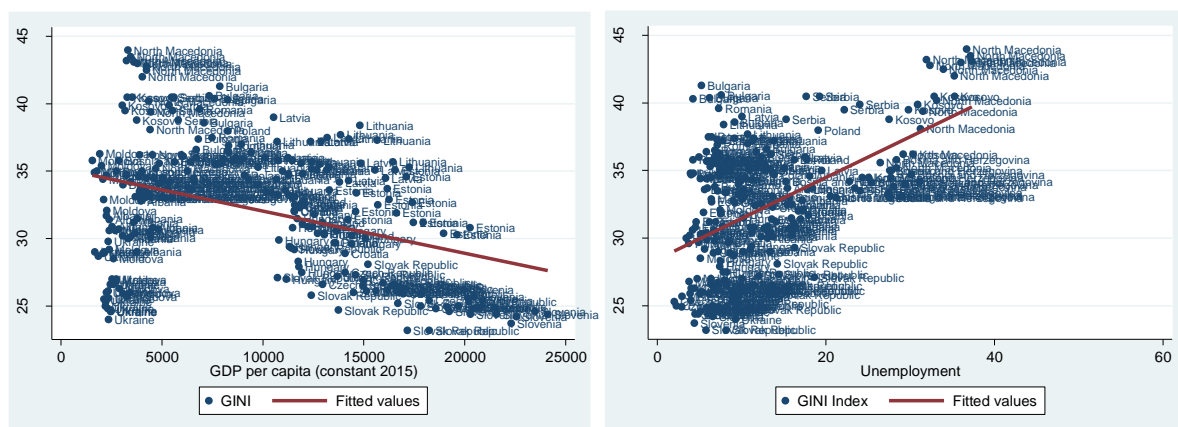
**Table 4. The coefficients for the binary repressors (countries)**

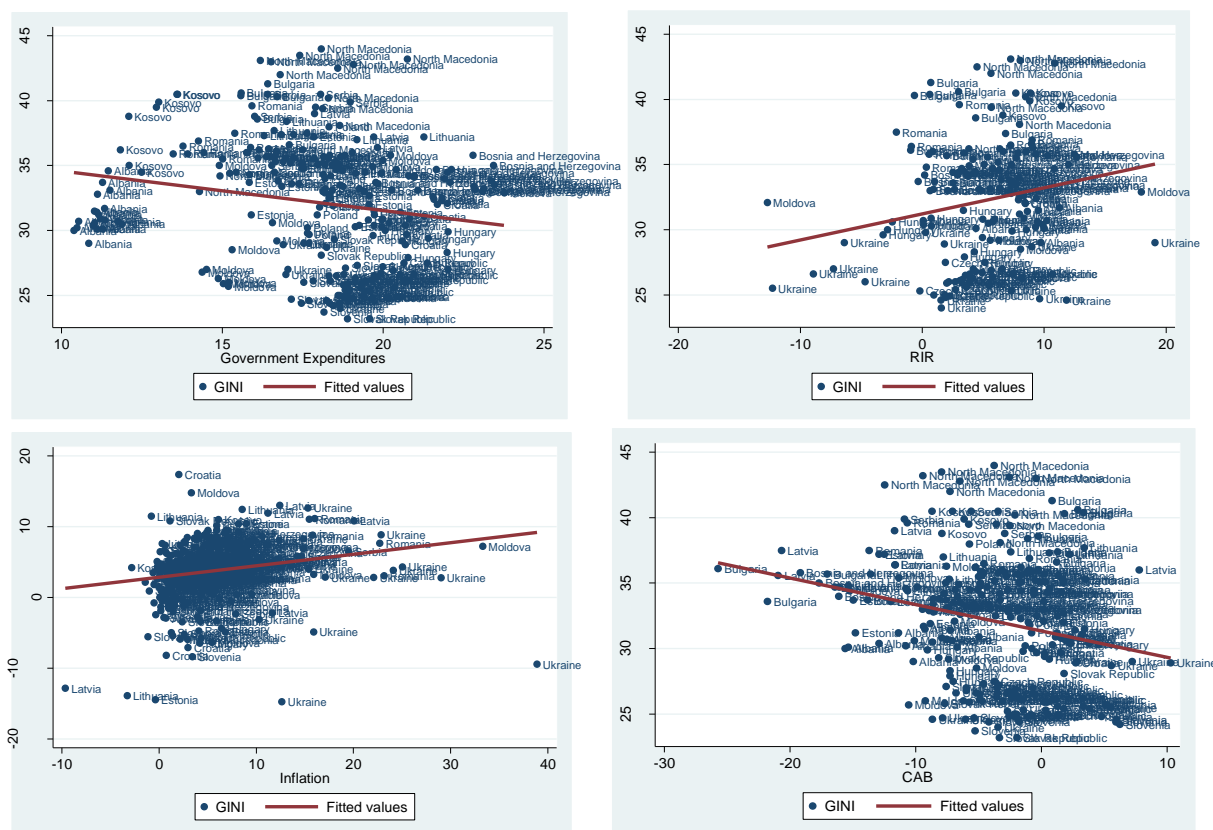
Country	Coefficient	Country	Coefficient	Country	Coefficient
Albania	-	Estonia	-4.680837***	Czech R.	5.649321**
Bulgaria	-3.997842**	Latvia	-9.520323***	Slovak R.	3.772147**
Bosnia & Herzegovina	3.166157**	Lithuania	-5.261228**	Slovenia	-2.995342**
Kosovo	-8.536128*	Romania	5.116453***	Hungary	1.710807
North Macedonia	4.448402**	Moldova	-10.51749***	Poland	-6.774403**
Serbia	-11.62192**	Ukraine	7.242513**	Croatia	-3.653973*

\*, \*\*, and \*\*\* represent the rejection of null hypothesis in the level of significance of 10%; 5%; and 1%, respectively.

Source: Author's calculations

**Graph 2 OLS plot of the Macroeconomic Determinants of Income Inequality in CEE countries**





Source: Author's calculations

#### 4 LIMITATIONS OF THE STUDY

The methodological approach, as elaborated above, has two major limitations. Namely, missing data, primarily for Gini index, leads to significant decrease in the sample size, thus losing valuable degrees of freedom. Also, missing data for some finance variables, such as non-performing loans and capital adequacy ratio, significantly narrow the analysis, which can cause omission of relevant variables from the models. Also, other factors, such as political and social are not considered, but the analysis primarily focuses on macroeconomic factors.

#### CONCLUSION

In CEE countries based on the data from various sources, it can be argued that since the late 1990s and on, when neoliberal ideology and economic globalization were introduced, and economic transition started, income inequality has been on the rise. The levels of income inequalities differ between countries, as do the factors that contributed specifically to the rise of income inequality in each country, but the consequences are similar in all the countries of Central and Eastern Europe.

The empirical analysis of this study reveals that income inequality in this set of countries primarily depends on factors related to economic development, GDP per capita, unemployment, inflation, general government consumption expenditures, current account balance, real interest rate and population. This analysis focuses on macroeconomic determinants, whereas political, social, and other factors are subject of further research.

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# Automotive outward FDI from the Visegrad countries and Austria: Do indigenous companies invest abroad?

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**Abstract:** Austria, Czechia, Hungary, Poland, and Slovakia have a relatively substantial outward FDI stock in the automotive industry. This may be a sign of increased competitiveness of indigenous automotive companies, but can be the result of other factors as well. Outward FDI data are analysed in the paper and compared with FATS data and company level data, taking into account their different content. Based on this comparative analysis, we conclude, that - opposed to the case of Austria and to some extent Poland and later on Czechia - the overwhelming majority of outward FDI realised from the other Visegrad countries in the automotive industry is actually realised by local subsidiaries of large foreign automakers, participating in global value chains, while indigenous firms hardly expand abroad through FDI. Developments over time are also highlighted, leading to changes in the position of Czechia in that respect. We highlight that the Visegrad countries are used to different extent as intermediary countries for outward investments of foreign multinationals. The reasons most likely include, besides the most often mentioned tax optimisation motivation, organisational reasons related to global value chains. Thus domestic firms represent none or a minor share of automotive outward FDI. That is why outward FDI is not a direct indicator of the international competitiveness of domestic firms in the Visegrad countries.

**Keywords:** automotive industry, outward foreign direct investments, Visegrad countries, Austria, tax optimisation, global value chains

**JEL Classification codes:** F21, F23, L62

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## INTRODUCTION

Czechia, Hungary, Poland and Slovakia – the Visegrad countries – are important players in the European automotive industry and by now they have become quite important outward investors in this industry. On one hand they represent around one sixth of European Union automotive production and around one fifth of European Union automotive employment, on the other hand, while these countries are still less important homes to outward FDI compared to their Western neighbors, automotive outward FDI is increasingly present, representing between 1.3 to 2.9 % of the total outward FDI stock and being one of the leading manufacturing sectors of outward FDI. Our main research question is whether there is a direct link between the increased importance of automotive production in these countries and their increased outward FDI in this industry, more specifically if domestically-owned or controlled automotive companies in the Visegrad countries have become so competitive over time that they are now able to successfully invest abroad and thus increase outward FDI in the industry. In our analysis, we point to the fact, that in certain countries, this increased outward FDI

activity is carried out partially or fully by locally operational, but foreign-owned companies, thus the domestically-owned or controlled firms carry out either no outward FDI or are responsible for just a part of outward FDI. In this paper, we analyze the Visegrad countries together with Austria, a developed economy, which is home to 'older' multinationals in and more integrated into the international networks of the analyzed industry and thus provides a good comparative case. We use a simple statistical comparison of data from various data sources, taking into account their different content and coverage and supplement this analysis with company-level information.

Our contribution to the literature is twofold: we show that increased outward FDI (balance of payments) is not necessarily reflecting increased international competitiveness of the firms in the analyzed countries. Second, we call the attention to the importance of the analysis of indirect outward FDI in general and in the automotive industry in particular.

Our paper is organized as follows. First we present the background to our study and a short review of the relevant literature. In the next section, the methodology is presented. The following section shows the results of the macro-level and then company-level analyses, followed by a short discussion. Lastly, conclusions, the limitations of our approach as well as potential avenues for further research are presented.

## **1 BACKGROUND AND REVIEW OF THE LITERATURE**

Automotive activities are not new in Austria, nor in the Visegrad countries. In the planned economy period, one of the strategic aims was to establish and nurture a local automotive or rather vehicle industry. Czechoslovakia and Poland at that time had their own brands, while Hungary specialized in bus production (Havas, 2000). After the transition process started in 1989-90, with different timing in the four countries, foreign automotive investors acquired or established through greenfield investments their production plants. The main reasons for their interest was the availability of relatively skilled but cheap labor in an increasingly liberalized market economy environment with flexible labor regulations and industry traditions in a geographically close market, which has become increasingly integrated into the European Union and offered various and generous incentives to investors – and thus they could build these newly available locations into their corporate strategies and networks (Pavlínek et al., 2009; Pavlínek, 2019). While Austria belongs to the automotive semi-periphery of Europe, the Visegrad countries are rather part of the integrated periphery, with Czechia oscillating between the two categories (Pavlínek, 2022). The position of the analyzed countries had not changed substantially during the bleak years of the 2008-9 financial crisis: multinationals did not relocate their activity from Hungary to lower-wage countries (and the case was similar for the other analyzed economies), which can be explained mainly by the fact that they have realized additional investments, labor market regulation and government policy were increasingly beneficial for them, and there were too few alternative sites of relocation (Rugraff & Sass, 2016). Similarly, the COVID-crisis has not induced substantial relocations. Thus the industry remained dominant in the region, in spite of the depressing effects of the various crises. The Visegrad countries play an important role now in the automotive industry of the European Union and even of the world economy as the data presented in the Introduction indicate, and on the other hand, the automotive industry is dominant in their manufacturing industry in terms of production, employment and exports (Éltető et al., 2015; Gáspár et al., 2023). Many question marks arise in connection with the consequences of the transition to electric vehicles for these economies, which may be a slow process with considerable risks and potential job losses (Pavlínek, 2023), but may not change substantially the integrated periphery status of the analyzed Visegrad countries and the semi-periphery status of Austria.

Outward FDI in the Visegrad automotive industry and the activities of the investing firms are rarely analyzed in the literature. In the case of Poland, Domanski et al. (2008) showed the negligible outward FDI in the automotive industry from Poland at that time, dwarfed by incoming automotive FDI. Radlo (2012) noted the presence of a Polish emerging automotive multinational. In a detailed recent case study, Micek et al. (2021) found that the international expansion of domestic-owned Polish firms, including in the automotive industry is determined by three mechanisms: first, the development of Central-Eastern European economies, second, the evolution of the Western European core, and third, the trajectory of individual Polish firms. There is a dynamic interdependence between firm-specific capabilities and the changing characteristics of the countries. They note that the outward expansion of Polish automotive firms started in 2010, it first targeted mainly Eastern European countries with export-platform type FDI, and later on Western European (market-seeking) and non-European (follow-the client) markets. It was based on an organic growth of companies beginning as suppliers for foreign MNCs and/or leaders in the domestic market. They also mention the relatively small size of these firms and thus their limited impact on the Polish automotive industry. They name Wielton, Sanok and Groclin as leading outward investing Polish firms. In the case of Czechia, Zemplerova (2012) noted the dominance of indirect outward FDI in the Czech automotive sector at that time, dominated mainly by the foreign investments of the German-owned Škoda company in faraway countries, including India. Škoda now has its own production operations in countries like India, Ukraine, Bosnia-Herzegovina and elsewhere (Gazo et al., 2021). In the case of Hungary, the lack of competitive domestic-owned automotive companies is noted. Sass & Vlčkova (2019) mention the case of Videoton, a domestic-owned electronics manufacturing service provider firms, which is an outward investing firm as well (Bulgaria and a joint venture in Ukraine, this latter closed down) and is an automotive supplier, but its main activity is in electronics. In another paper, Sass (2020) I noted for the Visegrad countries, that with the partial exception of Poland, their automotive outward FDI is realized by local subsidiaries of foreign multinationals. That was completely the case of Hungary, where there are no domestic firms among the foreign investors.

Some of the previous studies already noted that in the automotive industry, indirect outward FDI is present in the Visegrad countries. Indirect FDI is an investment abroad undertaken by an affiliate of a foreign multinational company that has been established in a different host country from that of the host country of the new investment. Direct outward FDI on the other hand is realized by indigenous (domestic-owned or controlled) firms. The importance of distinction between indirect and direct outward FDI is explained through showing that their motivations, impact on the home and host economies may differ (UNCTAD, 1998; Bellak, 1998; Kalotay, 2012), and of course, their ownership background can be completely different. Furthermore, the importance of this distinction is underlined by the fact that both direct and indirect FDI is included in the outward FDI statistics of a given country, presented in the balance of payments (Bellak, 1998). Thus outward FDI data in the balance of payments are not equal to outward investments realized by indigenous, domestically owned firms. It contains outward FDI by all locally operational (resident) firms, regardless of their ownership structure. According to the literature, at the aggregate level, in terms of the relative shares of domestically-owned or controlled companies and locally operational but foreign-owned subsidiaries in total outward FDI, countries vary. For example, Rugraff (2010) has highlighted that the outward direct versus indirect FDI composition of the Visegrad countries differs from each other. This is confirmed by other studies, which showed that in the case of Slovenia (Jaklič & Svetličič, 2009) and Poland (Kaliszuk & Wancio, 2013), it is mainly locally-owned firms that invest abroad. In contrast, in the case of Hungary (Antalóczy & Éltető, 2003; Szalavetz, 2010), foreign-owned subsidiaries may dominate, while in Czechia, the nature of this composition is rather ambiguous (Zemplerova, 2012; Sass & Vlčkova, 2019). These latter papers address the topic of indirect outward FDI at the macro level, we could not come across studies on the automotive industry.

## **2 METHODOLOGY**

We have extended and updated the analysis presented in Sass (2020). Thus first, we rely on a simple comparison of statistical data, taking into account their different content and drawing conclusion from differences between them. We compare the set on host countries of outward FDI in the balance of payments FDI data and in the FATS data (foreign affiliate statistics), as detailed below. Second, we supplement our analysis with company cases from the five analyzed countries. We define automotive industry as NACE C29, concentrating on the carmakers, and exclude components makers and those producing commercial vehicles. This is with the aim of simplifying the analysis.

Furthermore, we rely on the above mentioned concept of indirect outward FDI (Kalotay, 2012). Indirect FDI is an investment abroad undertaken by a subsidiary of a foreign multinational company that has been established in a different host country from that of the host country of the new investment. Due to the principles of the balance payments (recording transactions between residents and nonresidents), both direct and indirect FDI is included in the outward FDI statistics of a given country under one heading. Thus, in our case, foreign investment projects undertaken both by indigenous Visegrad/Austrian multinationals and by local subsidiaries of foreign multinationals are included in the data. In the macro analysis, we rely on data on outward FDI presented in the balance of payments at the same industry classification (NACE C29). As this data contains the amount of both direct and indirect outward FDI, i.e. all resident domestically-owned or controlled firms and those of local subsidiaries of foreign multinationals, we supplement and compare this data with other datasets. First, the most important Visegrad home countries of automotive outward FDI are identified on the basis of the Eurostat data on outward FDI at the industry level. Second, FATS data are used to present the host countries of ultimately Visegrad/Austrian-owned subsidiaries and compared with the host countries of the balance of payments FDI data with the aim of underlining the differences. Third, a few important outward investing firms are identified and analyzed based on available sources (company websites, balance sheets, case studies, articles in specialized journals). Information from these different sources is then compared and analyzed and conclusions are drawn.

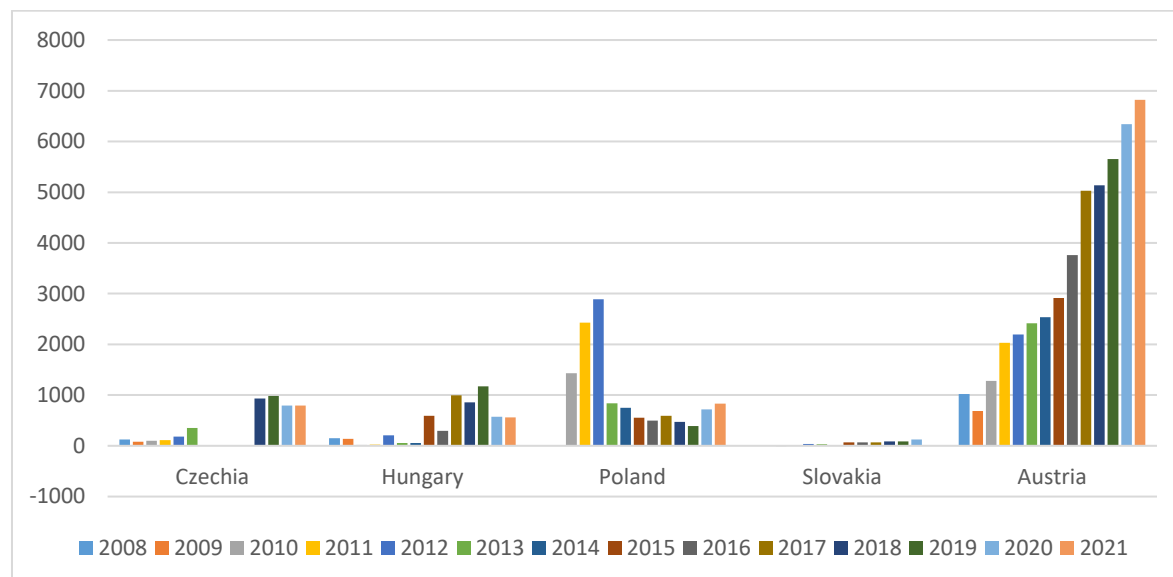
## **3 ANALYSIS AND RESULTS**

Our methodology is based on the comparison of statistical data taking into account their various content and coverage and in a supplementary manner, we add some company level information. First, various macro-level data on the stock of FDI and on host countries are presented, analyzed and compared concerning the outward FDI in the automotive industry from the four Visegrad countries and Austria. Then, to get a fuller picture, we go down to the company level and identify companies carrying out direct outward FDI (realized by domestically owned firms) and indirect outward FDI (realized by local subsidiaries of foreign multinational companies) in the analyzed countries.

In total outward FDI, and within that in manufacturing outward FDI, the automotive industry plays a relatively important role in the four countries (Fig. 1). According to OECD data, in 2021 it represented 1.5 % of total in Czechia; 1.3 % in Hungary, 2.9 % (2018) in Poland, 2.5 % in Austria and 2.3% (2020) in Slovakia. (For Poland and Slovakia, the latest available data are presented.) At the end of the period, Austria had the highest stock, followed by Poland, Czechia and Hungary. An interesting feature of Figure 1 is that – with the exception of Austria and to some extent Slovakia, which has the smallest investment among the five countries - outward stock data behave in a “chaotic” way, they fluctuate extensively from year to year. This may

reflect, that other than the traditional outward FDI shaping (level of development, competitiveness of local firms etc.) factors are at play and affect outward FDI and also the ongoing and intense consolidation process in the industry.

**Fig. 1 Outward FDI positions in the automotive industry, selected economies, 2008-2021 (million USD)**



Source: FDI positions by industry BMD 4, OECD inward and outward FDI by industry  
<https://stats.oecd.org/Index.aspx?QueryId=64238#>

In order to have an idea about the differences between direct and indirect outward automotive FDI, we compare their host countries. On one hand those host countries, which are listed in the balance of payments related FDI statistics, containing both direct and indirect outward FDI's host economies (outward direct investment by resident entities) with more than 10 % ownership shares, and on the other hand, host economies according to FATS data, which are put together according to the ultimate owners' nationality principle. Thus, they present data on the host economies of those automotive FDI, of which the ultimate controlling owner is located in the analyzed countries, i.e. just direct outward FDI (plus outward FDI, ultimately owned by the companies of the country in question, but getting to the host country via an intermediary country) (Table 1). Controlling owner refers to above 50 % ownership share.

**Table 1 Host countries of automotive outward FDI from the selected economies according to BOP outward FDI statistics and FATS (2020)**

	BOP OFDI, host countries	FATS host countries
Czechia	Germany, France, Italy, Hungary, Slovakia, Finland, Russia, Hong Kong, India	US, China
Hungary	Germany, Spain, Italy, Poland	-
Poland	Belgium, Czechia, Germany, Greece, France, Italy, Latvia, Lithuania, Netherlands, Portugal, Slovakia, Finland, Sweden, Norway, Switzerland, Turkey, Russia, Morocco, Canada, US,	EU (Czechia, Germany, Spain, France, Italy, Netherlands), Russia, China, Brazil, India

	Mexico, Brazil, China, Hong Kong, India	
Slovakia	Czechia	©
Austria	confidential	EU (Belgium, Bulgaria, Czechia, Denmark, Germany, Spain, France, Croatia, Italy, Hungary, Netherlands, Poland, Portugal, Romania, Slovenia, Sweden), Norway, Switzerland, Russia, Canada, Brazil, China, US, Japan

Source: Eurostat

According to BOP data, with the exception of Slovakia, all countries had quite geographically diverse country-targets of outward automotive FDI. Though the main target countries are in Europe, we can find certain Asian and African countries on these lists in the case of Czechia and Poland. The fact that data for Austria are confidential shows that there can be just a few destination countries of outward automotive FDI from this country. However, FATS data, based on the nationality of the ultimate controlling owners of automotive projects, show a completely different pattern. Hungary had no ultimately controlled outward FDI in the analyzed industry according to FATS, this indicates that in this economy, it is only indirect FDI, which had been realized by locally operational subsidiaries of foreign-owned multinational companies up till 2020. Thus domestically owned or controlled firms have not invested abroad. On the other hand, in Poland and Austria, outward investments in the analyzed industry are substantial by domestically owned or controlled firms (direct outward FDI) and are spread over a relatively large set of countries, again, mainly in Europe, but a few countries in other continents are also included in these lists. Furthermore, Czechia and Slovakia are somewhere in-between these two extremes. There are some outward investment projects from Czechia by ultimately Czech-owned firms, outside Europe. In the case of Slovakia, we can assume that data are confidential, because there is only one target country (and maybe one relevant project).

We already mentioned the fluctuation and changes over time in connection with BOP data (Figure 1). This is reinforced by the data presented in Table 2, which is based on FATS data and thus contains the number of ultimately Visegrad and Austria-owned and controlled subsidiaries in foreign countries in the automotive industry. For Hungary, data denote the same: no outward automotive FDI by domestic-owned firms. The high number of domestic-owned firms investing abroad is present in Poland and especially in Austria. The number of domestic-owned firms is low and in one year even zero in the case of Czechia and confidentially low (1 or 2 firms up till 2019) in Slovakia. This shows the same pattern, with domestic firms active in outward expansion in Poland and Austria, no outward expansion in Hungary and in-between cases of Czechia and Slovakia. For the two latter countries this may indicate that domestic-owned firms in these countries started their foreign expansion through FDI just recently – as it can be denoted based on data for earlier years in Sass (2020).

**Table 2 Number of ultimately domestic-owned automotive firms with foreign controlled assets (2017-2020)**

	2017	2018	2019	2020
Austria	107	111	97	187
Czechia	3	c	0	5
Hungary	0	0	0	0
Poland	28	14	13	16
Slovakia	c	c	c	4

Source: Eurostat

In order to have a fuller picture, we identified certain important foreign investor firms in the analyzed countries (Table 3). We could not identify any of the 5 foreign investor automotive firms in Slovakia. In the other countries, the collected information is in line with the respective data of Table 1. We could identify foreign-owned firms in Czechia and Hungary, which are important foreign investors (indirect outward FDI). However, we could not identify the 3 domestic-owned foreign investing firms in Czechia. In the case of Austria and Poland, we identified important domestically-owned foreign investing firms. We can find correspondence between the foreign investment locations as well between Table 1 and Table 3 for Austria and Poland. In the Polish case, the selected company is also mentioned by Micek et al. (2021) as one of the leading automotive outward investors. Inconsistencies between tables may be the result of the fact, that companies report even minority-owned affiliates, while these are not included in the FATS statistics (there the threshold level is 50 % ownership share). Another reason can be, that outward investments can be indirect, i.e. going through other countries before reaching their final host country. Based on the findings of Sass and Vlcková (2019) that may be the reason why we could not find Czech-owned foreign investing firms as they may go abroad through their foreign holding companies for tax optimization and institutional reasons. A noteworthy observation is that both foreign-owned and domestically-owned foreign investing companies tend to invest in other Visegrad locations too, which signals the presence and importance of regional value chains in Central Europe. However, Polish and Austrian (and more recently Czech) foreign investing firms venture further away from the region.

**Table 3 Company cases from the analyzed countries**

Company name	Activity	Country	Ultimate owner's nationality	Foreign investment locations (of the Visegrad parent or subsidiary)
Hirschmann Automotive	car parts production	Austria	Austrian	Czechia, Romania, Morocco, Germany, Mexico, China
MIBA AG	car parts production	Austria	Austrian	Slovakia, USA, China, Brazil, India, Germany, Czechia, Slovenia
Škoda	car production	Czechia	German	Slovakia, India
Lear Corporation	car parts production	Hungary	United States	Poland
Wielton SA	semi-trailers, trailers and car bodies manufacturer	Poland	Polish	France, Germany, United Kingdom, Spain, Italy, Russia; Ivory Coast

Source: company websites, annual reports and balance sheet data

All companies are operational in the automotive industry (Table 3), highly integrated in mainly European automotive value chains, but also – according to the list of the foreign locations –



they expand to other continents. In line with Micek et al. (2021), this can be motivated by establishing export-platform type of operations. In the case of the Austrian and Polish carmakers, they go abroad in order to expand their own value chains – or, besides that, in the case of the Austrian company, to provide the parts locally to their partners. Thus the efficiency-seeking and follow-client motives can also be present and there can be links to the operations of global value chains in the industry, which must be explored further.

## **4 DISCUSSION**

The presence of indirect outward FDI in the Visegrad countries has been highlighted by macro-level studies (among others Rugraff, 2010; Zemplerova, 2012; Sass & Vlčkova, 2019). Various studies also highlighted the different composition in terms of direct versus indirect outward FDI in the analyzed economies (Rugraff, 2010). We could reinforce both the presence of indirect outward FDI and the different direct-indirect outward FDI composition in the Visegrad economies at the industry level, in the automotive industry. We found that there can be a few indigenous, domestic-owned firms, which invest abroad in the automotive industry, in line with the findings of Micek et al. (2021) for Poland. Thus we can state that increased outward FDI is not necessarily a sign of increased competitiveness of indigenous firms, due to the (strong) presence of indirect outward FDI, when locally operational foreign-owned subsidiaries invest abroad. Furthermore, similarly to the Polish case (shown in Micek et al., 2021), in the other three Visegrad countries it is also true that increased competitiveness of domestic-owned firms translates itself very slowly in increased outward FDI. For this latter we show that in Czechia and Slovakia, it is only quite recently that a low number of domestic-owned firms invest abroad. In Hungary, on the other hand, this increased competitiveness in the industry has not nurtured yet any domestic-owned multinational company. Thus the Visegrad countries belong to different groups: in Poland, a relatively high number of domestic-owned automotive firms invested abroad, in Czechia and Slovakia a very low number started that process recently, while in Hungary there are none. Thus the indirect-direct automotive outward composition really differs: in Poland the share of direct in total is estimated to be the highest one among the 4 countries (similarly to Austria), Czechia and Slovakia have a minor direct share, whereas Hungary has no direct just indirect automotive outward FDI. The reasons for the different composition can be various. Micek et al. (2021) document how the increase in competitiveness of Polish firms was helped by inward FDI (through local firms becoming suppliers to foreign multinationals' subsidiaries) and by government programmes. The actual mechanisms need further investigation.

Another interesting takeaway is how fragile the position of these outward investing firms is: the annual fluctuation of the number of domestic-owned outward investing firms is high, even in the case of the country with the longest outward investing history: Austria. This may be explained by the ongoing consolidation, mergers and acquisitions in the industry, which faces many challenges from regulations (ecars) and technology changes. Another area which needs further investigations.

Another main point concerns the data. Outward FDI data may be shaped and influenced by various factors, not only by the competitiveness of domestic-owned firms. One reason for that is that BOP FDI data contain outward direct investments realized by resident firms, i.e. domestic-owned as well as foreign-owned firms, operating in the country in question. According to our data, indirect outward FDI (i.e. those by locally operational, foreign-owned subsidiaries) dominate automotive outward FDI in the Visegrad countries, with a possible exception of Poland. The company cases of Škoda, dominating Czech outward FDI and Lear Corporation, representing around one-third of Hungarian automotive outward FDI stock, are two outstanding cases. In these companies, for Škoda, the relative independence of the company with own model and GVC (Gazo et al., 2021) may be an explanatory factor, for Lear,

tax optimization (given the favorable tax environment offered by Hungary) may explain that. Thus we could identify two other factors, which may influence outward FDI in the automotive industry besides the level of international competitiveness of domestic-owned firms: GVC-related organizational aspects and tax optimization reasons. It is important to note, that outward FDI data from the BOP can even be lower, than the value of foreign FDI projects ultimately controlled by the firms of the given country. At the macro level we can assume that for Czechia, whereby outward investments are realized by foreign holding companies and not from Czechia (Sass and Vlcková, 2019). This may be the case in the automotive industry as well, as we could not identify those five Czech automotive firms, which have controlled foreign investments. Similar can be the case for Slovakia.

## **CONCLUSION**

The Visegrad countries and Austria are relatively important outward investors in the automotive industry according to the balance of payments data, which may reflect the increased international competitiveness of domestic firms. Through a closer look at the outward FDI data, we have found, that automotive outward FDI is actually realized by local subsidiaries of large foreign automakers, while indigenous firms expand abroad through FDI to a more limited extent. The five analyzed countries differ in that respect: in the case of Hungary, we cannot find domestic carmakers, which would invest abroad. That was the case for Czechia and Slovakia, but by 2020, we can find a few outward investing domestic firms in these countries. On the other hand, in Austria and Poland, it is partly domestically-owned firms, which invest abroad. A selected number of company case studies reinforced our findings. Thus, at least up till 2020 until when the relevant data are available, the relatively large outward FDI stock in the automotive industry is a result of increased international competitiveness of indigenous firms just to a limited extent in the Visegrad countries, but it is rather indirect outward FDI realized by local subsidiaries of large automotive multinationals, due to various reasons, for example tax optimization or organizational reasons related to global value chains. Consequently, outward FDI is not necessarily a good measure to show outward FDI realized by domestically-owned firms and therefore the evolution of international competitiveness of domestically-owned firms. Another interesting point is the volatility of the number of outward investing, domestically controlled firms. This may refer to the fragility of factors of international competitiveness at the firm level as well as to the ongoing and constant consolidation in the industry.

Our analysis is limited due to the low number of company cases as well as due to the fact that FATS data are available with a considerable time lag, which meant that we had to rely on 2020 data. Changes since then may have led to more substantial outward FDI by indigenous firms in the three countries as well – as changes between 2017 and 2020 in Czechia and Slovakia indicated.

There are many possible avenues for further research, some of them already mentioned in the Discussion section. The dynamics of the changes could be further investigated. An important further analysis can be obtained by deeper examination of company cases may give us ideas about the main factors of competitiveness of domestic firms and the main reasons why foreign-owned firms chose indirect outward FDI.

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# Rail freight transport performance in the Central European region

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**Abstract:** Rail transport is an important branch of logistics that is widely supported by European and national institutions for its environmental friendliness and sustainability of operations. The relatively positive development of the economy in the past decade has allowed many states to increase the performance of rail freight transport. Unfortunately, the pandemic, energy crisis, and heightened global political tension slowed down the positive economic results at the end of the past decade. The paper aims to verify this statement and compare the performance of railway transport in the Central European region using the benchmarking method. At the same time, it points out some shortcomings in the influence of the state on the activities of railway transport operators and suggests possibilities for their improvement.

**Keywords:** rail freight transport, railroad transport performance, benchmarking, Central European region

**JEL Classification codes:** L92

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## INTRODUCTION

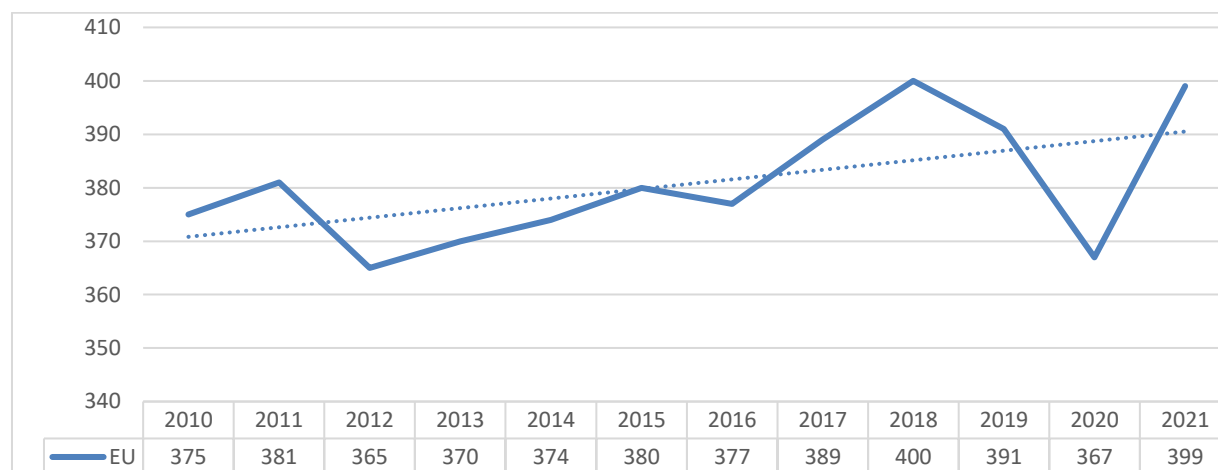
Ensuring the mobility of goods is an essential prerequisite for the proper functioning of the EU internal market and maintaining the high competitiveness of European industry and services. Functional mobility significantly helps economic growth in all sectors of the economy and contributes to the high level of employment of the population. However, with the development of transport, its negative impact on the environment and the quality of life of EU residents also increases. Transport performance in the EU, which has stabilized at roughly 2,300 billion tkm per year in the past decade, is about three-quarters provided by road truck transport (European Court of Auditors Report, 2016). The support of more efficient and environmentally friendly transport sectors is, therefore, a crucial part of the long-term transport policy of the EU and the individual member states. In the rail transport branch, the states' support primarily focused on the revitalization of the railway network and means of rail transport, as well as the transfer of cargo transport effected by road to rail routes and the inland waterway. A significant portion of the financial support of the Union is directed, among others, to the countries of Central Europe.

Rail freight transport is significantly more efficient and environmentally friendly than other modes of transportation if we measure it by ton-kilometers traveled per unit of energy consumed or greenhouse gases produced (International Energy Agency, 2017). However, moving goods by rail also has its downsides, as it involves transshipment expenses if the shipper or consignee has no direct rail access. The disadvantages mentioned can be partially eliminated by simplifying the transshipment of goods using unit trains or containerization. In some countries, railways are built and used to transport a specific type of goods or commodity

from a designated loading point to a final destination, such as from mines to an ocean port. Transport efficiency of this kind can be increased by using special railway freight cars. In these cases, freight trains are more energy economical and environmentally friendly, but their specific design reduces their usability.

The volume of goods transported by rail in the European Union gradually increased slightly over the past decade (see Fig. 1).

**Fig. 1: Rail freight transport performance EU 2010-2021 in billion ton-kilometers**



Source: Eurostat, 2022

However, the volume of transport carried out by road truck transport, which is about 4 - 4.5 times higher than rail transport, grew even faster. For this reason, the share of rail freight transport in the total transport volume in the EU continues to stagnate at around 10%. Despite many measures taken by the European authorities to improve the position of rail freight transport, the development of this transport branch is unsatisfactory. The situation aptly described in the European Court of Auditors report from 2016: *Rail freight transport in the EU: still not on track*, has not yet changed too significantly. Although rail freight transport has seen some positive changes over the past decade, it has been widely affected by the ongoing epidemic and other economic and political events. A more significant increase in flexibility, quality of transport services, and labor productivity was recorded relatively rarely.

Previous studies of this kind are mainly focused on evaluating the performance of individual rail transport operators in selected countries (Sharma, 2016, Wiegmanns, 2007 and others). In contrast, the present paper is based on the analysis of the performance of individual states. The state is the administrator and primarily the only investor in the railway infrastructure, which is also imposed on it by *White Paper: Roadmap to a Single European Transport Area* from 2010. In the Central European region, the state also acts as a decisive shareholder of the most essential railway freight transport operators and has a fundamental influence on their strategic decision-making. The paper can therefore serve as an incentive for the decision-making of state authorities in rail transport. The research question of this contribution can be formulated as follows: *How has rail freight transport in the Central European region developed under relatively favorable economic conditions in the past decade?* The research is based on an analysis of selected countries in Central Europe, specifically the Czech Republic, Slovakia, Poland, Austria, and Hungary. Germany was deliberately excluded from the study, as it is not considered comparable in terms of the geographically defined operational area, economic strength, and the focus of the activities of individual operators. The resulting evaluation is carried out by the benchmarking method, which shows the intensity of activities and the development of the markets in selected countries in the past decade. Only publicly available data were used to answer the research question.

## 1 THE POSITION OF RAILWAY FREIGHT TRANSPORT IN THE CENTRAL EUROPEAN REGION

Although railway transport in Central Europe is characterized by a long tradition dating back to the middle of the 19th century, it is characterized by significant technical and infrastructural diversity. This situation led to a lack of international integration and reduced the chance to offer flexible, reliable, and efficient services. Different types and voltages of electric traction, incompatible track gauges, disparate signaling and warning systems from country to country, and lengthy border controls still complicate cross-border traffic. For these and some other reasons, the railway network in Western Europe is better maintained and technically better equipped than in Central Europe. Although the share of rail freight transport in total inland transport performance in the EU decreased from 18% to 16% in the past decade, the level of involvement of Central European rail carriers remains relatively high. This share is around 22% in Poland and the Czech Republic, close to 30% in Slovakia and Hungary, and slightly exceeds this value in Austria (Eurostat, 2020).

The improvement of the technical equipment and the technologies used, such as the electrification of tracks, improvement of track security, the wide use of containers, and the deployment of unit and shuttle trains, took place in the past decade in the Central European region as well. However, increasing the competitiveness and fastening the position of rail freight transport depends not only on technical means but is closely related to the quality and range of provided services. The high quality of the offered services guarantees compliance with the transit time and reliability of deliveries. However, reducing transit time requires increasing the number of connections, the frequency of trains, and the wider use of modern means of transport and traffic management systems. It increases operating costs and brings the need for investments from providers and the state as well. At the same time, factors that can hinder the development of rail freight transport, such as limited track capacity or poor rail network connectivity, have also been identified (Barthel and Woxenius, 2004). Efforts must be made to improve the competitive position of rail freight transport and increase its efficiency by using all the supporting factors of development and gradually eliminating the negative ones.

The performance of rail freight transport in all EU countries, including Central Europe, is closely linked to the economic situation. The countries of Central Europe have plenty of common characteristics in terms of economic performance, focus, and available resources, which are largely influenced by a common historical development. The geographical location and political and economic situation are also reflected in the area and density of the railway network. The essential characteristics of the economy and the railway network in Central European countries are mentioned below in Table 1:

**Tab. 1 Economic characteristics of the Central European countries in the year 2021**

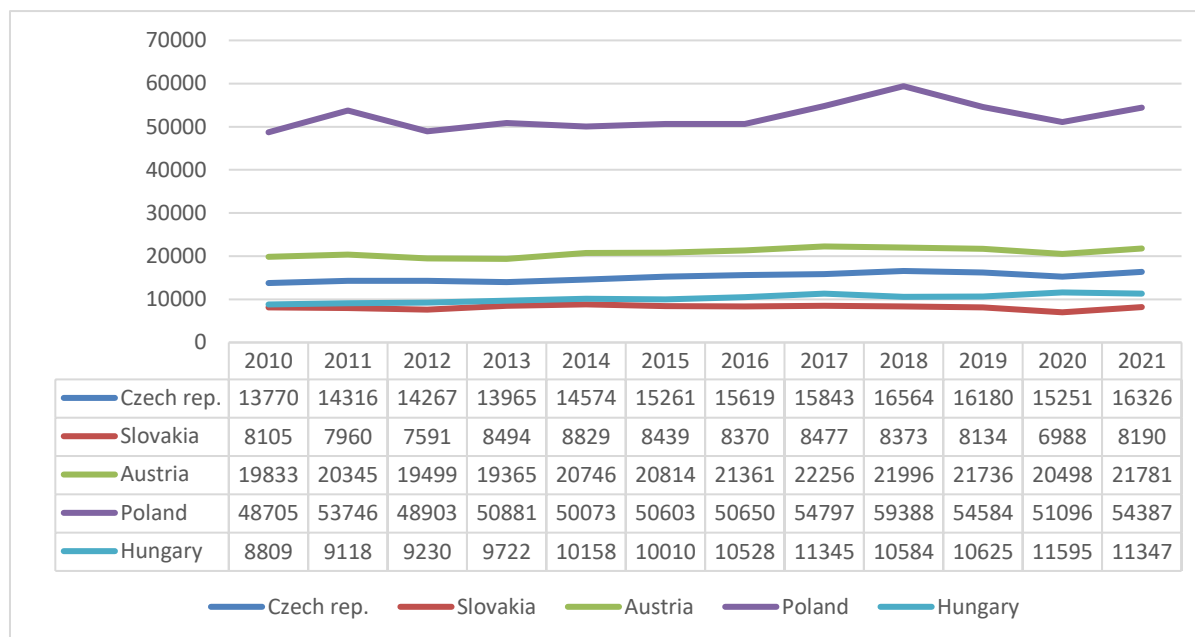
	<b>Czech rep.</b>	<b>Slovakia</b>	<b>Austria</b>	<b>Poland</b>	<b>Hungary</b>
<b>Lines length in km</b>	9 523	3 626	5 603	19 287	7 889
<b>Land area in mil. km<sup>2</sup></b>	78 866	49 036	83 858	312 685	93 030
<b>Population in thousands</b>	10 517	5 435	8 979	37 654	9 689
<b>GDP p.c. in mil. €</b>	18 020	15 920	36 950	13 760	13 690

Source: Eurostat 2022

The consequences of the global economic crisis of 2008-2009 were naturally reflected in the performance of rail transport, the volumes of which returned to their previous level only after 2010. However, the development was not smooth, and volume increases were relatively low.

The positive effects were unfortunately interrupted by the global epidemic, which brought a moderate drop in performance at the end of the monitored period (see Fig. 2).

**Fig. 2: Central European railways - performance in mil. tkm**



Source: Eurostat 2022

The development of the performance of rail freight transport in the Central European region in the past decade can be assessed as relatively positive. However, the share of rail transport in the total transport volume has hardly changed.

## 2 DEVELOPMENT OF EFFICIENCY OF RAILWAY FREIGHT TRANSPORT IN THE CENTRAL EUROPEAN REGION

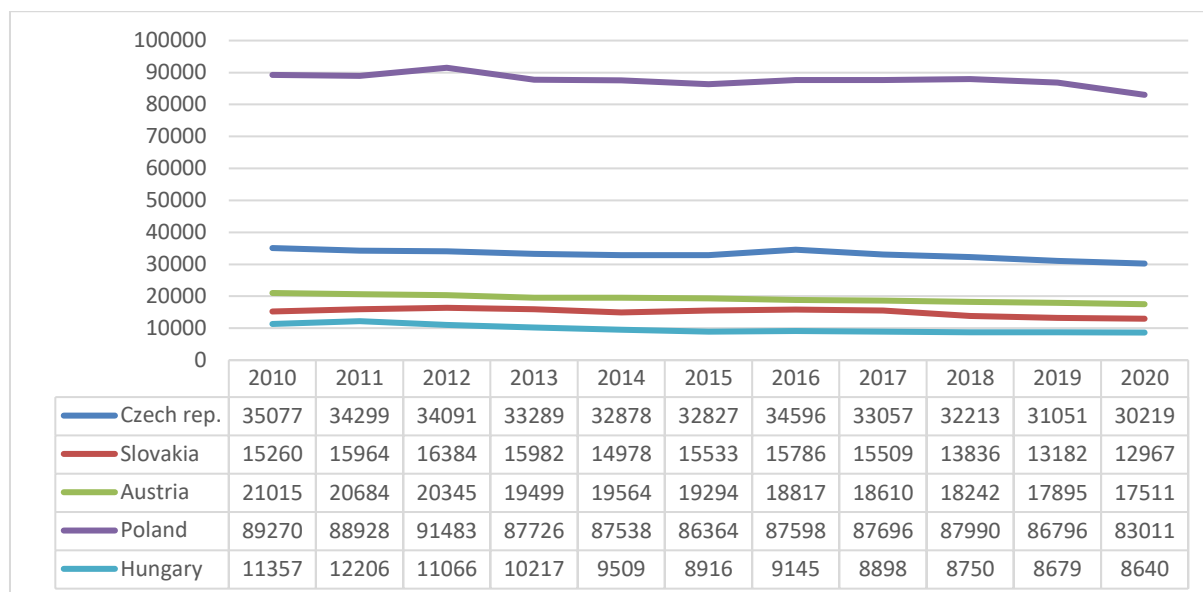
Effectiveness evaluation is traditionally based on assessing the relationship between input, process, output, and result. Inputs are material and non-material resources, such as production means, workforce, or intellectual property rights, used to obtain final results. Efficiency can be measured by comparing the results of the activity - outputs, expressed in the quantity or value of disposable goods or services, with the means used to acquire them – inputs. The use of inputs to obtain final results is linked to the application of various processes, which may be based on experience and custom or may contain innovative elements. For the purpose of this paper, efficiency can be defined as the ability of the specified inputs to ensure the requested outputs, i.e., to satisfy the specific needs of customers of rail freight transport.

The efficiency of rail freight transport depends on the ability to correctly use the available inputs (wagons, drive units, track lines) to achieve the expected outputs - i.e., the correct and timely movement of the entrusted cargo. Processes in freight transport should be organized to achieve optimal results with the minimum possible costs. Malfunctions can occur for various reasons, such as when too many inputs are used or their combination is unsuitable. The reason may also be the employees' insufficient motivation or the shareholders' irresponsible behavior. The expected output may also be missed due to unexpected events - e.g., weather, state interventions, or lack of information (McCarthy, 2001).

An essential input for rail freight transport is the number of freight rail cars (wagons) with which the entrusted goods can be transported. Their number decreased slightly over the past decade (see Fig. 3).



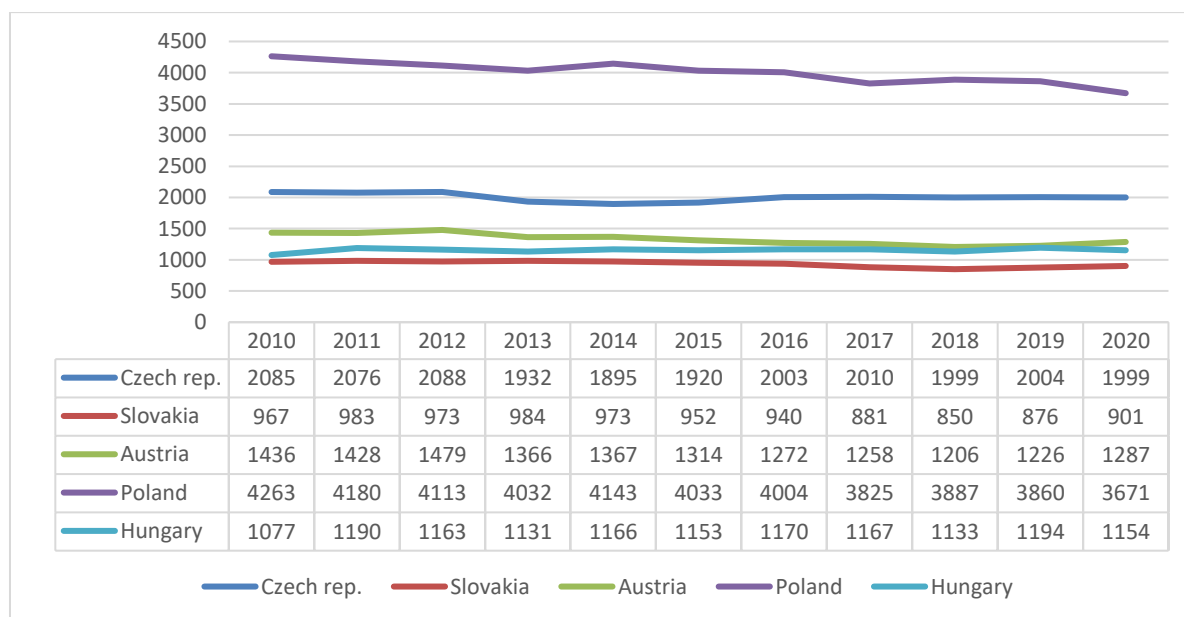
**Fig. 3: Number of rail freight cars (wagons) in pcs**



Source: Eurostat 2022

An equally important input is the locomotives used for driving the train sets. Their number also decreased over the past decade (see Fig. 4).

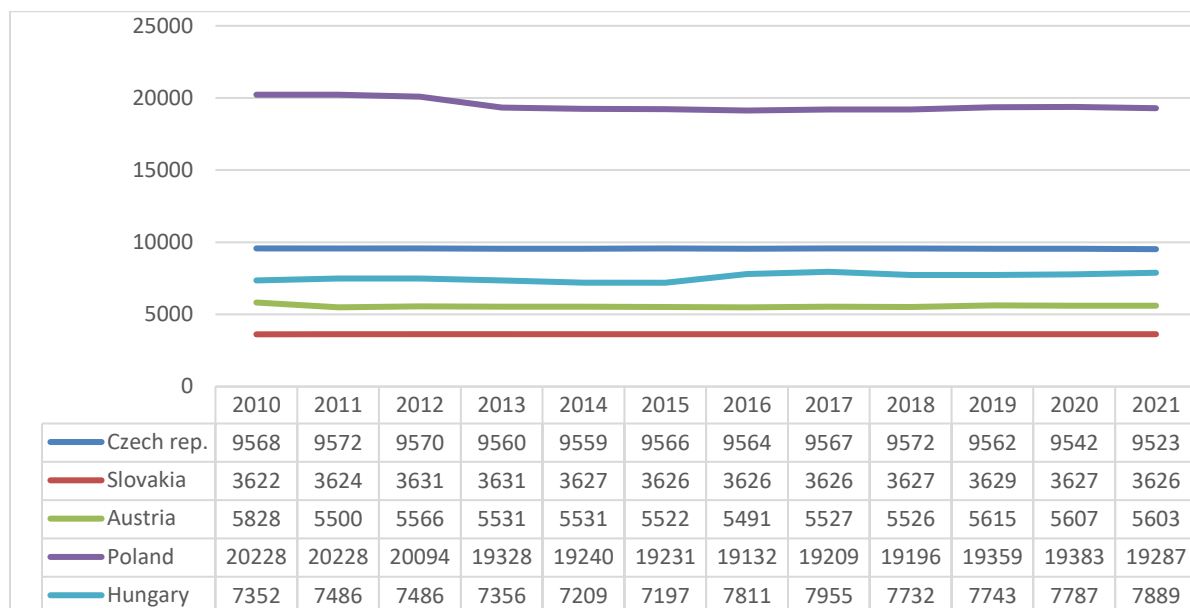
**Fig. 4: Number of drive units (locomotives) in pcs**



Source: Eurostat 2022

Transport performance undoubtedly depends on the railroad lines' length, quality, and technical security. For evaluation purposes, several data are available regarding the quality of the tracks (e.g., single-track or double-track) or their equipment (e.g., electric traction). However, some information indicates that insufficient funds are invested in the maintenance and renovation of the railway network, especially in the Czech Republic and Poland (European Court of Auditor's Report, 2016). The length of the railway network itself has not changed significantly in the past decade, and its size has even decreased slightly in all countries of the Central European region (see Fig. 5).

**Fig. 5: Length of railway lines in km**



Source: Eurostat 2022

The measurement of the efficiency of cargo transportation has recently received wide attention. The efficiency analysis should show how the relatively favorable economic development in Central European countries was used in the past decade to develop rail freight transport and how its performance changed. The research is focused on comparing selected indicators of rail freight transport in countries of Central Europe – the Czech Republic, Slovakia, Poland, Austria, and Hungary, obtained from publicly available sources. A relatively simple method that allows an easy and coherent evaluation of traffic performance is benchmarking.

### 3 BENCHMARKING OF RAILWAY FREIGHT TRANSPORT IN THE CENTRAL EUROPE

Benchmarking can be characterized as a procedure based on the comparison of selected indicators across the compared units and the evaluation of the obtained results. Indicators must be adequately selected and widely respected to be sufficiently informative. Benchmarking results can be effectively implemented in the performance improvement process only if the mentioned rules are respected.

As a research method, benchmarking has been used since about the 1980s. It was initially used to solve more complex tasks requiring international comparison (Hong et al., 2012) or to evaluate existing or future processes and procedures (Joo et al., 2017). It has also found application in assessing the effectiveness and quality of rail freight transport providers' services (Wiegman et al., 2007) or evaluating specific processes in some transport branches (Merkert et al., 2010). Benchmarking can also be used to assess specific key performance indicators in the transport sector, such as service quality, asset utilization, financing, and others (Išoraitė 2004). Benchmarking does not give the possibility to obtain mathematically or statistically accurate indicators. However, it accurately determines the investigated indicator's state and development, which is entirely sufficient for this research. This paper will use benchmarking to assess the performance of rail transport within individual states.

The input and output type should be chosen to optimally reflect a specific efficiency indicator. In previous studies, the railway network length, the number of operated railcars or locomotives, the number of dispatched train units or containers, and the number of employees

were frequently used as inputs. The amount of transported goods in tons or tkm, sales, and net profit were usually used as outputs. In some papers, the evaluation of transport performance also included punctuality, the number of train accidents, and customer complaints. The limited amount of input data and their availability, different technical equipment of the railways and different work rules and practices, sustainability, and some other aspects of the investigation were mentioned in previous studies as obstacles for mutual comparison. The various elements of the analysis are presented in the following Table 2.

**Tab. 2: Inputs, outputs, and limitations in benchmarking performance measurement**

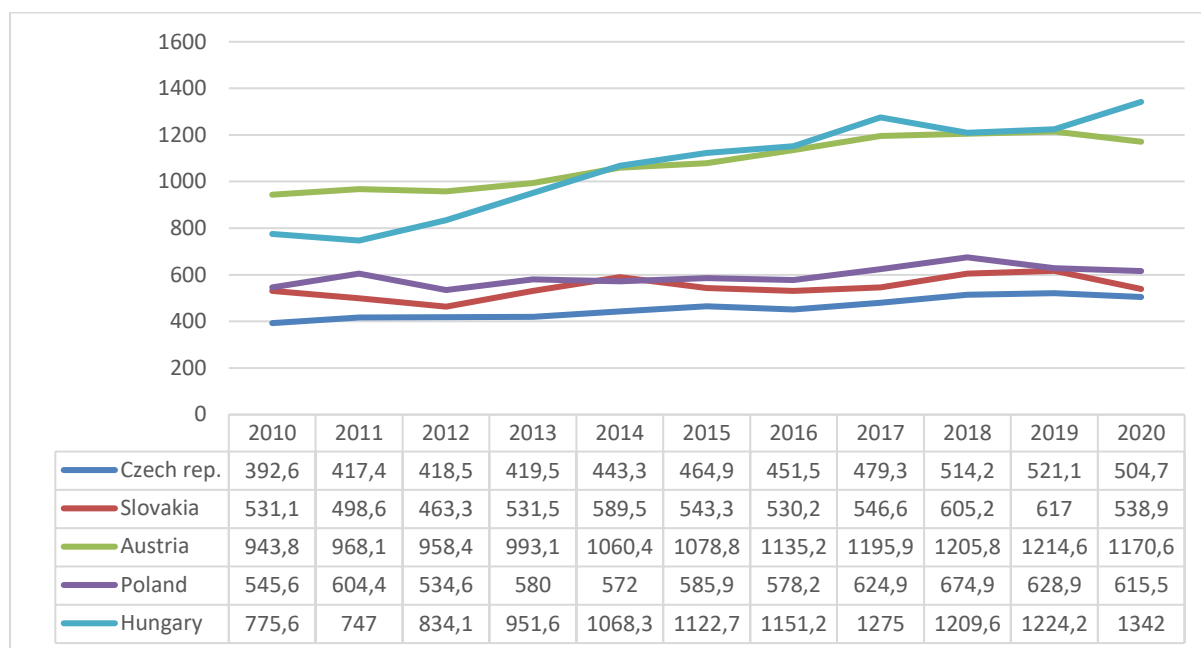
<b>Inputs</b>	<b>Outputs</b>	<b>Limitations</b>
Number of railcars	Freight in tons	Data availability
Number of locomotives	Freight in tons-km	Various network length
Track lines length	Revenues	Availability of inputs
Number of employees	Punctuality	Technical equipment
Number of TEUs	Customer complaints	Different working culture
Shuttle or unit trains	Train accidents	
	Sustainability	

Source: Modified Wiegman et Donders, 2007

The analysis is partly inspired by the study of Wiegman and Donders, uses similar research methods, but focuses on individual states of the Central European region. The paper uses only indicators closely related to rail freight transport: the number of used freight cars and locomotives as inputs and transport performance in tkm as outputs. There is no doubt that transport performance also depends on other factors, such as the length and quality of railway lines, the number and productivity of the workforce, and many others, but access to relevant data from public sources is relatively limited. Therefore, the study only estimates the current situation and the trend of its further development. An analysis of work procedures, rules and practices, technical equipment, and other factors would undoubtedly contribute to a deeper analysis of the problem under investigation, but the relevant data are unavailable.

The effectiveness analysis evaluates indicators related to rail freight transport in Central Europe – the Czech Republic, Slovakia, Poland, Austria, and Hungary. Some countries were deliberately excluded from the evaluation due to their geographical diversity (Croatia, Germany), economic strength, and the focus of their providers' activities (Germany). Benchmarking is based on the evaluation of the transport performance in individual states (expressed in tkm) per unit of input, i.e., wagon (see Fig. 6) or locomotive (see Fig. 7).

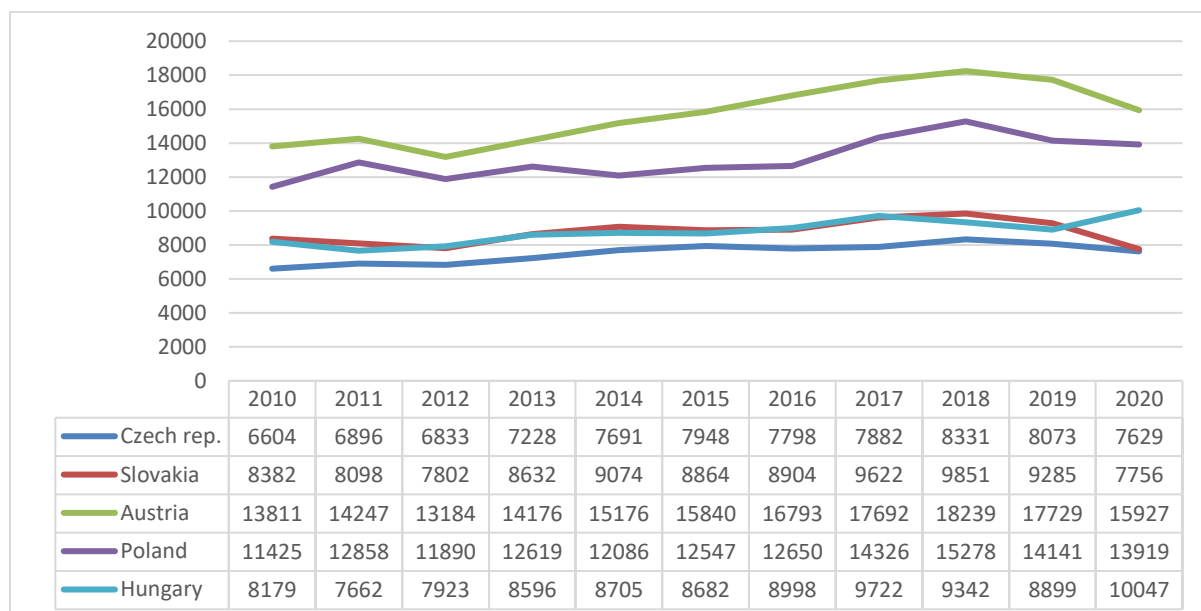
**Fig. 6: Transport performance in thousands of tkm per rail freight car (wagons)**



Source: Author - using data from Eurostat 2022

Benchmarking focused on rail freight cars is based on data on their total number regardless of their purpose of use (e.g., covered hoppers, intermodal, tank cars). Data may be influenced in individual countries by the character of industrial production, mineral resources, average transport distance, and other factors. The type of transport services provided should also be considered, e.g., shuttle, mixed, unit, or container train sets. However, data of this kind are not publicly available.

**Fig. 7: Transport performance in thousands of tkm per drive unit (locomotive)**



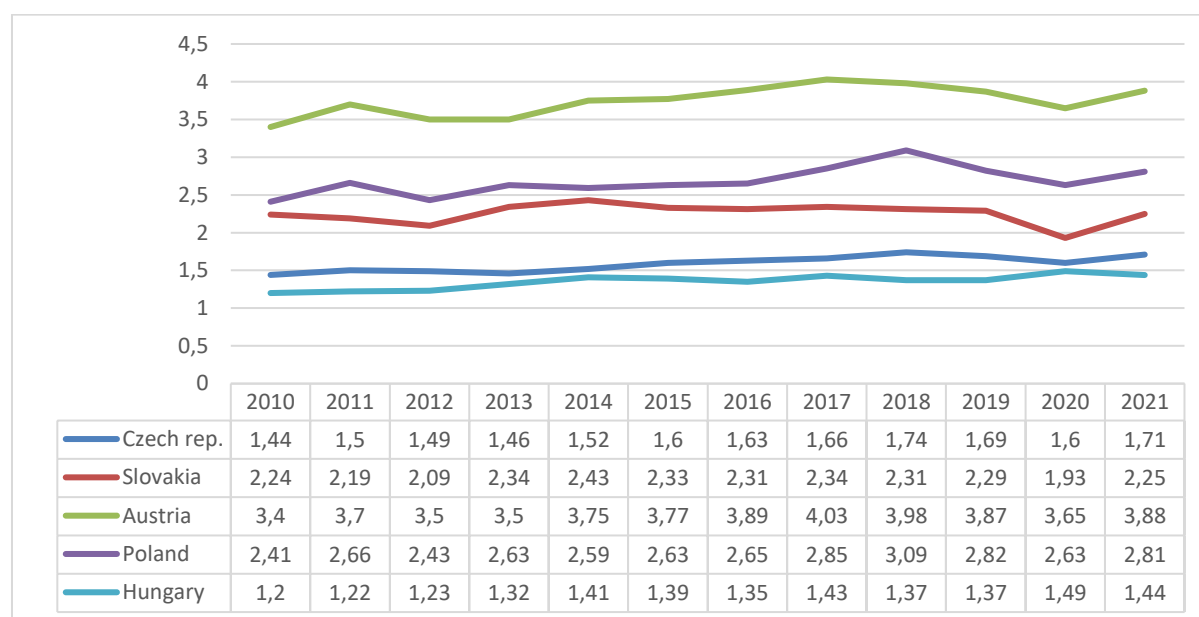
Source: Author - using data from Eurostat 2022

The finding obtained when assessing rail freight vehicles (wagons) performance also partially applies to drive units (locomotives). The operation of locomotives is universal and is not too dependent on the transported good's nature or transport distance. An important role plays

their technical level, significantly affecting the final transport performance, speed, and reliability of goods transfer.

Comparison of transported tkm/km of lines, the amount of transported goods per unit of distance, i.e. the use of tracks regardless of their quality (single or two-track lines, electrified lines, etc.) Positive results expressed by a high volume of transported cargo in tkm per unit length of track may indicate higher labor productivity but are not necessarily indicators of excellent service quality or acceptable financial results. It is obvious that investments that improve the quality of lines (double-track lines, electrification, traffic safety system) ensure an increase in transport productivity and the achievement of better financial results. The ideal result is the maximum volume of transported goods per unit of distance (see Fig. 8).

**Fig. 8: Transport performance in goods transported in tkm per km of lines**



Source: Author - using data from Eurostat 2022

It is evident that the assessment should also include other indicators, such as the number and workload of employees, load capacity of lines for passenger transport, and others. However, the mentioned indicators can be analyzed in some further research.

## CONCLUSION

The data used to process this study comes mainly from Eurostat, which, unfortunately, does not always provide complete timelines. For this reason, the conclusions in some text passages are formulated only in general terms. In any case, the individual indicators point to visible differences between the results and the development of rail freight transport in the Central European region (see Table 5).

**Tab. 5 Comparative indicators - overview of the benchmarking position**

Performance:	Czech rep.	Slovakia	Austria	Poland	Hungary
tkm/railcar (locomotive)	5	4	1→2	3	2→1
tkm/drive unit (wagon)	5	4	1	2	3
tkm transported/km lines	4	3	1	2	5

Source: Author

The results of the benchmarking show that even three decades after the change in the economic and political environment in the countries of the former Eastern Bloc, the limits of the effective functioning of rail freight transport have not been completely removed. Many barriers, such as the lower throughput of the railway network, the outdated traction network, the weaker technical level of the security equipment, the lower professional level of the staff, and others, are being removed very slowly.

A specific problem with the study is that publicly available data from all countries may not always be sufficiently accurate and reliable. Some input data (e.g., the number of power units or railcars) may be distorted by reporting the inventory status, not the number of units used in ordinary operations. However, the indicators reliably show the development of the performance of rail freight transport in the past decade. The benchmarking results suggest that a faster increase in efficiency is necessary and desirable, especially in the new EU countries, and state institutions should play a leading role in this process. State support should be focused mainly on the maintenance and development of the transport network, traffic management, and legislation regulating rail freight transport operating conditions.

The paper has been focused on answering the question: *How has rail freight transport in the Central European region developed under relatively favorable economic conditions in the past decade?* The benchmarking method was used for comparison purposes, and the results were summarized in Table 5.

Based on the vast majority of indicators, it can be said that rail freight transport in Austria achieves the highest efficiency of all the monitored countries significantly. In the case of technical equipment (wagons, locomotives), the performance is roughly twice as high as in other countries, and the difference in the track lines is even higher. In addition, Austria took advantage of the favorable economic situation in the past decade to increase its lead. Operators in Austria particularly benefit from thrifty and environmentally friendly transport services such as the Rolling Motorway, widely used in the country. The local transport operators use systematic state support, which gives them a strong market position and relieves intense foreign competition.

Although the efficiency of rail freight transport in Poland is significantly lower than in Austria, it remains slightly above the level of other Central European countries and is gradually increasing. The longer average transport distance and the more intensive use of container and unit trains influence the positive results. Poland's results are undoubtedly affected by roughly a quarter of freight transport performance (especially the more profitable one) provided by a technically well-equipped German carrier. The development of the performance of Polish rail freight transport over the last decade can be assessed as slightly positive, despite the crisis in Ukraine in 2014, which negatively affected transit transport.

The position of both countries, the Czech Republic and Slovakia are very similar in benchmarking rail freight services. Progress in the efficiency of transport services is minimal in both cases. In addition, it can be expected that the past epidemic and the upcoming energy crisis will slow down or completely stop positive development.

The performance assessment of railway freight services in Hungary shows noticeable progress, especially in comparing technical means (railway wagons). The development to this date can be explained by the fact that many essential services are provided by the efficiently functioning local branch of Rail Cargo Austria. A comparison of the indicators of transported volume in tkm per unit of track length shows a significant (more than double) lead for Austria. Somewhat surprising is the relatively acceptable position of Poland and Slovakia; lagging is evident in the case of the Czech Republic and Hungary. Over the past decade, the situation has not changed significantly.

The paper shows some differences in the efficiency of rail freight transport in the countries of the Central European region. The efficiency level in the Czech Republic, Slovakia, and Poland are still significantly behind Austria, and this gap is widening. The past decade, relatively favorable for doing international rail freight transport business, unfortunately, did not bring any significant changes (with the partial exception of Hungary). Benchmarking, as a method used in this paper, confirms the stated situation and indicates the trend of its further development.

The future development of rail freight transport in the EU, including the Central European region, is outlined in the so-called EU "White paper" from 2010. This Regulation lays down rules for the organization and management of European rail transport with a view to the development of a rail network for competitive freight. At the same time, it sets the rules for the selection, investment planning, and implementation of railway network development. However, implementing the adopted Regulation largely depends on the available resources. The ongoing pandemic, the protracted European energy crisis, and the uncertain geopolitical situation do not make it possible to accurately and reliably predict future development. Future research on rail freight transport is thus largely dependent on the existence of a more stable and predictable economic environment.

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# Work and non-work adjustment. Are there differences between assignment expatriates and self-initiated expatriates?

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**Abstract:** The result of globalization in the area of human resource management (HRM) is the fact that more and more people work outside their country of origin and more and more people working in their home country are employed in foreign subsidiaries or branches operating there (e.g. Gomółka, et al., 2020). For enterprises, this means the need to adapt to the international context of their operations, including adaptation in the area of personnel activities (Stor, 2011).

Therefore, the main purpose of the descriptive-empirical article is to present the results of the pilot study, which aimed to reveal factors significant for the process of adaptation in the workplace and outside of two groups of expatriates- assignment and self-initiated. It is also worth noting that the study is part of a wider project entitled "Adaptation of expatriates over time. The pre-departure stage during and after arrival in the home country".

**Keywords:** assignment expatriates, self-initiated expatriates, adjustment, work, non-work adjustment

**JEL Classification codes:** F22, J61

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## INTRODUCTION

The literature on expatriation primarily focuses on expatriates as a homogeneous group of employees posted on foreign missions from the corporate headquarters to the host country (Peltokorpi & Froese, 2009). However, critical researchers in the field have begun to look at other types of expatriates as well, such as expatriate NGOs (Fee & Gray, 2012), academic expatriates (Jonasson et al., 2017), foreign executives in local organizations (Lauring & Selmer, 2018), public expatriates (Selmer & Fenner, 2009), flexpatriates (Mayerhofer et al., 2010) or inpatriates (Moeller et al., 2016). However, it should be emphasized that in recent years, there has been more space in scientific publications, not to self-initiated expatriation (SIE) (e.g. Cerdin & Selmer, 2014).

These results, among others, that self-initiated expatriates are more often employed in international corporations in host countries than delegations of traditional expatriates (AE)<sup>1</sup>.

As evidenced by researchers (e.g. , Andresen et al., 2012; Banai & Reisel, 1993; McNulty & Tharenou, 2004; Richardson & McKenna, 2006), international corporations decide to employ SIEs because of their flexibility and knowledge of the local market. What's more, they have international experience. At the same time, as they independently initiate a relocation,

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<sup>1</sup> According to BGRS research (2013), nearly 65% of highly qualified international employees in corporations are SIEs, and 35% AEs.

international organizations refrain from participating in the relocation as the adaptation process in the host country (which is not the case with corporate expatriates).

At this point, it should be emphasized that in the literature on the subject, one can find many references to the adaptation of traditional expatriates (e.g., Cerdin & Selmer, 2014; McNulty & Selmer, 2017). However, only a few studies focus on comparing the adaptation process of traditional and self-initiated expatriates (e.g., Grelecka, 2016; McNulty & Brewster, 2019).

Therefore, the primary purpose of the descriptive-empirical article is to present the results of the pilot study, which aimed to reveal factors significant for the process of adaptation in the workplace and outside of two groups of expatriates—assignment and self-initiated. It is also worth noting that the study is part of a more comprehensive project entitled: "Adaptation of expatriates over time—the pre-departure stage during and after arrival in the home country.

## 1 LITERATURE REVIEW

### 1.1 Types of expatriates

About expatriates, despite more than four decades of research on this population of workers (Dabicab et al., 2014), there is still no theoretical consensus on defining this type of workforce (McNulty & Brewster, 2017), although numerous attempts ordering this matter bring researchers closer to terminological clarity. The literature on the subject provides multiple relations to assigned and self-initiated (after, Przytuła & Strzelec, 2019).

**Table 1. Terms in the literature describing assignments and self-initiated expatriates**

<b>Assignment expatriates</b>	<b>Self-initiated expatriates</b>
corporate nomad	self-determined expatriate
professional on a foreign mission	foreign worker on his initiative
organizationally rooted expatriate	highly qualified expatriate
organizational expatriate	mobile international worker
A manager from the country of origin of the headquarters	freelance international worker
global careerist	self-recruited expatriate
corporate expatriate	employee moving on his initiative

Source: (Przytuła & Strzelec, 2019)

The quoted terms indicate that traditional expatriates are associated with the organization that employs them, sends them on foreign missions, provides organizational support, and finances relocation. This definition emphasizes that expatriates were already employees of the organization before being sent abroad and employed by that organization in another country, distinguishing expatriates from people outside the company, e.g., tourists, immigrants, refugees, entrepreneurs, and students (McNulty & Brewster, 2017).

On the other hand, the distinguishing feature of self-initiated expatriates is the lack of attachment and dependence on any organization, decision-making autonomy, and own initiative in organizing and financing trips abroad.

What is typical of SIE is that self-initiated expatriation is not supported by any organization (e.g., (Al Ariss & Özbilgin, 2010; Doherty & Dickmann, 2012; Tharenou, 2013). SIEs go abroad independently of any organization located in their country. Therefore, they are responsible for every stage of their international work. They independently initiate a trip abroad and select the destination country, length of stay, or repatriation. They decide to go to another country before they get a job. They have yet to determine how quickly, if at all, they will find employment (Andresen et al., 2015).

As pointed out by Inkson et al. (1997), Suutari and Brewster (2000), and Thorn (2009) self-initiated expatriates are mobile international workers whose mobility has been combined with travel opportunities or a desire for adventure and career development.

However, there are more differences between AE and SIE; therefore, below are only a few examples of discretion about motives for leaving, socio-cultural adaptation, previous international experience, or "organizational root."

SIE studied by Pinto et al. (2012) showed mainly individual motives, namely: (1) the desire to gain international experience; (2) the personal challenge of international relocation, and (3) the professional development and career benefits of going abroad.

Isakovic and Whitman (2013), researching a group of self-initiated expatriates in the United Arab Emirates, identified significant positive correlations between adaptation and previous international experience and cultural novelty. The analysis showed that countries where foreigners are the majority (such as ZAE) are attractive destination conducive to adapting to the country's new culture of delegation. In addition, previous international experiences (such as short-term trips, including tourist trips) impact the extent to which expats adapt to the host country's environment.

In turn, research by C. Linder (2019) conducted among 98 expats from 34 organizations also shows another critical determinant of undertaking a foreign mission by expats, which is "organizational embeddedness". The results show that organizational rootedness positively affects the work performance of all expatriates, but there are differences in these effects between traditional and self-initiated expats.

Self-initiated expats who seek opportunities to work abroad on their own have a weaker impact of rooting on the results of their work and achieving goals abroad than traditional expats sent on missions by their parent company. Being deeply embedded in the company's reality increases professional satisfaction, because the employee sees himself as a part of it, shares its goals, values, and vision. Deep roots and identification with the corporation increase the likelihood of employees performing tasks that go beyond their contractual requirements and organizational goals.

## **1.2 AE and SIE adjustment**

The area of research in the field of adaptation of foreigners is very complicated, ambiguous, and full of contradictory reports (Thomas, Lazarova, 2006), which results from the diverse methods of measuring adaptation and the criteria of effectiveness. It can be said that the impact of adaptation on an expatriate's work efficiency is neither linear nor direct (Glińska-Noweś, 2017).

It should be emphasized that most of the studies on the adaptation of expatriates were conducted in Asian countries, e.g., in China (Selmer, 1995; Takeuchi et al., 2009; Lee & Kartika, 2014; Rafiq et al., 2019); in Japan, (Peltokorpi & Froese, 2009; Yamazaki, 2010); in South Korea (Froese, 2012).

In recent years, the issues of adjusting expatriates have also been studied in African countries (Okpara, 2016).

The literature indicates a need for more research in Central and Eastern Europe (Brewster, 1991; Horwitz & Budhwar, 2015; Selmer, 1995). In Europe, the adaptation of expatriates in Scandinavian countries was studied: in Finland (Suutari & Brewster, 2000), Norway, and Sweden (Selmer & Luring, 2014), as well as in Germany (Zimmermann et al., 2003)). L. Lett and M. Smith researched Polish expatriates working in Great Britain.

On the other hand, studies concerning Polish expats in Poland are very few and represented mainly by: S. Przytuła (2014), A. Poczowski (2012), J. Grelecka (2016), I. Kubica (2017).

Factors facilitating adaptation (facilitators) were indicated in many models, constructs, and adaptation programs. A review of the literature and research in this field shows that these factors can be arranged into a triad of the following dimensions: individual (also referred to as personality or psychological), organizational (related to work and professional experience), and contextual (socio-cultural, external environment, on social interaction in the country of posting).

Based on the literature review in the area of expatriate adaptation, an original table was developed (Table 2), in which 31 individual, 25 organizational, and 13 contextual factors influencing the process of adapting AE and SIE in the country of the delegation were distinguished.

**Table 2. Individual, organizational, and contextual factors determine the adaptation of AE and SIE.**

<b>Individual</b>	<b>organizational</b>	<b>contextual</b>
1) self-efficacy, 2) relationality, 3) knowledge of foreign languages, 4) previous foreign experience. 5) flexibility, 6) sensitivity, 7) empathy, 8) awareness, 9) intelligence, 10) willingness to work in a multicultural team, 11) willingness to communicate, 12) readiness to go abroad, 13) extraversion, 14) openness to experience, 15) neuroticism, 16) conscientiousness, 17) agreeableness. 18) conflict resolution/coping ability, 19) knowledge about the host country,	1) logistical and organizational support in relocation from the headquarters, 2) support from colleagues, 3) clarity of the role and professional requirements of the mission, 4) autonomy in decision-making, - novelty/differently of professional tasks in a new country, 5) providing a job in the home organization after returning, 6) using the knowledge and experience of expats in the parent unit, 7) role conflict, 8) pre-departure training, 9) mentor at the headquarters, 10) remuneration and benefits package, 11) the level of involvement in the affairs of the local unit, 12) period of operation of the organization on the market, 13) size of the organization,	1) cultural distance between the country of origin of the expat and the culture of the country of secondment, 2) degree of family adjustment, 3) interactions with local employees/residents, 4) adjusting the spouse, 5) family adjustment, 6) the size of the population in the country second. 7) the number of markets in which the company operates, 8) specificity of the place of business. 9) family and interpersonal support, 10) knowledge of the values and norms of the culture of the posting country, 11) climate, 12) geographical location, 13) amenities of everyday life (local transport, availability of medical care services, entertainment).

20) satisfaction with previous foreign experience, 21) knowledge of foreign languages. 22) education, 23) country of origin and system of expressed values, 24) seniority, 25) professional role (type of position held), 26) individual career orientation, 27) cultural intelligence, 28) willingness to learn, 29) appropriate (tolerant) attitude towards cultural issues and differences, 30) developed social competencies, 31) features showing determination and strong motivation.	14) country of origin, 15) employment size, 16) type of applicable organizational procedures, 17) organizational culture, 18) degree of organization of the adaptation process (policies, programs, tools, and responsible units). 19) intercultural training (content, duration, and techniques) 20) length of the foreign mission, 21) distance from the home country, 22) frequency of contact with the home country, 23) issues of family relocation and pre-departure assistance and after arrival at the branch, 24) issues of repatriation and career prospects for expatriates after returning to the head office, 25) the method of "organizing" a foreign mission.	
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Source: own study

Examples of the factors presented in the triad table can be seen in the studies cited below.

Peltokorpi (2008) quantified the adaptation of 179 traditional and self-initiated expatriates in Japan. The analysis showed a positive impact of foreign language skills and emotional empathy on social and professional adaptation in the host country. In addition, the study revealed that the primary dimension of diversity, i.e., gender, is essential for the adaptation process in the case of both surveyed groups of expatriates. This means that male expatriates (AE and SIE) adapt better to Japanese society and culture than female expatriates. This is due to the masculinistic and senior Japanese culture.

Research conducted among 30 expatriate academicians of Western origin who are engaged in a foreign mission in South Korea proves the relationship between the motives for undertaking a foreign mission and adjustment in both professional and non-professional spheres. Froese (2012) emphasized that family reasons, cognitive curiosity, and unfavorable working conditions in the home country significantly impact the level and degree of professional and non-professional adaptation.

The results of research conducted among self-initiated expats in Germany showed a positive correlation between job satisfaction and their adaptation (Cao et al., 2013).

In turn, Shaffer et al. (2017) showed differences in the level of adaptation and the relationship between work and personal life, showing that SIEs are more adaptable to life in the host country than AEs.

S. Przytuła (2014), researching a group of traditional expatriates in Poland, showed that although one-third of the respondents working in Poland was in no way prepared to work and live in the country of delegation, most of them did not experience adaptation problems. This could be because the international experience and practices gained before being delegated to Poland proved helpful in this respect, which was reported by 67% of the surveyed expats. In addition, the respondents indicated environmental factors (similar culture, religion, climate, and geographical location of the country where they previously worked), individual characteristics (motivation and willingness to work in Poland, and work-related factors (similar. Therefore, these were foreign experiences gained in work conditions identical to those in Poland.

The results of a study conducted by I. Grelecka (2016) on a group of traditional and self-initiated expatriates showed, among others, that cultural intelligence positively affects the adaptation of both groups of employees outside their workplace. Moreover, language proficiency is relevant for the SIE's adaptation process in the workplace but not for AE.

## **2 METHODOLOGY**

As it has been emphasized, studies raising the issue of expatriate adaptation are presented by numerous researchers in this area (e.g.), it should be noted that they are based on the expatriate adaptation scale (BMO) by Black, Mendenh, and Oddou (1991).

Although this model is the most often quoted in the literature, it has its limitations indicated by other researchers. Many points at these three dimensions have a weak, or rather "artificial" foundation and theoretical justification (Brewster, et al., 2016). Although this model has been statistically confirmed in subsequent studies (this was a meta-analysis conducted by Bhaskar-Shrinivas et al. in (2005), their theoretical basis is a weakness (Hippler et al., 2014; Lazarova, Thomas, 2012; Shaffer et al., 2016).

Researchers also indicate that the dimensions of adaptation proposed in this way do not consider many factors that should be examined (Aycan, 1997; Selmer, 1995).

Black et al. used a 7-factor scale for general adjustment, a 3-factor scale for work adjustment, and a 4-factor scale for interaction adjustment.

Hippler, Caligiuri, and Johnson (2014) drew attention to methodological problems which, according to the researchers, were not included in the BMO scale and are crucial for the expatriate adaptation process. According to the researchers, there is a need to: less ambiguously operationalize expatriate adaptation, identify the factors that make up the person-environment (P-E) relationship, and (3) challenge the assumption that all expatriates (i.e., both SIE and AE) perceive environmental aspects as equally important for their adaptation process. Therefore, taking into account the existing premises and the indicated research inconsistencies, the authors developed a new 35-item scale to measure the adaptation of expatriates, which was initially adapted for the needs of the current pilot.

The target group consisted of employees, foreigners working in international corporations in Poland who were delegated on a foreign mission by the organization's headquarters, and those who independently initiated their expatriate mission.

The quantitative survey was conducted mainly using the CATI (Computer Assisted Telephone Interview) technique, to a lesser extent CAWI (Computer Assisted Web Interview), and 63 traditional and 37 self-initiated expatriates participated.

The demographic analysis of the surveyed group of respondents showed that 49% were men and 51% were women. The mean age of the subjects was 38.28 years. On average, the respondents work in the current organization for 7.78 years. The general seniority of

expatriates is 12, 42 years. On the other hand, the total duration of stay in Poland was 4.69 years. The nationality of the surveyed expats came from 12 countries, i.e., Belarus, China, Croatia, the Czech Republic, France, Germany, Ireland, the Netherlands, Spain, UK, and the USA. 76% of the respondents graduated from higher education and obtained a master's degree, 19% have a bachelor's degree, and 5% have a doctorate. Most of the respondents (as many as 68%) came to Poland alone, and 37% of the respondents were on a foreign mission with family or friends. Expats (traditional and self-initiated) are 82% managers and 18% executives. When asked about previous foreign missions, 66% of respondents gave an affirmative answer. For 34%, it was the first expatriate mission.

### 3 RESULTS AND DISCUSSION

To find out, among other things, what fundamental factors are essential for adapting both expatriates in the professional dimension and beyond, three research questions were posed, and the analysis is presented below.

To verify them, descriptive statistics were used: average, percentage, frequency, minimum, and maximum.

1. What key factors are essential for adaptation in the workplace for traditional expatriates and SIE?

**Table 3. Critical factors for professional adaptation**

	<b>AE</b>	<b>SIE</b>
<b>Work-related factors</b>	Mean	Mean
The working attitude of the employees	2,00	2,05
The amount of freedom I have in decision-making at work	1,94	2,24
My ability to understand the language used in my work environment	1,86	2,03
The corporate culture of the organization where I work	1,84	2,22
My colleagues' qualifications and skill level (coworkers, direct reports, etc.)	1,87	2,19
The variety of my tasks at work	1,90	1,97
My ability to express me in written language	2,08	2,08
The work climate (i.e., the environment affecting my daily experience on-the-job)	1,95	2,30
My job activities or tasks	1,97	2,00
The autonomy I have in organizing and structuring my tasks at work	2,00	2,19
The employees' method of working, in general	1,95	2,14

My level of professional responsibility	1,83	2,00
How people communicate (e.g., discuss issues, debate)	2,05	2,11
My ability to understand the written language	1,86	2,14
The reliability of the people	2,08	2,08

Source: own study

As can be seen from the analysis carried out for both SIE and AE, work-related factors such as, for example, the work attitude of the employees, the variety of tasks at work, the ability to express myself in written language, the autonomy in organizing and structuring tasks at work or the reliability of the people are equally important. Slight disproportions can be observed among factors such as: level of professional responsibility, ability to understand the written language, the corporate culture of the organization, and the work climate (i.e., the environment affecting my daily experience on-the-job).

As J. Bonache (2005) points out, in contrast to local workers, expatriates 'value more work characterized by various tasks and autonomy, providing learning opportunities, allowing them to apply their knowledge and giving them sufficient responsibility.'

According to V. Koteswari and M.S. Bhattacharya (2007), organizational support contributes significantly to adaptation in the workplace. The authors perceive the organization's support through the prism of the quality of superior-subordinate relations and psychological acceptance of local co-workers. In addition, the management style in the organization affects the quality of the superior-subordinate interaction. Organizational support is perceived through employee interactions with management, supervisor, co-workers, and subordinates. If the reflection of these interactions is positive, then the corporate support perceived in this way supports the expatriate's adaptation to the work environment.

2. Which factors are crucial for adaptation outside the workplace (e.g., life, the culture of the posting country, interaction with the local community) for assignment expatriates, and which for SIE?

**Table 4. Critical factors for adaptation outside the workplace**

<b>Active outside of work</b>	<b>AE</b>	<b>SIE</b>
	Mean	Mean
The way I spend my leisure time	2,06	2,11
Contact with my friends in my home country	1,89	2,05
My family's cohesion	1,98	1,89
The number of friends I have locally	1,90	2,05
The level of environmental pollution	1,90	2,32
My sense of balance between my professional/work and private/home life	1,94	2,14



The street traffic	1,97	2,19
My working hours	1,92	1,97
The size of my house or flat	1,95	2,19
The punctuality of the people	1,89	2,22
The opportunities to play the sports I enjoy	1,90	2,08
My ability to express myself in written language	2,08	2,08
The harmony of my relationship with my spouse or partner	2,25	2,22
The natural beauty of my local environment	2,02	2,30
My ability to actively communicate in my non-work environment	2,03	2,00
Opportunities for spending my leisure time	1,90	2,11
The depth/quality of my friendships locally	1,94	2,14
Contact with my extended family/relatives	1,87	2,08
My ability to understand the language used in my non-work environment	1,98	2,05
My accommodations (e.g., detached house, flat, gated community)	2,05	2,03
My ability to understand the written language	1,86	2,14
Opportunities for practicing hobbies I enjoy	1,84	1,97

Source: own study

Also, this analysis showed no significant discrepancies between adaptation and non-work-related factors for corporate and self-initiated expatriates.

This means that, on average, factors such as e.g., contact with my extended family/relatives, opportunities for practicing hobbies, the harmony of my relationship with the spouse or partner, the natural beauty of the local environment, ability to communicate in a non-work environment actively, are essential for the process of respondents' adaptation to life, interaction with the local community or culture, attitudes, and behavior in Poland.

According to Puck et al. (2017), interactions with residents, general differences (including cultural differences), size of the population in the country of posting, and degree of novelty/differently (national) affect the level of adaptation of expatriates in three dimensions of adaptation from the BMO model.

Mol et al. (2005) postulate that work-live-balance significantly impacts the "well-being" of an expat, which, in the authors' opinion, is related to its adaptation.

Respondents also provided answers to open questions in the survey questionnaire.

This means that the research indicated, in their assessment, the most important barriers or what they lacked in their adaptation in Poland.

3. What are the critical barriers to adaptation for assignment expatriates and for self-initiated expatriates at the preparation stage and carrying out a foreign mission?

**Table 5. Barriers to adaptation at the preparation stage**

<b>What was missing while preparing for your trip to Poland?</b>		<b>Percent</b>
AE	Better preparation	6,30
	I was missing my family	4,80
	Learning Polish	8,00
	Money	9,50
	Nothing	34,90
	Time	9,50
SIE	Better preparation	4,80
	Learning Polish	4,80
	Money	4,80
	Nothing	15,90
	Time	3,20

Source: own study

As can be observed, both AE and SIE, at the preparation stage for a foreign mission, did not follow key barriers that would be important for their adaptation process (34.90% and 15.90%, respectively). However, money, time, learning Polish, or better preparation are less critical for AEs in their adaptation process. In turn, SIE pointed out that other vital barriers affecting adaptation in Poland are: better preparation, learning Polish, money, and time.

Although both groups of respondents indicated similar barriers, the hierarchy of their importance is different for AE and different for SIE.

At this point, it should be emphasized that the adaptation process begins at this preparation stage, i.e., before leaving for the host country.

Preparing for departure to another country has been studied much less often than the other stages of the expatriate cycle. The research results so far do not indicate its suitability for a foreign mission. Some authors (e.g., Waxin & Panaccio, 2005) postulate a high added value of preparation for a foreign mission, while others emphasize low effectiveness.

The expats themselves usually positively assess the value of the preparation (Brewster, Ehner, 2008) (in fact, its significance depends on the type of preparation and when it was performed). The most significant value can be obtained by receiving information from the so-called—source, i.e., directly from an employee who has been or is on a foreign mission.

The increased use of social media such as Facebook or WhatsApp has often replaced the need for formal training. Pre-departure support can be found online by connecting directly with an expat (often completely unknown) in the host country.

More and more expats are experienced travelers (e.g., experiences gathered during holidays abroad, they also use information collected on the Internet about various destinations), and they know a lot about the world and the differences they can experience. Many willingly share their experience on blogs, vlogs, and other discussion forums.

In turn, at the implementation stage, the results are as follows:

**Table 6. What you missed at the implementation stage**

<b>What did you miss during your stay in Poland?</b>		<b>Percent</b>
AE	Family	61,90
	Nothing	15,90
SIE	Family	43,20
	Nothing	18,90

Source: own study

For both groups of respondents at the implementation stage, the critical barrier in the adaptation process was the lack of a family. Interestingly, at this stage the respondents indicated the lack of obstacles to a high degree (it is 15.90% in the case of AE and 18.90% in the case of SIE)<sup>2</sup>.

In addition, the respondents were asked how they would assess the organization of the adaptation process in the current organization (subsidiary) in Poland<sup>3</sup>. Traditional expatriates evaluated the organization of the adaptation process as good and very good (corresponding indications at the level of 23.80%). In turn, SIE assessed this process in 29.70% as very good.

In addition, the analysis showed that the professional adaptation process of traditional expatriates took an average of 11 weeks. In contrast, self-initiated expats adapted to the work environment after an average of 13 weeks. On the other hand, AE adapted to life, culture, and interaction with Poles in 9 weeks, and SIE in 10 weeks on average.

## CONCLUSION

Although the literature indicates significant differences in the adaptation process among traditional and self-initiated expatriates, the pilot study conducted in Poland did not show such differences. Therefore, work and outside work factors are essential in the adjustment process of both surveyed groups of international workers in Poland.

The pilot study has limitations that affect the interpretation and generalization of the results. The most important, according to the author, is the research tool. The scale by Hippler et al. (2014) used to measure the adaptation of traditional expats in host countries did not consider

<sup>2</sup> It should be recalled that this is an open question, and the answers indicated in the table accounted for the most significant percentage.

<sup>3</sup> All respondents have worked in the current organization for an average of 7.78 years.

some factors specific to Poland, Polish culture, and social conditions, which were not asked about.

This limitation is also a postulate towards the triangulation of research methods (Stańczyk, 2013) and supplementing the obtained quantitative research with qualitative methods (Cresswell, 2012).

It should also be emphasized that the pilot study is only a part of a more comprehensive project, which may be a call for further future exploration. The project refers to adaptation to the entire cycle of expatriation, i.e., preparation, implementation, and repatriation, and is set in time. According to the authors of the 3D model (Haslberger et al., 2014), adaptation is a dynamic process (it occurs dynamically over time). At the same time, the expatriate may be adapted to the working conditions or professional environment but needs more time to adjust to interaction with the local community. According to the authors of this model, adaptation occurs in various areas and dimensions and is subject to changes over time. This may mean that the length of the expatriate's stay in the country of posting can be independent of their adaptation process.

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# Can they get out of the middle-income technology trap? State strategies in Hungary and Türkiye in promoting automotive investments

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**Abstract:** Hungary and Türkiye show similar characteristics in many respects. At the same time, many differences can be discovered due to the domestic characteristics of the automotive industry, which explain the different alternatives of the state support mechanism. They have in common that the same pattern of economic policy results in the development of a unilateral support policy in both countries.

The aim of this paper is to review state incentive systems for automotive investments using government and independent sources as well as related literatures. It also examines, based on literature review, the extent to which public incentives promote upgrading in the sector. Finally, it analyses the similarities in the political economic background of the subsidies.

In the case of both countries, we can witness the support of exclusive development coalitions, which points in the opposite direction to the catch-up process. It enables a rent-seeking attitude, not only in an economic but also in a political sense.

**Keywords:** automotive sector, industrial policy, multinational corporations, Hungary, Türkiye

**JEL Classification codes:** L62, O25, P11

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## INTRODUCTION

The automotive sector is an important driver of growth in the economy for both Hungary and Türkiye (OSD, 2022; MAGE, 2022). The two countries also play a significant role in European road vehicle production, Türkiye is the second largest manufacturer of commercial vehicles in Europe (OSD, 2022), while Hungary is one of the production centres of German automotive companies (Stefanovics & Nagy, 2021; Török, 2022) and the main target of investments in electromobility in the recent period. In the development and modernization of middle-income economies integrated through global value chains, the automotive industry plays a prominent role (Brid, 1996). Therefore, in the case of governments in their investment promotion programs, automotive investments are given special emphasis both in the case of Central European countries (Szent-Iványi, 2017) and Türkiye (Loewendahl & Ertugal-Loewendahl, 2001).

Hungary and Türkiye have developed their economic institutions in quite different ways in the twentieth century. While Hungary had to re-create the capitalist system with private owners as the core economic actors, in the case of Türkiye, despite active involvement of the state in



the economy, private companies were always part of the institutional setting. Still, in the 1990's and the early 2000s, a similar process of privatisation went on in the two countries, with most of the remaining state assets becoming privately owned. The foreign private capital had an eminent role in the privatisation process, and due to the inflow of FDI, foreign capital had an increasing role in the economies, creating a dependent type of capitalism in many countries of the region. In the case of Türkiye, despite the presence of foreign capital, the domestic capital groups had a much stronger position in the economic sphere.

What makes the comparison of the two countries more exciting, are the similar political and economic processes occurring: populist and illiberal type regimes with strong domestic political support, authoritarian centralized decision-making and neoliberal policy elements (tax system, labour laws, social policy, etc.) started to reshape the economic institutional framework to help their political and economic ambitions.

## **1. LITERATURE REVIEW**

In the period following World War II many countries managed to advance to the category of middle-income countries relatively quickly, but in the end only very few of them became a high-income economy. Typically, the initial phase of quick growth was followed by the sudden deceleration of growth and production – this phenomenon is referred to in literature as “middle income trap”. According to the estimates of the World Bank, out of 101 middle-income countries (data from 1960) only 13 became a high-income country by 2008 (Agénor et al., 2012). So the middle-income trap refers to a situation whereby a middle-income country fail in its transition process to a high-income country due to a lack of technological upgrading (Griffith, 2011, p. 39). The escape from the trap requires high level of investment in new technologies and innovation conducive technologies (World Bank, 2010). Both in case of Hungary (e.g. Myant, 2018; Györffy, 2022) and Türkiye (e.g. Yilmaz & Saracoglu, 2016; Yülek, 2018) there is an increasing literature discussing the both the evidences on the existence and on the possibilities to avoid the middle income-trap.

In our paper, we take a closer look on the investment policies of both countries. The most important policy to attract foreign capital in both countries in the nineties were investment liberalization (Antalóczy & Sass, 2000, Aydoğan, 2017), thereby making their economies attractive to investors. Hungary, as an EU member state, could give subsidies to the given companies in accordance with the EU's competition law regulations. This can be a tax discount, financial support, a loan with a reduced interest rate and a free or discounted real estate benefit (Antalóczy & Éltető, 2017). In Hungary, the grants of the government attracted a significant number and amount of investment in recent years. Large investments were made in the automotive industry, which were more concentrated and larger in volume than before (HIPA, 2021).

After the turn of the millennium, until 2014, five such large Hungarian plans were drawn up. Their common feature is fragmentation and the juxtaposition of various priorities (Voszka, 2019). The basic goals themselves remained similar throughout (different with wordings about stimulating growth, employment, improving competitiveness, and catching up), and they were in line with the European Union for your current endeavours. The period after 2010 represents a new era in many respects, not only in terms of the amount of financial resources used, but also in terms of goals and tools. Perhaps the most important is that, compared to previous governments, the state's attitude towards the activities of foreign companies in Hungary has fundamentally changed (Mihályi, 2015, 2018; Szanyi, 2017; Sass, 2021). Economic policy rhetoric mainly divided foreign companies operating in Hungary into good, “productive” and bad, “speculative” companies (Transparency International Hungary, 2014). The state was much more permissive to the “good” ones, whether it was operational regulation (Éltető, 2022)

or the regulation of the labour market (including the labour law) (Gerócs & Pinkasz, 2019). In this regard, it can be observed that, from 2010, the state, regarding education, taxation and labour market reforms, favors German industrial interests in the legislation.

The AKP, the party governing Türkiye since 2002, followed a program making economic growth and restructuring top political priorities. This also entailed the improvement of the investment environment. New Turkish politics were, therefore, highly oriented to promoting competitiveness. Ünay (2012) examines the 2002–2012 period of Turkish development based on the theory of the “competition state” (Czerny, 2010). Its elements are: 1. neoliberal monetarism instead of expansionism with inflation; 2. micro- instead of macro-economic governance; 3. setting strategic goals instead of resorting to extensive intervention; 4. innovation and profitability instead of well-being maximization; and 5. economic diplomacy and market share instead of geo-strategy and national security.

Micro-economic interventions are the most impressive in the fields of regulation, industrial policy, and employment policy. Especially in these early days, the specific vision for industrial policy was also missing, and besides external pressure (from the EU, IMF, and WTO) and because of it, economic subventions were typically applied in a sector-neutral way based on horizontal politics. According to Ünay (2012), setting a target for industrial development strategy is still quite nascent even today, although recently there have been some shifts in this regard.

According to Yilmaz (2011) only the selective industrial policy that supports specific sectors can be successful. This is not only the basis of the economic success of Japan, South Korea, and Brazil, but also the developed countries applied this previously, and it is becoming popular and accepted again. The non-selective (neutral) policies that are promoted by the neoliberal economic policy are ineffective according to Yilmaz. The economic foundations (macro stability, markets operating properly) do not necessarily lead to the transformation of the economic structure; for industry development, appropriate and supportive industrial policy is also a must. This is affirmed also by Rodrik (2007, p. 23) – although he puts his emphasis not specifically on the traditional, selective industrial policy based on direct state subsidies but rather on the participation of the state that actively fosters the process of industrialisation.

As Akan (2018) points on it, the AKP government started to transform the country’s dependent institutional and industrial structures by launching the entrepreneurial state paradigm and by focusing on industrial transformation programs. It partly failed, however, in a large extent due to imperfection in the systemic functioning of Turkish developmental regime (ibid. 164).

## 2. METHODOLOGY

The findings of our study are based on the analysis of newspaper articles and government documents published on the subject, in addition to summarizing the results of the related literature. Regarding statistical sources, we relied on official government sources.

Our research set up three areas of investigation, where we would like to compare the two countries and find some common elements in their development and opportunities:

*RQ1: What are the current trends and development opportunities for the automotive industry in the two countries?*

Though the size of the domestic markets for automobiles is different, their position in the global value chain (GVC) of car manufacturing is similar. Are they on a similar development path? Do they have the same opportunities in production and in upgrading?

*RQ2: How do governments try to promote automotive investments? Can these investments help in the upgrading of the sectors?*

By taking a closer look on the investment promoting systems in the two countries, we compare the basic principles and aims of these support mechanisms, and also the place of the car manufacturing in this system, with a special regard on the electric car segment.

*RQ3: What are the similarities in the political economic background of subsidies? How much do these subsidies fit into a wider framework of economic policy?*

During the research, we point out the similarities between the state strategies and evaluate the successes and the negative consequences of economic policy choices, with a special regard on the development-enhancing aspects of state support, and on the institutional framework of development policy.

### **3. RESULTS AND DISCUSSION**

#### **3.1. A brief history of the automobile industry in Hungary and Türkiye**

The development of the Turkish and Hungarian automotive industry followed different paths in the 1960s and 1970s after the Second World War. While Hungary specialized in the production of buses and trucks, in Türkiye, after the production of tractors and heavy and light commercial vehicles, the industrial policy aimed to start the production of passenger cars. While the nineties brought radical changes in Hungary with the collapse of the previous production structure and the loss of markets (Havas, 1995), in Türkiye they were able to adapt the previous development model to the new circumstances. At the same time, thanks to foreign capital investments from the nineties, both countries were integrated into the global automotive value chains (Aydoğan, 2017). This created a fundamentally different situation/heritage in the possibilities of vehicle production in the two countries.

Hungarian car assembly began after the 1990s. First, Suzuki built an assembly plant in the early nineties, the first car was completed in the Esztergom unit in 1992. At the same time the Opel factory in Szentgotthárd was established, where at first cars were assembled, and later only engines were produced. At Audi in Győr, the development was the other way around, initially they made engines, but only after 1998 did they start assembling cars. The latest car assembly plant is the German Mercedes plant in Kecskemét, which opened in 2012. The fifth car factory in Hungary is being built by the German BMW, but the investment was hindered by the market uncertainties due to the Covid-19 pandemic, so the start of production will be postponed to 2025.

Hungary's position in commercial vehicle production is marginal compared to the pre-1990 period. Major manufacturers are all foreign companies such as Schwarzmüller (towed commercial vehicles) or Chinese BYD which manufactures electric buses and bus chassis. The Chinese manufacturer established its assembly plant in Komárom in 2016. Only domestic manufacturer Kravtex-Kühne (Credobus) depends on the domestic market, where government purchases account for a large share of revenue (Magyarbusz, 2021).

After 2016, a noticeable change took place in the case of automotive investments, with significant foreign capital flowing into electromobility, and into the development and production of new automotive solutions. In addition to the production (Audi) and assembly of the main units of electric vehicles, significant investments were directed into vehicle battery production. While car assembly companies came mainly from Europe, the main investors in the production of battery cells and modules for electric vehicles in Hungary are the leading Asian (South Korean, Japanese and Chinese) companies, who supply the European market from here (i.e. export-platform type of FDI). The largest investors are South Korean companies. Samsung SDI started assembling batteries in the former monitor manufacturing plant in Göd, in 2017, and then continuously expanded production in the following years. SK

Innovations will build its next battery plant in Iváncsa having already one in Komárom, which was established in 2018. So far the South Korean company is the largest receiver of state aid in Hungary to date (K-Monitor, 2020). In addition, the Japanese GS Yuasa and South Korean Inzi Controls have established plants in Hungary. The Chinese battery manufacturer Contemporary Amperex Technology (CATL) announced in 2022 that it will establish its second European plant in Debrecen in eastern Hungary. According to official data, the amount of the investment is EUR 7.34 billion (HIPA, 2022), which is Hungary's largest single-sum greenfield investment to date. The factory with an annual capacity of 100 GWh will be a strategic supplier of BMW, Stellantis and Volkswagen (Bloomberg, 2022). Thanks to significant investments, by 2025, Hungary could be the second largest battery producer in the EU after Germany (Bockey & Heimes, 2022).

In contrast to the Hungarian automobile industry, from the 1950s we can observe an organic development in the field of road vehicle production, which, in addition to the strengthening of domestic companies, meant the import of significant foreign capital and technology. The beginning of the Turkish car industry dates back to the 1950s. Motorization has necessitated the production of heavy and light commercial vehicles and tractors mainly in industry and agriculture (Taymaz & Yılmaz, 2017). The first tractor factory, Türk Traktör, was established in 1954. The First Five-Year Development Plan (FYDP) between 1963 and 1967 gave impetus to Turkish car production, as a special role was assigned to car production in the industrial development plan (Yücel, 2015). Between 1963 and 1967, factories were founded one after the other. In 1963 the Otokar (bus and military vehicle manufacturer), in 1966 the joint venture between the Turkish Anadolu Group and the Japanese Isuzu Motors was established Anadolu Isuzu Otomotiv Sanayi ve Ticaret AS, BMC (trucks, buses, military vehicles), followed by the Karsan (light commercial vehicles and buses) and the MAN (light commercial trucks and later buses) factories. A year later, in 1967, the local Mercedes Benz (buses) plant was founded. Turkish passenger car production began in 1966 at the Otosan factory in Istanbul. The Turkish company signed a license agreement with Ford in 1977, and the company's name was changed to Ford Otosan. The import substitution policy of the 1960s and 1970s prioritized the development of domestic industry. The duties imposed on imports and subsidies for increasing domestic added value have proven to be successful.

The second FYDP (1968-1972) is associated with the establishment of two major car manufacturers. In 1968, the automobile factory TOFAŞ (Türk Otomobil Fabrikası Anonim Şirketi) was established as a joint venture between Koç Holding and FIAT. In 1969, the Turkish OYAK and the French Renault jointly founded a car factory. The two car factories handled a much larger production volume. While less than 4,000 cars were produced in 1970, by 1975 production had increased to 72,000 (Taymaz & Yılmaz, 2017). The turning point was the tightening of relations with the European Economic Community and the customs union agreement, which gave new impetus to investments (Aydoğan, 2017). In the 1990s, three new Asian car factories were established. Toyota established its plant in 1990, and in 1992 the Turkish Anadolu Group and Honda founded their joint car factory. In 1994, the Korean Hyundai Motor jointly founded a factory with the Turkish Kibar Holding.

Until the 2000s, the automotive companies' investments in Türkiye primarily targeted production for the domestic market. After the 1996 customs union agreement with the European Union, export-oriented investments serving the European market accelerated (TCTB, 2022). After the agreement exports have been dominated by automotive and machinery products (Eralp et al., 2021). The Turkish automotive industry was integrated into the network of European businesses (Yalcin & Felbermayr, 2021). In the 2000s, foreign companies increased their production by establishing new plants (Ford in 2001) or expanding existing ones (Toyota and Hyundai Assan).

The establishment of Türkiye's newest car factory was announced in 2017 by Turkish President Recep Tayyip Erdoğan. The announcement did not come from the president by chance, as the creation of the car factory was a political decision, the aim of which was to create an independent and globally competitive Turkish car brand. Large Turkish companies participated in the joint venture (Anadolu Group, BMC, Kök Group, Turkcell, Zorlu Holding and TOBB). The plant located in Gemlik started production at the end of 2022. The plant is planned for an output of 175,000 units (Deutsche Welle, 2022).

In 2021, Hungary ranks 12th in European road vehicle production (including Russia and the United Kingdom) (OICA, 2022). The Turkish vehicle industry is the 13th largest globally, while the 5th largest in Europe. Türkiye's production of commercial vehicles is outstanding (trucks, buses), it ranks first in Europe (OICA, 2022). In Hungary, automotive growth has been exported (Túry, 2014; Rechnitzer et al., 2017; Stefanovics & Nagy, 2021) from the nineties, and on average 90 percent of production is exported (Autonavigator, 2022). In Türkiye, the internal market also plays a significant role in output, the sector's average export rate in 2021 is 73 percent (Investment Office of the Presidency of the Republic of Türkiye, 2022). In Hungary, the automotive industry is the largest exporter with a 20 percent share (MAGE 2023), while it ranks second in Turkish exports with a 13.3 percent share (Andalu Agency, 2022). In terms of economic and trade relations, the European Union is the most important partner for both countries. In 2021, 61.9 percent of Hungarian automotive exports and 75.6 percent of Turkish exports were directed to EU (27) countries.

### **3.2 State investment promotion policies in Hungary**

In Hungary, three of the government programs designate vehicle production (road and rail) as a target area. The New Széchenyi Plan (2011-2021), the Széll Kálmán Plan 2.0 (2012-), and the Foreign Trade Strategy (2012-2020). There are: increasing of FDI inflow, increasing employment, support for investments related to R&D, improving the supplier situation of SMEs; development of regions, reduction of regional differences, and development of priority sectors.

In addition the government also used the 'strategic partnership agreements' concluded with multinationals to encourage investments. According to the objectives set out in the 2012 Kálmán Széll Plan, one of the important pillars of investment promotion is the follow-up of companies established here.

The most significant (mega) investments of the past 5-8 years were granted based on EKDs. In the case of EKD, companies submit their support application directly to the Hungarian Government. The program started in 2001, and in each case, the Hungarian Government decides individually and directly. In all cases, the participating authority is HIPA – National Investment Agency, and the Minister of Foreign Affairs and Trade acts on behalf of the Hungarian Government. In exchange for the support, the initial condition was the creation of a certain number of new jobs. The support program defined two target areas for job creation: start-up investment and start-up investment aimed at carrying out new economic activities. From 2017, the range of subsidies was extended to support research and development investments. The range of applicants is limited by the fact that only large companies with more than 250 employees can apply.

**Tab. 1 Individual Government Decision grants over HUF 10 billion**

Company	Ownership	Industry	Direct state aid	
			bn HUF	% of the investment
SK On Hungary	South Korea	automotive parts (battery)	76.36	12.9
Samsung SDI Magyarország	South Korea	automotive parts (battery)	33.68	9.2
SK Battery Manufacturing	South Korea	automotive parts (battery)	28.49	14.3
Mercedes-Benz Manufacturing Hungary	Germany	automotive assembly	22.15	12.1
Rubin NewCo 2021	U.K.	automotive parts	16.28	31.4
Apollo Tyres Hungary	India	automotive parts	16.08	11.0
Hankook Tire Magyarország	South Korea	automotive parts	15.88	12.1
AUDI Hungaria Motor	Germany	automotive assembly	13.00	5.2
Mercedes-Benz Manufacturing Hungary	Germany	automotive assembly	12.88	19.3
Sisecam Glasspackaging Hungary	Türkiye	glass manufacturing	12.55	17.8
BMW Manufakturing Hungary	Germany	automotive assembly	12.32	36.1
MOL Petrolkémia	Hungary	chemical industry (petrochemistry)	11.68	4.2
thyssenkrupp Components Technology Hungary	Germany	automotive parts	11.16	35.0
KOMETA 99	Italy	food industry	10.88	35.3
Continental Powertrain Hungary	Germany	automotive parts	10.62	34.5
ThyssenKrupp Presta Hungary	Germany	automotive parts	10.60	31.8

Source: Government of Hungary 2022

Some companies have received support several times, such as Audi Hungaria, with a total HUF 36.1 billion. The automotive industry dominates the list, receiving 53 percent (!) of all subsidies, HUF 502 billion. Among the big projects of the last 2-3 years, all the battery manufacturers can be found, but the large international OEMs and the two major tire manufacturers are also present (see Table 1). In addition to such subsidies, the state offers a number of other benefits to the investors, which are part of the negotiations, but not included in the actual subsidy amount, and may even exceed that amount (Mészáros, 2022). These can be additional investments with specific material implications (construction of public utilities and roads, preparation of the construction site), but they also play a major role in creating a "sufficiently flexible" regulatory/legislative environment (Éltető, 2023). We can find many examples of the latter related to the investments of Hungarian battery factories (Éltető, 2022).

The distribution of subsidies does not reduce the centre-periphery relationship, the supplier role of the region, which characterizes the current Hungarian and Central European automotive industry (Czakó & Vakhal, 2020). On the contrary, it not only preserves, but also increases dependency. On the one hand, there is a technological dependence in the direction of battery

production, which is an energy and labour-intensive sector, and on the other hand, it is a commitment to Asian investors. Within the EKD between 2004 and 2022, the state supported 377 projects (Government of Hungary, 2022b), most of which were German (120), Hungarian (65) and US (41) companies. More than one third of the projects are directly related to the automotive industry (133).

The EU has officially adopted a new regulation on foreign subsidies that distort the internal market, which is expected to be applicable from the second quarter of 2023, but individual companies establishing themselves in the EU can be investigated retroactively for 3 years (European Council, 2022). The regulation essentially extends the EU's ban on state aid, focusing on third-country state aid, large-scale public procurement procedures and mergers and acquisitions (M&A) deals.

This Regulation therefore expands the scope of the EU's existing State aid prohibition to "subsidies" provided by non-EU countries. The Regulation can apply to EU as well as non-EU businesses that receive such foreign subsidies. The term "subsidies" is defined broadly and captures a wide range of subsidies, such as contributions, loans, grants, guarantees, and tax benefits. Similar to the existing EU State aid regime, the Regulation gives a key role to the Commission in monitoring and enforcing the new rules (EY, 2022).

Hungary could be a big loser of the new regulation, however. The EU regulations may force the government to reshape its investment incentive approach focusing primarily on the attraction of Asian investors, since in their case, state subsidies from the sending state which help them to become market leaders in the world are quite common.

### **3.3. State investment policy in Türkiye**

Turkey has implemented a new investment incentive regime in April 2012 with retroactive effect as of 1 January 2012. The main incentives were value added tax (VAT) rebates, VAT exemptions of investment expenditures up to 60 percent, custom duty exemptions, and social security premium support up to 12 years. Additionally, depending on the region where the investment is made, the Government also provided free land, tax deductions up to 8 percent from the current effective rate of 20 percent, and loan rate support of 3 to 7 percent (UNCTAD, 2012).

By looking at the results, 66,503 incentive certificates were issued between 2012 and 2015, of which only 48 were strategic investment incentives. On the other hand, 13% (138.8 billion TL) of the total capital incentive of 1 trillion TL were strategic investment incentives (Haciköylü & Karal Önder, 2019).

Strategic investment incentives are targeted mostly as a policy to reduce the current account deficit, by reducing the import of treated raw materials for industry and to promote high value-added investments in these areas in Türkiye. Strategic investments were made in the sectors of mining and chemical products, while investor in the iron and steel, automotive and machinery, textile and agriculture sectors didn't receive or demand incentives. Although the expectations for strategic investment incentive policy were very high, this expectation has not been met (Haciköylü & Karal Önder, 2019).

As an extra boost to existing investment incentive schemes, the Turkish government launched a Project-based Incentive Program in November 2016. The new investment promotion scheme supported with a minimum of US\$100 million investment value, that are able to boost technological capacity, research and development (R&D) efforts, competitiveness and added value in production. Unlike the broad-based and conventional Investment Incentive Programme which offers a fixed incentive package and focuses on what the investors plan to produce in the country, the project-based incentive scheme is much more selective and focuses

not only on what investors are going to produce, but also the production process (Chan, 2018). Under the new scheme, certain companies may be “invited” to invest in certain areas or a general invitation for investments may be issued calling for investors to submit their applications to benefit from the scheme.

In the first years of the new scheme 23 major projects with a total value of TRY135 billion (US\$22 billion) have been supported. The projects have created around 170,000 direct and indirect jobs and they have reduced Türkiye’s annual current account deficit by US\$19 billion (Chan, 2018). Among the projects supported here were e.g., a new generation engine production project by Oyak Renault, a transportation and defence industry investment project by BMC, and an electric battery production investment project by Vestel.

### ***Türkiye's Automobile Joint Venture Group (TOGG)***

The creation of TOGG, its own car manufacturing company, embodies the political will that heightens nationalist sentiments (Mordue & Sener, 2020). The participating companies are used to be considered as close supporters and allies of the current AKP government. The latter is also a limitation for him, as the depletion of state funds due to a possible political turn poses a risk for the company’s operation.

The new company is based on a cooperation of four major local companies participating in the project: Anadolu Grubu (23 percent ownership), BMC (23 percent), Turkcell (23 percent), Zorlu Holding (23 percent). Zorlu Group signed a \$4.5 billion deal with the Chinese GSR Capital to invest in battery production through its subsidiary Vestel and with a plan to build a 25,000 mega-watt battery production factory.

The project is expected to cost 22 billion lira (\$3.7 billion) over 13 years. The state provides different types of support for TOGG: an exemption from customs and VAT, other tax reductions, 10-year support for workers’ social security, and a 30,000-unit yearly purchase of TOBB-produced electric cars for the public sector.

The TOGG car factory only partially possesses the competencies necessary for the implementation and success of the project. Mordue and Sener (2020) summarized the most important factors for the project. It speaks in favour of the investment that during the production of a new car/model, the BEV, due to its structural simplicity compared to the ICE (Christensen, 2011), benefits from its design and assembly. Furthermore, it is favourable for new entrants that the price of batteries, which are considered the biggest cost, is expected to continue to decrease. Finally, it is favourable that the company has the right amount and quality of labour available for its operation, which is an important factor especially in the case of engineers and skilled labour. In addition to these, there are many features that threaten or make the success of the project difficult. The most important is, that the technology required for production cannot be found in Türkiye, so the companies involved in production are forced to buy it on the global market. As an alternative, the licence of the technology may arise, but there is no rationality for this. Another problem is that, in general, the Turkish automotive industry has a low localization rate (i.e., the use of indigenous technologies), and the most important supplier positions are large global companies. In addition to the development and production of vehicles, the company must solve problems such as the market positioning of the products and the range, which is one of the most important factors in terms of the success of a product. In this context, the availability of charging, i.e., the charging network, is a key factor. The latter significantly limits the company’s sales growth potential. The planned production quantity (175,000) also represents many limitations for the company. According to Mordue and Sweeney (2020), this number of units is too small, which prevents the company from creating wider benefits, affecting the automotive industry like other global companies.



#### 4. STATE SUBSIDIES AND THEIR DEVELOPMENT IMPACT

The core aim of state subsidies in the countries of the semi-periphery is to provide help for the restructuring and upgrading of the economy, and for the catching up process. A basic developmental strategy is to help sectors survive in free markets and achieve a high(er) position in GVCs. How can subsidies help in this upgrading process in Hungary and in Türkiye?

Implementing development strategies needs new kinds of state institutions. In lesser-developed countries the lack of proper institutions could prevent actors to adjust to the challenges of growing market competition, but domestic political factors may hinder them from developing these institutions.

An important external factor shaping the institutional and political conditions in a country may come from global (e.g. IMF) and regional (e.g. EU) actors (Bruszt & Langbein, 2020). Under the influence of strong nationalist-populist leaders backed by powerful majorities, however, both Hungary and Türkiye have been moving recently in an increasingly illiberal direction, away from well-established EU norms (Önis & Kutlay, 2019).

It is not easy to change developmental paths on the peripheries, however. It requires large-scale institutional investment, extraordinary collective action, and coalition building (Doner & Schneider, 2016). And here, the state has a crucial role: it may help or prevent the forming of inclusive coalitions (developmental alliances).

Based on Bruszt and Karas (2020) four factors play important role in shaping developmental alliances and making them more inclusive:

- the institutional characteristics in which the sector level decision-making is embedded,
- extended vertical accountability of incumbents provided by strong effective competition among political parties,
- skilled and autonomous bureaucrats are also needed to build inclusive developmental alliances,
- presence of autonomous organizations of non-state actors in the sector with the capacity to provide unified representation and to create alliances among different categories of producers.

EU interventions in domestic institutional settings may be a key factor in inducing developmental divergence. In case of Hungary, in the pre-accession period, the EU interventions included measures to upgrade core state institutions by increasing the autonomy and the capacity of bureaucracy and judiciary. It was also the case in Türkiye, between 2002 and 2004, where political and institutional reforms were the set as conditions for starting accession negotiation in the country. The EU engaged in a deep mode of integration towards Türkiye during the short period when the country's membership prospect was deemed credible (Langbein & Markiewicz, 2020). The political environment and the normative power of the EU to enforce such institutional reforms have been faded, however, in case of both countries (Önis & Kutlay, 2019).

In the automotive industry, the space of domestic policy is limited because of the dominating role of leading firms in GVCs. More autonomous and capable states can change MNC profit strategies by way of improving the capabilities of workers entering the labour market, or by increasing the capacities of domestic firms to join in more complex forms of collaboration (Bruszt & Karas, 2020). Another option is the diversification of the supplier base of part producers to decrease the dependence on a single MNC.

Identifying and exploiting developmental opportunities, mobilizing resources, and creating developmental coalitions to change a developmental path all require states able and ready to do so.

As we have seen above, both in Hungary and in Türkiye, the state continues to support automotive producers and provides them with funds via different state aid schemes. But nowadays, automotive producers can go for safe rents coming from state aid, due to the weakening monitoring of EU institutions (Langbein & Markiewitz, 2020, 1120). In Hungary, German and East Asian (Chinese, South Korean) MNCs continue to create exclusionary alliances with the state. In Türkiye's, former big holdings and MNCs has been weakened, while the new alliance between the ruling AKP party and conservative, religious Turkish businessmen and pro-AKP corporations are on the rise. With the creation of TOGG, an ambitious exclusionary developmental alliance has been created, but it is still unknown, if it can really fulfil the conditions of upgrading, or the Turkish automotive sector will remain trapped in a low equilibrium.

## 5. CONCLUSIONS

The analysis of the export patterns shows that both Hungary's and Türkiye's position in the international division of labour has been largely determined by the multinational firms whose subsidiaries are important players in the local automotive industry. The pattern of exports and imports (in terms of destination/source countries, and the type of products traded) is determined by multinational companies' global production decisions (Taymaz & Yılmaz, 2017).

In the case of current trends and development opportunities, the two countries face similar challenges. If we look on the impact of the automotive sector on the two economies, we can put quite similar statements (pretty much true for many other countries on the semi-periphery). In the GVCs, it is rather the position than the participation that determines productivity gains, and here, upgrading of the local participants would be a basic requirement. What makes it harder, however, is that the manufacturing capabilities gained over the years have not been translated into innovation capabilities, while indigenous technological and innovation capabilities are difficult to form. Joint product developments in which domestic firms are involved in initial stages, may be important not just for capability building, but also for getting bargaining power over strategic decisions.

It is difficult to escape the middle-technology trap without active government involvement (Bod, 2015; Akcomak & Bürken, 2019). This was also confirmed by the government strategies that formed the framework of the development policy. At the same time, the internal resources of the economies, especially with regard to the capabilities of indigenous-owned businesses, created a significant barrier to the perspective of development. A weak national innovation system coupled with state-automotive industry agreement favouring short-term economic gains at the expense of forming long-term indigenous technological capabilities, however, is not the best setting here.

Partly due to the different industry characteristics, the beneficiaries of the subsidy policy are different in the two countries. In Hungary, there are significant subsidies for large companies with foreign capital. The size of such subsidies in the sector is insignificant. Current changes in the EU regulatory system of state aid received directly or indirectly (from non-EU member counties) may reshape the existing practice of state support. Türkiye, on the other hand, promotes the upgrading process with the support of a deep-rooting national ambition, the creation of an own (electric) vehicle brand. The result of the project is still unknown, though there are a lot of factors questioning the future success of the initiative.

While the EU regulatory framework tries to create an institutional framework that helps the creation of developmental alliances, and by that, the technological upgrading of economies, the Hungarian and Turkish state-support-mechanisms seems to opt for different alternatives. Despite the differences, we can also see similarities in the support policy pattern. In case of

both countries, we can witness a support for exclusive development coalitions that allows more a rent-seeking attitude, not only in economic but also in political terms. This economic policy direction reflects the general political objectives of governments.

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# Typology of generation Z in terms of the use of digital technologies

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**Abstract:** Generation Z is the first generation that grew up in a digital environment and on social networks. However, it is natural that not all members of this generation have the same attitudes towards digital technologies. The paper presents the results of a survey which purpose was to find out the knowledge and use of digital technologies by Generation Z in Slovakia. This paper aims to create a typology based on online shopping habits of this generation. Of the 6 types of digital consumer, the Bargain shopper has the largest representation, for which the extensive use of comparison shopping tools is characteristic. These shoppers are just looking for the lowest price and they are not truly loyal.

**Keywords:** digital marketing interactive content, online shopper typology

**JEL Classification codes:** M30

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## INTRODUCTION

We live in the online age and we are witnessing how many activities are gradually moving from the real world to the digital one. The field of marketing is not exception, the traditional forms are supplemented or replaced by digital ones. In the current emerging technological decades, the behavior of the consumers is changing and shifting towards the online shopping. Therefore, it is important for the organizations to understand the behavior of target market before taking any marketing action (Waheed et al., 2017). How to seize consumers' behavior is always critical (Waheed & Yang, 2018). This also applies to retailers, as participants in the consumer's journey to the product. Examining a shopper journey enables retailers to target the right shopper, at the right point in the shopper journey with the right message (Villanova et al., 2021).

Generation Z, who are global, social, visual, and technologically active people affected by digital technologies, have become an important market segment with a potential high purchasing power (Jílková & Králová, 2020). This generation refers to the most application-friendly and website-savvy generation engaging with the internet for most of its daily activities (Risca, 2019). Gen-Z is the first to have been described as digital natives. They have been online since childhood, using the internet, mobile phones, social networks, and even shopping from young age. They rely on smart phones for accessing information (Yeole & Agrawal, 2022). While shopping online, Gen Z derives enjoyment, learning, exploration and has a deal-hunting behavior, and significantly values reviews and ratings (Agrawal, 2022).

This paper aims to find out the attitudes of Gen Z towards digital trends and modern communication tools, as well as to create a profile of six types of online shoppers.

## 1 LITERATURE REVIEW

The growth of digital marketing has been rapid in the past years. Today, no decision can be made before referring to multiple websites and digital media. People are consuming digital content on a daily basis and marketing for most corporations is becoming increasingly interactive and “always on”. Delivering an efficient for the customer and the company, relevant and engaging experience increasingly relies on a deep knowledge of the consumer. Modern interactive marketing demands deeper understanding of customers and their behavior and how they like to interact with the company and the ability to deliver personalized experiences which they find useful and engaging (Stone & Woodcock, 2013).

The concept of digital marketing has evolved along with innovations in the internet and technology. Digital marketing refers to any marketing methods conducted through electronic devices which utilize some form of a computer, including online marketing efforts conducted on the internet. In the process of conducting digital marketing, a business might leverage websites, search engines, blogs, social media, video, email and similar channels to reach customers (American Marketing Association). Digital marketing is a core part of the electronic business including policies and activities to be closer to customers and the better understanding of their needs to add value to products and/or services, expanding distribution channels, and increasing sales through campaigns using media channels, such as search engine marketing, online advertising, email blogs, the use of web pages facilitating sales and post-sales service management (Lozano-Ramirez et al., 2021). The adoption of innovative devices and techniques in digital marketing has provided more convenience, a wider reach, cost-effectiveness, and the ability to cross boundaries of distance and time (Krishen et al., 2021). There are six distinct characteristics, which make digital environment particularly attractive for young consumers, especially: ubiquitous connectivity, personalization, peer-to-peer networking, engagement, immersion and content creation (Monteiro et al., 2019).

Interactive marketing has the ability to address the customer, remember what the customer says and address the customer again in a way that illustrates that company remember what the customer has told (Dhillon, 2013). One of the fundamental changes in interactive marketing is that customers have acquired substantially more power and are co-creating the offering and influencing marketing actions in more ways than before (Shankar & Malthouse, 2009). Personalization is a key trend and an increasing amount of content is personalized using data from social media, or data submitted by users (Infogr8, 2017). Interactive content is browser-based digital content experiences designed for visitor participation. Interactive content usually includes a feedback loop in which the outcome of the experience is directly impacted by the interaction of the visitor. These experiences go beyond passive reading or watching, as the user might be calculating, configuring, answering a quiz, participating in a contest or clicking around on stats and facts within an infographic (IonInteractive). Users may have one or more many different goals in mind when interacting with a content, from the basic (select, sort), to the open-ended (learn or explore). They may want to purchase, or to share (Infogr8, 2017).

Modern information and communication technologies provide an opportunity to utilize innovative online shopping patterns as well. The concept of e-commerce has evolved to include not only the acts of buying and selling products via the internet but also making products easier to discover and purchase. Online shopping has become popular as the simple clicks on the screen can help people purchase the products in all-day open online stores (Zheng & Ma, 2021). Compared to offline shopping, online shopping has many advantages including saving transportation cost, easily comparing prices across different online stores and receiving more product information. It is noted that many savvy shoppers often search



for deal information before they make online purchases. Searching for deals has become one of the most popular internet activities among today's consumers (Zhang et al., 2019).

There are three types of values provided by a shopping website to its consumers—hedonic, utilitarian and social. The importance of social values is evident from the increasing use of live chat on shopping website (Kakar, A. & Kakar, A. K., 2018). This service allows customers to seek service related information from an organisation via online-based synchronous media and a human service representative who provides answers through such media (McLean & Osei-Frimpong, 2017). Live chat is viewed as a cost-effective way to reduce purchasing risk through increasing social interaction. It has also been regarded as a good method to respond to consumer questions, and to personalize the shopping experience (Elmorshidy et al., 2015).

Interactive marketing technology has increased online shoppers' expectations for highly engaging, time-sensitive, and personalized shopping. Websites can use various visual presentations, such as image zooming, product rotation, 3D product presentation, or virtual fitting rooms to increase consumers' positive responses such as positive product attitudes and purchase intentions (Jai et al., 2021).

Voice assistant represents a novel form of interaction with consumers. As the adoption of voice assistants grows, it is strategic for brands to develop a strong voice presence that fulfils the needs of sophisticated consumers as well as those with disabilities. Voice assistants already possess the technical capabilities to lead interactions with consumers, from activating passive users to automating product purchases (Mari & Algesheimer, 2022). Voice search is perceived most useful during situations in which the user's hands were unavailable, for example, when driving or cooking. Consumer adoption of voice assistants may be impeded because they often record conversations and therefore may pose privacy threats, and because they store data and connect with the cloud making them a potential target of criminals or hackers (Zarbock & Loonam, 2020).

With the increasing demands of e-commerce, the need for better and faster customer services is also an essential thing for companies to succeed. In recent years, companies have developed a new category of solutions to transform customer behaviors even further by using artificial intelligence – from human to algorithm (Srinivasan, 2020). Chatbots are considered as one of the latest and trendy learning technologies with artificial intelligence. A chatbot is programmed with text messages or speeches to simulate human conversation in a scripted way. The advantages of using chatbots include low cost, less time in obtaining answers, better interaction and ability to operate as a 24/7 support service (Vanichvasin, 2021). Designed to convincingly simulate the way a human would behave as a conversational partner. A chatbot allows a user to simply ask questions in the same manner that they would address a human (Ansari et al., 2021).

## **2 METHODOLOGY**

Identifying and knowing the needs and types of customers is the key to a successful and efficient business. That's why the aim of this paper is to create a profile of selected types of online shoppers in terms of knowledge and use of modern communication tools. Based on this goal, we set the following research question:

RQ: Is there a type of Gen Z online shopper that is dominant?

In the first step, we selected the types of online shoppers to be investigated. There are several typologies of online shoppers, which characterize shoppers according to their behavior, needs or motives. For our purpose, we selected 6 types that appeared most frequently in the literature (Lahunou, 2022; Predoiu, 2022; Yadav, 2017): the New to the

Net, Reluctant, Bargain, Surgical, Enthusiast and the Power shopper. We wanted to find out to what extent these types are represented in Slovak Gen Z and how they can be characterized in terms of variables such as experience with newer technologies used to communicate with online shoppers or attitude towards influencers.

In the second step we designed the survey questionnaire which consisted of three parts. The first part contained questions about knowledge and use of digital communication tools and social networks, and about attitudes towards influencers. The second part contained scales, which were used to determine whether an individual belonged to a given type of online shopper. To assign the respondent to the given type, we used statements (two statements for each type) with the answer options on the scale "It characterizes me", "It characterizes me partially", "It rather does not characterize me" and "It does not characterize me at all". The third part of the questionnaire included demographic information about respondent.

To collect data we used on-line survey – CAWI and ensured with a filter question that only respondents born between 1997 and 2012, that is members of Gen Z (Dagostino, 2021), could fill out the questionnaire. The questionnaire was distributed through social networks in February and March 2022. The sample was not drawn randomly, so the results cannot be generalize to any specific population. Our final sample consisted of 176 respondents, of whom 55.5% were men, 31.8% with a university degree and 54.0% with a high school diploma.

In order to be able to determine what type of online shopper the respondent is, we needed to numerically code the answers in the scales with statements. We calculated the average score of the two statements for each online shopper type and for each respondent. Subsequently, based on the average score, we decided whether or not the respondent is the given type. Then we characterized each online shopper type according to the questions from the first and third part of the questionnaire. We also used the Chi-Square Goodness of Fit Test to compare the proportion of demographic variables (gender and education) in each of six types of online shoppers. For example, whether the same proportion from men and from women belong to the given type.

### **3 RESULTS AND DISCUSSION**

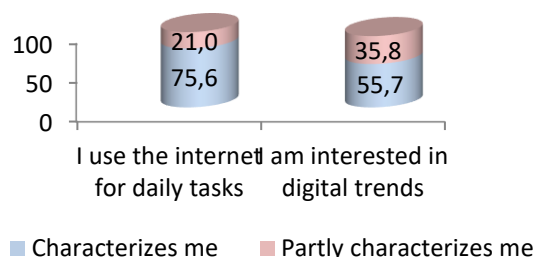
First, we will present our findings regarding the use of digital tools and influencer tracking for all Gen Z respondents, and in the second part, we will focus on the typology of online shoppers.

#### **1.1 Digital technologies and Generation Z**

As already mentioned, Generation Z grew up in a digital environment and on social networks. That's why we found out which newer communication tools they have experience with and we also focused on influencers as a source of information.

Almost all respondents (Fig.1) use the internet for daily tasks (96.6%) and are at least partially interested in digital trends (91.5%).

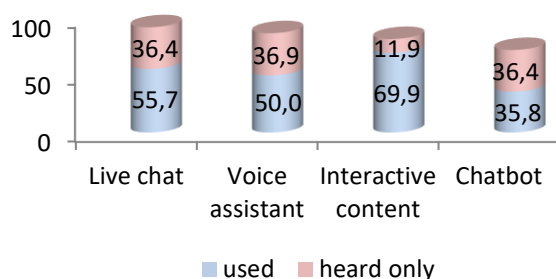
**Fig. 1 Internet and digital trends**



Source: own calculations

The most popular modern technology is live chat on a website, which 92.1% of young people have at least heard of (Fig. 2). They are followed by voice assistant, interactive content and chatbot. The most used of these tools is interactive content, which has already been used by 69.9%, for example for calculations (BMI, for loans), movement on the map, evaluation, surveys or games. More than a third of Generation Z members have the least experience with chatbots. Young people could imagine its use in banking or financial consulting (88.9%), in e-shops (81.5%) or telecommunications (50.0%), or in public administration (35.2%). in the health field (33.3%) or gastronomy (22.2%). According to Retail magazin.sk, 38% of Generation Z are willing to try a voice assistant when ordering, 25% of them say they can't wait to use it, and 10% said they are already using it.

**Fig. 2 Knowledge and use of communication tools**

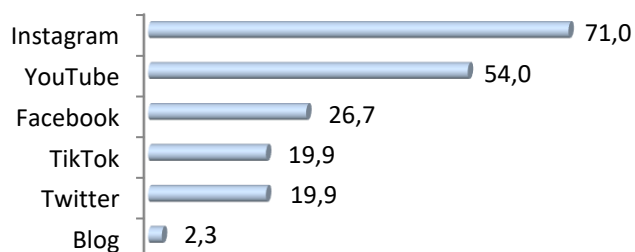


Source: own calculations

Those who have experience with a chatbot mainly appreciate the immediate response (88.9%) and easy communication (44.4%). As for the negative side, half said they preferred communicating with real people (50.8%), more than a third were not properly understood (38.1%), less than a third said they received unclear answers (30.2%) or that their problem was not solved (28.6%). Of those who used live chat on the website, they throw out its advantages compared to the chatbot in that it has a greater ability to solve problems (59.2%), it is more personal (49.0%), more interactive (46.9%), more customizable (38.8%) and provides more information (37.8%). They see the long wait for an answer (31.6%), unavailability (25.5%) and failure to solve problems (14.3%) as disadvantages of live chat. The greatest advantage of the voice assistant is considered by those who used it to be that there is no need for hands (65.9%), saving time (58.0%), the possibility of using it even while driving (54.5%) or greater comfort (52, 3%). They see as disadvantages that they do not always understand everything (79.5%), communication in a foreign language (54.5%), and not everyone can master it (25.0%).

We were also interested in Gen Z's attitude towards influencers. Three quarters of respondents follow influencers on social networks, with Instagram and YouTube being the most used and blogs the least (Fig. 3).

**Fig. 3 Following influencers on social networks**

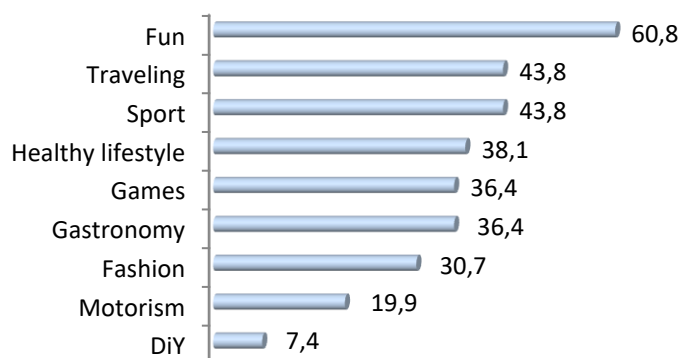


Source: own calculations

More than half (56.1%) of the respondents follow influencers daily and almost a third more than once a week (29.6%), especially in the field of fun, traveling or sport (Fig. 4). Most young people trust influencers. However, more than a third (37.1%) do not trust influencers mainly because they are paid to promote a product or use unverified information. Young people follow influencers for inspiration (51.1%), relaxation (47.2%), information (38.6%) and discount codes (18.2%).

According to the Glami survey (TouchIT, 2023), Generation Z looks for inspiration and news. 41% of women visit fashion websites or apps on their mobile phone to see news and trends. 70% then consider Instagram and TikTok to be an endless source of ideas. 74% of Gen Z men can be found on YouTube. Twice as many members of Generation Z than Generation Y visit the website after mentioning an influencer, and 15% buy directly there.

**Fig. 4 Areas in which influencers are followed**



Source: own calculations

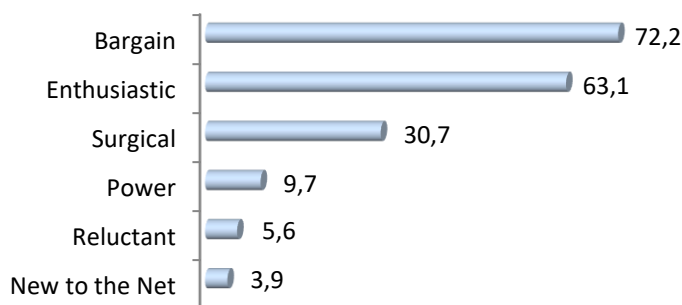
## 1.2 Typology of Generation Z

We created the typology of members of Generation Z by using statements to find out what type of online shopper the respondent is and then to compare it with the other types using the variables presented in section 1.1. Since several respondents identified with statements

characterizing several types, one respondent could be assigned to more than one type of online shoppers.

The answers show that young people as online shoppers can be characterized as bargain and enthusiastic (Fig. 5). This is confirmed by the increasing popularity for promotions and sale products (Mergado, 2022).

**Fig. 5 Online shopper types**



Source: own calculations

The characteristics and comparison of the individual types are as follows:

#### *The Bargain shopper*

This type makes extensive use of comparison tools and its goal is to get the lowest possible price. Compared to other types, they use interactive content to a greater extent, follow influencers on Instagram and Twitter in order to find information and inspiration in the field of entertainment and sports. To the greatest extent, they use the internet every day to solve work tasks. In terms of demographics, they represent a medium representation of men and university graduates.

#### *The Enthusiastic shopper*

They shop often and consider shopping a form of entertainment. Compared to other types, they stand out in that they use the voice assistant to the greatest extent, follow influencers the most, and the largest share of them clearly consider influencers to be a reliable source of information. The most of them follow influencers in the fields of entertainment, healthy lifestyle, fashion, travel and food, and the least among all types in the field of sports and DIY. This type is also most interested in digital trends. In terms of demographics, they represent a smaller representation of men and those with a secondary university education.

#### *The Surgical shopper*

These shoppers know what they want in advance and usually buy only what they intended. They know in advance the criteria on which they will make decisions. They search the internet for information that matches these criteria and buy only when they are sufficiently confident that they have found the right product. Compared to others, they use interactive content to the greatest extent, follow influencers in the field of games or sports. These areas stand out for them, perhaps because they trust influencers the least of all, and therefore if they follow them, it is mainly for entertainment. They are interested in digital trends and use

the internet every day to solve work tasks. From the point of view of demographics, this segment has the largest representation of men and a smaller share of university graduates.

### *The Power shopper*

They see shopping as a necessity rather than a form of entertainment. They want to find what they want quickly and don't want to waste time looking around. Compared to others, they use live chat the least. They follow influencers more on YouTube and blogs, but less on Facebook and Twitter. They follow gaming influencers to the least extent, and to a small extent compared to others, it is also the area of sports and fashion. They use the Internet to the smallest extent on a daily basis to solve work tasks or are interested in digital trends. In terms of demographics, they represent a medium representation of men and university graduates.

### *The Reluctant shopper*

This type is concerned about their safety and privacy online. Perhaps that is why they use chatbot and Live chat to the greatest extent of all. But on the other hand, a large proportion of them trust influencers and most of all follow them in order to obtain discount codes. Also, it is characteristic for them that they follow influencers with the least frequency and the smallest proportion of them (compared to other types) follow them in the field of sports and motorism and for the purpose of obtaining information or inspiration. Compared to others, they follow DoItYourself influencers to the greatest extent and use mainly Instagram for this, and least of all TikTok and blogs. To a lesser extent, they use the internet daily to solve work tasks or are interested in digital trends. In terms of demographics, this type has the smallest share of men and the largest share of university graduates.

### *The New to the net*

They are shoppers who are less "internet" literate. Of all types, they have the least experience with chatbot, live chat, voice assistant and interactive content. They are also the least likely to follow influencers for relaxation and in areas such as entertainment, healthy lifestyle, fashion or food. On the other hand, the largest share of them (compared to others) follows influencers from the field of motoring. They follow influencers on social networks in the same way as others, but it is characteristic for them that they tend to prefer Instagram, YouTube and Facebook. In this way, they represent a middle ground compared to other types in the following characteristics: considering influencers as a reliable source of information, daily frequency of following influencers, and following them for inspiration and discount codes. To a lesser extent, they use the Internet daily to solve work tasks, but they are interested in digital trends. In terms of demographics, there were more men in this segment than in the other segments (except Surgical), and the smallest share of university graduates.

We also focused on comparing the distribution of the share of men and women and the share of people with no education and with a high school diploma in individual types. We identified statistically significant differences by gender in Surgical shopper ( $p=0.00$ ) and Enthusiastic ( $p=0.05$ ). 73% of men and 44.3% of women were classified as Surgical shoppers, and 57.8% of men and 80.3% of women were classified as Enthusiastic shoppers. Even when comparing by gender, we identified statistically significant differences in two types, namely Surgical shopper ( $p=0.05$ ) and New to the net ( $p=0.03$ ). 80% of people

without high school diploma and 60.3% with higher education were classified as Surgical shopper. 40% of people without a high school diploma and 20.5% with a high school diploma or university education were classified as New to the net.

## CONCLUSION

Based on the results, we can conclude that Generation Z can be described as digital fans who are interested in digital trends, like to use new digital tools and use online platforms and the internet for everyday tasks. They have the least experience with chatbots, and since Gen Z could most imagine using chatbots on the websites of financial institutions, e-shops and telecommunications operators, we recommend companies from these areas to incorporate chatbots on their websites. The biggest barrier to using chatbots is that half of the respondents would prefer communication with people, i.e. live chat. The latter is more popular than chatbot and its biggest advantage is a better ability to solve a problem, but the experience of young people is that they have to wait a long time for a connection or an answer. Live chat represents higher personnel costs for companies, but its positive side is a more flexible solution to customer problems.

The strength of the voice assistant is the ease of use in the form of a voice without the assistance of hands, but the weakness is that it does not always understand everything, and communication is in a foreign language. There is room for software companies to develop and improve existing systems. The most popular is interactive content, which is more used, but still offers enough space for new solutions that can attract or keep Gen Z on websites longer.

Influencers represent a reliable source of information for the majority of Gen Z and they follow them mainly in the field of entertainment and for inspiration and relaxation. A correctly chosen method of communication can help an influencer attract and gain followers not only in the field of entertainment, but also in more serious topics.

We formulated research question:

*RQ: Is there a type of Gen Z online shopper that is dominant?*

We found that the selected types have the following representation in Gen Z: Bargain shopper 72%, Enthusiastic shopper 63%, Surgical shopper 30,7%, Power shopper 9,7%, Reluctant shopper 5,6% and New to the Net 3,9%. We can conclude that 2 types, Bargain and Enthusiastic shopper, are dominant among Gen Z.

Therefore, the efforts of marketers should be focused on these two types. It is necessary to understand their needs and requirements and then set processes and marketing activities in accordance with these requirements.

Bargain shoppers represent almost three-quarters of Gen Z. These shoppers are just looking for the lowest price and they are not truly loyal and easily switch from one online store to another. Online retailers should convince these shoppers that they are getting the best price and do not need to continue searching for a better deal. Sale-priced items listed on the site could be very attractive to these shoppers together with appropriately designed Interactive content, which this type of online shopper likes to use. As an online shop cannot live on discounts only and Bargain shoppers are primarily focused on the money they save, there is an opportunity to create, for example, a loyalty program that will offer attractive benefits that will attract this type of customer.

Enthusiastic shoppers, for whom shopping is fun, also have a significant presence. Voice assistants and influencers in the fields of entertainment, healthy lifestyle, fashion, travel and gastronomy are attractive to this type. Online retailers can attract them with simple

navigation and instant access to information so that they don't waste time. Shopping should be easy and fun.

A limitation of this study is that samples have been obtained by non-probability method, namely by convenience CAWI sampling. As opposed to a random sample, the results may not be used to make an inference about the whole population of Generation Z. However, thanks to the growth of internet use among young people, we believe that our study may provide insight into the use of digital technologies and online shopping patterns of Gen Z.

Future research could go in two ways. Choose an a priori approach, when the types of online shoppers are known in advance. It is possible to add other types and create statements in the questionnaire to identify these types. Or choose an a posteriori approach, when a set of questions/statements is created and through methods of statistical analysis, e.g. Cluster analysis, segments of online shoppers will be created and the task of the researcher will be to characterize them and name them aptly. Since online shopping is also widespread in other age groups, future research could also be focused on other generations or target groups.

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