ISSN 1648-7974

LIETUVOS VERSLO KOLEGIJA
LITHUANIA BUSINESS UNIVERSITY OF APPLIED SCIENCES

VADYBA

2022 Nr. 2 (38)

Journal of Management

KLAIPĖDOS UNIVERSITETO LEIDYKLA
Klaipėda
2022

Name of publication: **Journal of Management** (ISSN: 1648-7974)
Issue: Volume 38/Number 2/2022
Frequency: Semianual
Languages of articles: English,
Office of publication: Public Institution Lithuania Business University of Applied Sciences
Turgaus str. 21
LT-91249, Klaipėda
Lithuania

Editorial Office: Assoc. prof. dr. Jurgita Martinkienė
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Phone +370 46 311 099
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E-mail: publisher@ltvk.lt

Journal of Management Homepage: http://ltvk.lt/vadyba

The journal is reviewed in:
Index Copernicus (IC) database https://indexcopernicus.com/index.php/en/parametrisation-1/journals-master

Central and Eastern European online Library (CEEOL) database http://www.ceeol.com/

EBSCO Publishing, Inc. Central & Eastern European Academic Source https://www.ebscohost.com/titleLists/e5h-coverage.htm

https://www.mab.lt/paslaugos/lietuvos-mokslo-zurnalai/v/

Every paper is revised by two reviewers.

ISSN 1648-7974 (Print)
ISSN 2424-399X (Online)

Leidinio pavadinimas: **Vadyba** (ISSN: 1648-7974)
Leidimas: Volume 38/ Number 2/2022
Periodiškumas: Leidžiamas dukart per metus
Straipsnių kalba: Anglų
Leidėjo adresas: Viešoji įstaiga Lietuvos verslo kolegija
Turgaus g. 21
LT-91249, Klaipėda

Redakcijos adresas: doc. dr. Jurgita Martinkienė
Mokslo-taikomųjų tyrimų skyrius
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Turgaus g. 21, LT-91429
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Telefonas +370 46 311 099
Faksas +370 46 314 320
Elektroninis paštas: publisher@ltvk.lt

Žurnalo internetinio puslapio adresas: http://ltvk.lt/vadyba

Žurnalas referuojamas:

Index Copernicus (IC) database https://indexcopernicus.com/index.php/en/parametrisation-1/journals-master

Central and Eastern European online Library (CEEOL) database http://www.ceeol.com/

EBSCO Publishing, Inc. Central & Eastern European Academic Source https://www.ebscohost.com/titleLists/e5h-coverage.htm

https://www.mab.lt/paslaugos/lietuvos-mokslo-zurnalai/v/

Kiekvienas straipsnis yra peržiūrimas dviejų recenzentų.

ISSN 1648-7974 (Print)
ISSN 2424-399X (Online)

Vadyba
Journal of Management
2022, № 2 (38)
ISSN 1648-7974

Turinys / Contents

EDITORIAL

“Journal of Management“ is periodically published applied sciences journal by Lithuanian Business University of Applied Sciences. The journal is constantly publishing articles since 2002 and has gained significant experience and international recognition. This year the journal is celebrating its 20 years anniversary. It has been well renowned by foreign scientists and number of international scholars publishing continues to increase. Currently, 38th number of the journal is released to readers. Only those articles that meet thorough requirements set by the Editorial Board are being published. Authors of these articles represent various Lithuanian and foreign countries science. From Lithuania the following institutes are represented Lithuania Business University of Applied Sciences, Kaunas University Technology. The following institutes from foreign countries: University of South Bohemia in Ceske Budejovice (Czech Republic), Hungarian University of Agriculture and Life Sciences (Hungary), Multimedia University (Malaysia), Alexander Dubcek University of Trencin (Slovakia), Czestochowa University of Technology (Poland) and other.

Editorial board of “Journal of management” seeks for published academic researches to cover different economic directions and to be relevant to different industries and countries around the world. At the same time, the focus remains on ongoing changes in various industries, human resources, and governance. Based on these criterions, articles are chosen for publication in the journal. Focusing on relevant areas of change is expected to encourage further scientific discourse and development of social science ideas.

The largest part of scientific articles are prepared by foreign researchers residing in different scientific institutions. This situation creates conditions for research from different perspectives in different fields of science. One of such researches is made by polish and slovak scientists M. Okręglicka, A. Lemańska-Majdzik, K. Havierniková. Colleagues in this research analyse knowledge-based resources in market share development. By studying the field, authors are looking at the relationship of how building knowledge-based resources in the organization could create opportunities to achieve a competitive advantage, leading to increasing market share and overall increase of results of the firm. Authors are testing such hypotheses by running the survey, based on a group of 355 enterprises in Poland, where they try to identify the relationship between selected areas of knowledge-based resources and the change in the firm's market share.

However, Editorial cannot review all of the researches, therefore we encourage familiarizing with them in the Journal, which currently is under the indexing process with Scopus and WoS.
We invite scientists to actively publish in the Journal, share their research results and methodological insights. We expect for close cooperation.

Prof. Dr. (HP) Valentinas Navickas, Editor-in-Chief

https://doi.org/10.38104/vadyba.2022.2.01

Vadyba
Journal of Management
2022, № 2 (38)
ISSN 1648-7974

THE EFFECTS OF MEDIA ON PUBLIC ATTITUDE DURING THE BRAND VALUE CRISIS: EVIDENCES FROM *GRIGEO* CASE

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Abstract
Many scholars have focused on consumers when analysing the brand crisis and the importance of the media during the event, creating a lack of empirical research on public attitudes. In addition, the empirical studies of public attitude conducted so far analyse it abstractly, dividing the attitude into positive, negative and neutral. The significant effects of the brand value crisis drive the need for more detailed research, i.e. to analyse the public's attitude through the components of emotions, cognition and behaviour. Such a study would allow us to understand better the expression of public attitudes against the background of brand crisis and media information about the crisis and how public attitudes, brand crisis and media information interact. It should also be noted that each crisis is unpredictable and different, so each investigated case of a crisis becomes another source of knowledge and crisis prevention. This study aims to evaluate the effect of media on public attitude during the brand value crisis. This study uses the media content quantitative analysis method to examine the media effect on public attitude during the reputational crisis of the paper and wood industry company group in the Baltic countries. The research revealed that during the brand value crisis, the media is dominated by information that emphasises immorality. The brand value crisis has had a negative impact on public attitudes through all three of its components. The established unfavourable public attitude towards the brand was demonstrated by feedback, causing negative consequences for the brand. The research findings allow the authors to confirm the obvious relationships between the brand value crisis, media information reflecting immorality, and public emotions, cognition, and behaviour. The study revealed the case of a brand value crisis that provoked a strong public reaction. Public attitudes have been analysed through its components (emotions, cognition, and behaviour), thus making it clearer to identify preventive communication activities and avoid the larger-scale development of the brand value crisis. This study provides a basis for the theoretical development of crisis management and expands the discussion of the crisis's effect on public attitude. The research findings may provide insights into corporate crisis communication and be prerequisites for sound brand communication solutions in public, by anticipating the possible development of public attitudes and seeking to control them. The interaction between the symbolic value and the effects of the brand, and the emotions, cognition and behaviour of the public, which was formed with the dominance of media information reflecting the immorality of the brand value crisis, was established. The interaction between the brand value crisis and pubic attitude regarding in terms of the impact of media information has been reasoned.
KEYWORDS: crisis management, brand management, brand value crisis, corporate reputation, public attitude.

Introduction

Reputational crises of organisations are just a few of the challenges of this century that encourage companies to take care of their reputation (Iglesias et al. 2011; Da Silveira et al. 2013). The painful consequences of the crisis make brands seriously prepare for the occurrence of the event. Even with the action plan, Coombs, Holladay (2014), and Pace et al. (2017) argue that crises remain unpredictable and different each time. The unpredictability of crises is determined by society and the attitudes that can develop during a crisis, which can lead to brand negative behaviour by spreading word-of-mouth communication, affecting other societal actors, including consumers, and contributing to declining financial performance (Bennett and Kottasz 2012). In addition, it is believed that the freedom of society to express its beliefs can prolong the crisis period, even when events in the media calm down (Goodman et al. 2010).

The increasing relevance of brand crisis has attracted the interest of researchers, focusing on three key areas:

1) the factors that influence public attitudes by highlighting the different assessments of public comments and information provided by the media (Holton et al. 2014; Hong and Cameron 2018; Ping et al. 2014);

2) crisis management by assessing the type of crisis, which influences the choice of strategy for brand response (Coombs and Holladay 2006; Greyser 2009; Dutta and Pullig 2011);

3) the factors that determine the responses of consumers during the crisis by emphasising importance of the media, as an important variable in the face of the crisis, and by highlighting its possible impact on the formation of consumer attitudes (Yannopoulou et al. 2011; Helm and Tolsdorf 2013; Jeon and Beack 2016).

Scientific studies on the latter topic focus on the public, highlight the media as the primary source of information about the brand crisis, on the basis of which the public assesses the crisis situation.

Many researchers, analyzing the brand crisis and the importance of the media, study public attitudes rather abstractly, dividing attitudes into positive, negative and neutral (Sung, Lee 2015; Ip et al. 2018).

Literature review results showed that the significance of the brand crisis for the reputation of organizations prompts the need to analyse public attitudes through emotional, cognitive and behavioral components. Such a study would allow to research the expression of public attitudes towards the brand crisis and information about the crisis in the media, and to evaluate how public attitudes, the brand crisis and information in the media interact. The research questions are as follows:

RQ1: What is the focus of information in the media during a brand crisis: lack of skills or immorality?

RQ2: What is the attitude of media consumers to the crisis of brand value shaped by media information? Which component of society's attitude - emotions, cognition, and behaviour is the most expressed?

RQ2a: What public emotions are shaped by media coverage of the brand's immorality toward the brand value crisis?

RQ2b: What public awareness of the brand equity crisis is shaped by media coverage targeting brand immorality?

RQ2c: What kind of public behaviour is shaped by brand value crisis media coverage of brand immorality?

RQ3: Does public attitudes to the crisis of brand value affect the brand in crisis?

A media content analysis approach was used to answer the problematic question how the brand crisis and information about it in the media affects public attitudes. The following method was chosen to analyse the brand value crisis of one of the largest paper and wood industry company group in the Baltic countries, which was sparked by particular attention both in the media and in other interested groups. The mentioned crisis was characterized by a very strong public reaction, high media coverage, and the scale of the crisis itself.

Theoretical background

Brand crises have become an inevitable reality faced by almost every organization; brands are trying their best to prepare before the first manifestations of a crisis appear. The biggest problem is that it is almost impossible to fully prepare for a brand crisis and accurately predict its further course, as each crisis is different and varies depending on the situation and the stage of the crisis (Johar et al. 2010; Pace et al. 2017).

Despite the possible classification options for different types of crises, product-harm crises and values-related crises receive the most attention of researchers. According to Dutta and Pullig (2011), both types of crises respond to the value created by the brand and indicate the nature of the crisis. In the case of a product-harm crisis, the defects in the products offered by the brand and the damage they may cause are covered, while the crisis reflects the failure of the functional value created by the brand. The crisis affects the symbolic and emotional values created by the brand. Damage to any of the value elements can lead to a value crisis and negatively affect a company’s ability to deliver benefits to consumers. In each type of crisis, brand value suffers, the only difference being whether it appeals to functional or symbolic and emotional values. Due to the frequency of occurrence, the product-harm crisis is chosen much more often than the values-related crisis, but the latter crisis is characterized by a greater negative assessment of consumers, especially in the current context.

Backhaus and Fischer (2016), Baghi and Gabrielli (2019) confirmed that a higher negative consumer reaction is observed during the brand value crisis. The following response is based on the inclusion of social and ethical issues, threat to the consumers’ interests, regardless of cultural differences.

Researchers note that the severity of the crisis depends on the extent to which the crisis is related to the existing consumers’ associations with the brand, as the resulting situation in the minds of consumers may affect the existing associations (Dawar and Lei 2009; Salvador et al 2017). In other words, consumers tend to assess brands differently during a crisis, depending on how well they are known to them. When consumers know a particular brand, have bought its products or learned about it from the media or other sources, certain associations are formed in the minds of consumers. During a crisis, the following associations and prior information accumulated in the consciousness become relevant again and can mitigate the impact of the negative information received during the incident. Meanwhile, when during a crisis consumers are confronted with an unknown brand, there are no preconceived associations or attitudes in their minds; thus, information provided during the crisis becomes primary, shaping consumers’ attitudes towards the brand (Dawar and Lei 2009).

Under present market conditions, the number of factors that can affect brands during the crisis and their various stages is increasing. The variety of factors that can determine the outcome of the crisis and their limited control make it difficult for brands to solve problems smoothly (Do et al. 2019). Helm and Tolsdorf (2013) note that the brand’s reputation and the resulting halo effect may reduce the negative impact of the crisis on the brand’s reputation, but Coombs (2007), Yannopoulou et al. (2011) give the media a unique role due to its low control possibilities and undoubted importance in times of a crisis. The media have a critical role in influencing the formation of stakeholders’ attitudes during a crisis.

In view of the increasing information flows, Yannopoulou et al. (2011) analysed the impact of media on consumer confidence when they have directly faced the brand crisis and received information indirectly, i.e., from the media. It has been observed that when consumers directly faced a crisis, they tend to be more lenient in assessing the situation and forgive faster, while the information in the media exacerbates the situation and sows doubts in the minds of consumers, making them more brand-critical. Coombs (2007) notes that in a crisis, it is important how the media presents the situation and what the level of objectivity is. Stakeholders often do not hesitate to choose the crisis version presented in the media and consider it to be real. Thus, during a crisis stage, communication of the company about the situation is of great importance. Li et al. (2018) state that during a brand crisis, the media information can be directed at emphasizing the immorality or lack of skills of the brand in crisis and affects public attitudes.

Having analysed information provided by the media, the authors emphasized that a greater negative impact on consumers is observed in the case of unfavourable information for the brand (Siomkos et al. 2010; Yannopoulou et al. 2011; Li et al. 2018; Mason 2019), in contrast to positive. It is negative information that in many cases dominates in the media and becomes inevitable for the brand in crisis and the society. The public cannot always support information provided by the media. There are cases when information unfavourable to the brand posted on news portals has not been reflected in public comments and, on the contrary, has contradicted it (Holton *et al.*, 2014; Hong, Cameron, 2018).

Ip et al. (2018) point out that it is important to pay attention to how and what information is presented on the media, as this contributes to the public reaction. During a crisis, however, unfavourable information for the brand that cannot be controlled attracts public attention, which can increase the vulnerability of the brand (Hong, Cameron 2018).

Studies carried out by Siomkos et al. (2010), Yannopoulou et al. (2011), Liu and Shankar (2015), Mason (2019) have identified a greater impact of negative media information on consumers of a brand in crisis. Meanwhile, research by Ping et al. (2014) highlighted that information provided by the media can negatively affect the attitudes of not only consumers but also the public. Research of Li et al. (2018) focused on the reference of media information to immorality or lack of skills. According to the researchers, media presenting information during the brand crisis take into account the crisis situation and highlight the truth by focusing on the cause of the crisis.

It is likely that during a brand value crisis, media based on the situation, will focus most on immorality; thus, research question *RQ1* is formed:

RQ1: What is the focus of information in the media during a brand crisis: lack of skills or immorality?

Ip et al. (2018), Piotrowski and Guyette (2010) confirmed the existence of a relationship between the brand crisis and public attitudes. Not only can the occurred brand crisis negatively affect public attitudes, but public attitudes can also affect the crisis by increasing its scale.

Unfavourable information for the brand encourages the public to be more critical in assessing the situation (Ping et al. 2014). Comments in the public sphere influence public attitudes and can be a strong factor that changes public attitudes (Sung and Lee, 2015). Having read an article in the media and comments from other members of the public, the situation will be assessed on the basis of one's own perception of a more reliable source (Hong and Cameron 2018).

Ping et al. (2014) note that the public is made of consumers of a particular brand and other individuals who do not necessarily are aware of it. In the case of the appearance of negative information in public, the latter part of the public is often more critical, thus contributing to the formation of a negative attitude and at the same time arousing doubts of the consumers of that brand. Ip et al. (2018) revealed that in the case of a brand value crisis, a negative public attitude in terms of a brand in crisis is formed. Based on this research by researchers and accepting the previous assumption that in the event of a crisis of brand value, information directed at its immorality dominates in the media, the research question *RQ2* is formulated:

RQ2: What is the attitude of media consumers to the crisis of brand value shaped by media information? Which component of society's attitude - emotions, cognition, and behaviour is the most expressed?

In recent decades, the importance of an attitude has increased due to its impact on the behaviour of individuals (Jain 2014). Attitudes influence the choice and actions of a person (Fabrigar and Wegener 2010). Jain (2014) suggests to examine attitude as an umbrella expression covering such concepts as preferences, feelings, emotions, beliefs, expectations, judgments, principles, and intentions. The following results in the attitude being subjective and difficult to be measured due to available personal attributes (Jain 2014). To understand the attitude and its structure, researchers analysed its possible components and developed different models. According to Jain (2014), Spooncer (1992) offered a "Tripartite Model", which consisted of three components of attitude: feelings, beliefs, and behaviour. The first component included an individual's emotions expressed in words and reflecting one's feelings. The second relied on a person's cognitive response, illustrating one's beliefs. The third component showed the individual's overt action and intended behaviour (Jain 2014). According to Jain (2014), previous research on only positive, negative or neutral attitudes lead to a weak assessment of the formed attitude. The following shows that the public response to the brand in crisis remains not yet been explored completely and leaves questions concerning the changes of public attitudes in the media background. The following observations allow to raise research questions *RQ2a, RQ2b, RQ2c* to clarify the brand in crisis and the public's attitude to the crisis though its constituent elements.

RQ2a: What public emotions are shaped by media coverage of the brand's immorality toward the brand value crisis?

RQ2b: What public awareness of the brand equity crisis is shaped by media coverage targeting brand immorality?

RQ2c: What kind of public behaviour is shaped by brand value crisis media coverage of brand immorality?

Research by Liu and Shankar (2015), Baghi and Gabrielli (2019) revealed that consumers' response to the crisis may result in negative communication by "word of mouth" and a changed intention to buy, which would contribute to a decrease in the brand's market share and other financial losses, such as decrease in demand or redistribution of consumer preferences. Hong and Cameron (2018) believe that negative information about the brand, which is impossible to control, increases its vulnerability, as it attracts more public's attention and generates a negative reaction from them. The media becomes part of the crisis, as it is seen as a key source of information for stakeholders and society as a whole, thus contributing to the formation of its attitude (Ping et al. 2014), and emphasizes that greater public interest can further prolong the period of the brand's crisis (Goodman et al. 2010).

Researchers point out that the boundaries of the crisis are "drawn" by the brand crisis itself, the information provided in the media and public attitudes. All of the following participants are interrelated and should be analysed together. Media information, in the case of a brand value crisis and public attitude, becomes an area for the development of the interaction between these two variables. It is possible to claim that the media is one of the essential sources of information, which shapes public attitude about the crisis that has taken place (Bennett, Kottasz 2012), while the public, whether or not it had direct contact with the brand, but encountered indirectly through the media, can influence the brand crisis. This leads to *RQ3: Do attitudes to the crisis of brand value affect the brand in crisis?*

Methodology

In order to reveal the relationship between the brand value crisis, public attitude, and media information, a content quantitative analysis method was used.

The brand value crisis of *Grigeo*, *AB* (**Grigeo, AB** is the only paper and wood industry company group in Lithuania and one of the largest in the Baltic countries) that took place in January 2020 has been chosen for the qualitative research. In 2019 *Grigeo* occupied almost a quarter of the Lithuanian market, and is well known to the majority of the country's population for its products, intensive communication and marketing. At the beginning of 2020, it became clear that one of the companies belonging to the company group had been intentionally polluting the Lithuanian port city lagoon with untreated sewage for a long time.

According to the concept of the brand value crisis, in the case of the *Grigeo* brand, the crisis occurred by violating the symbolic value of the brand and elements of corporate social responsibility attributed to it. Before the crisis, *Grigeo* publicly declared:

1) in the mission: activities of *Grigeo* aim to improve the quality of life by producing environmentally friendly products";

2) in the list of values "360° responsibility" that is based on "consideration of the smallest details, responsible behaviour, as everything we do affects our results".

The case of *Grigeo*, *AB* is also distinguished by the fact that despite improper actions of one company (*Grigeo Klaipėda*, *AB*), the crisis covered the entire group of companies (five companies). The following was confirmed by actions taken by consumers and partners of stopping purchasing products from companies of the *Grigeo group*. In the case of the occurred crisis, the public associated the incident mainly with *Grigeo* hygienic paper and packaging products, including the *Grite* brand, the production of which is mainly focused on the daily needs of the public. The actions of the public, the media and partners have shown that consequences of the crisis have also affected other companies belonging to the group.

The research was conducted using the method of quantitative content analysis. In order to research what the information about the crisis of brand value in the media is focused (lack of skills or immorality) and to determine which sub-components of the company's social responsibility the symbolic value created by the company is violated, a semantic analysis was chosen, i.e., what basic sentences and how often they occur in the text. A thematic analysis was chosen to answer the other research questions, i.e., what concepts and how often they occur in the text (assumptions: meaningful units that reflect the attitude of media users).

The analysed articles (N=162) and comments from members of public (N=1434) were selected by applying non-probability sampling. Taking into account the excess of information and the abundance of online media portals, based on the data of *Gemius Baltic* (Gemius, 2020) of January 2020, two main news sites in Lithuania (*delfi.lt* and *15min.lt)* were selected. The *Facebook* social platform was chosen for public comments related to a particular article, where news sites hosted articles published on their site. The *Facebook* social network was chosen as an alternative to comment sections after articles, given that articles of the analysed period no longer posted comments from registered and unregistered readers on the website, but the same articles, shared on the social network by news portals, still have public comments.

A document review approach was used to collect data. The investigation was carried out: January – February 2020 were chosen purposefully by taking into account the period of the crisis of the *Grigeo Klaipėda*, *AB*, i.e. from the first article about the incident to the publication of research results. Method of selection of articles was based on targeted selection on keywords: *Grigeo* and *Grigeo Klaipėda* were used in the search for articles on news portals, and are directly related to the analysed incident.

Data collection tool: two groups of documents (*delfi.lt; 15min.lt* and readers' comments, respectively); N=162 articles and N=1434 comments, six codes, sixteen sub-codes were analysed.

Operationalization of the research instrumentation. The content analysis allowed dividing the elements of the brand value crisis, public attitude towards the brand during its value crisis, and media information, into specific components and subcomponents.

The element of *public attitude* was identified according to three subcomponents distinguished by Jain (2014), i.e., *emotions*, *cognition* and *behaviour*. Each subcomponent of the public attitude was identified by analysing individuals' comments (see Table 1). The first component – *emotions* of the public – was identified on the basis of basic emotions distinguished by Ekman (1999) and very often used by researchers. Keywords and sentence wordings, identified by research results of Chen et al. (2011) were used to measure the emotions elicited, in which the essential, most commonly used words characteristic of each emotion subcomponent, were identified for each emotion. The expression of the emotion in the analysed public comments helped to determine the verbal expression of emotions in the research.

Table 1. Expression of components of public attitudes

Public attitudes codes	Sub-codes	Keywords
Emotions	Disgust	shame, scary, horrible, dissatisfied, odious, disgusting, deplorable, fed up with.
	Joy	to be impatient, rejoice, enthusiastic (full of enthusiasm), happy, cheerful, satisfied, pleased, great, wonderful, best.
	Anger	anger, rage, scam, lie (liars), grumpy, cruel, dislike, furious, mad, hate, annoying.
	Sadness	sad, grief, tragedy, misery, oppression, depressed, disturbed, broken, wrong, painful, repulsive, belittled, discouraged.
	Fear	to fear, fear, scary, panic, horror, helpless, vulnerable, stuck.
	Surprise	wow, strange, surprised, did not expect.

Cognition	Beliefs	Entries can reveal a subjective assessment of the situation based on personal experience or non-direct knowledge accumulated over time (rumours, information shared by others). A person's belief can be presented as a statement that reflects a positive (favourable to the company, supporting it) or a negative (expressing negative beliefs and an unfavourable assessment of the company) assessment.
	Knowledge	Entries present arguments, facts, it can be stated that information is available. Statements are directed against or in favour of the participant of the incident.
Behaviour	Intention to buy	Verbal expressions about future actions, intention to purchase or not to purchase brand products. For example: I will (not) buy.., I would buy, I would purchase, I am going to buy, I would consider buying, I plan to buy.
	Intention to recommend	Comments express the intention to recommend or not recommend brand products to others. For example: I would encourage/stimulate, I would/would not recommend.

The component of *cognition* is defined as a person accumulated knowledge and existing beliefs, but the distinction between them is very blurred. Nonetheless, according to Pehkonen and Pietilä (2003), when confronted with the term of belief, it is important to define how it will be perceived. In the present research, beliefs are defined using recommendations of Pehkonen and Pietilä (2003) to consider them as a subjective statement of a person without providing any facts. Knowledge is defined as statements that contain arguments or facts.

In the approach model presented by Jain (2014), the component of *behaviour* focuses on a person's intentions to repurchase or not to buy a product. According to Schuh et al. (2018), the component of behaviour can be analysed not only by repurchase, but also by the intention to recommend. Taking the following into account, the component of behaviour is divided into two subcomponents: intention to buy and intention to recommend, the expression of which is formed based on question scales and statements of Barber et al. (2012), Schuh et al. (2018) and El-Said, Aziz (2019).

Media information (the second element), during a crisis, is usually characterized by anti-brand content that is negative. In order to identify the dominant information in the media during a crisis, it is possible "framing" directed at a brand's lack of skills or immorality, is used. Table 2 presents operationalization and examples of both areas of information, compiled from the study by Li et al. (2018), which included information directed towards both, brand immorality and lack of skills. According to the latter claim, areas of information often depend on the type of brand crisis and closely correlate with it, thus in the case of the following empirical research, articles in the media were assigned to only one area of information.

Table 2. Areas of information provided in the media

Codes	Code explanation	Examples
Immorality	The violation of the company's morals and declared values.	The inappropriate, unethical, or harmful actions, violating moral standards, causing damage to the environment or social responsibility. The information appeals to selfish actions of the company that cause damage to the environment, violate the rules.
Lack of skills	The flaws in the product quality.	The company's inability to control the ongoing production processes, poor quality of products or services, inadequate, limited or outdated technologies that caused the failure.

Analysing the articles and readers' comments, seven topics of the articles were identified (basic sentences, the coding of which is presented in the Table 3).

Table 3. Topics highlighted in media articles

Source of articles	Topics	Content of articles	Number of shares
Media-initiated articles on "*Grigeo*"	General information about the situation	Data provided by the prosecutor's office, details of the incident, suspects, previous activities of the company and allegations made against it.	19 847
	Responses of stakeholders	Actions of partners, incentives in the online space to boycott products.	3 580
	Position of politicians, business representatives	Comments of politicians (ministers, party representatives), opinions expressed by businesspersons (excluding company partners) regarding the participants of the incident.	3 357
	Transparency of environmental authorities, the municipality, and gaps in the law	Allegations to environmentalists, the municipality and other public institutions due to possible non-transparent activities during the inspection of "*Grigeo Klaipėda*".	2 182
	Environmental pollution	Water pollution of the Curonian Lagoon and research results. Intentions of public authorities, in terms of other independent sewage treatment companies and another company potentially polluting the environment.	1 066
	Grigiškės "*Grigeo*"	Allegations of possible pollution, complaints from local residents, inspections by environmentalists.	935
	Changes in the financial situation of the company	Suspension, resumption of trading shares, seizure of assets, changes in sales	614

		volumes and product labelling.	
Company-initiated articles		Presentation of the company’s position on the incident, intentions and results of the research initiated by the company.	2 758

In cases of a brand value crisis, when the existing ethical and social standards are violated, researchers focus on the damage to the symbolic value created for brand consumers (Dutta and Pullig 2011; Hansen et al. 2018). Corporate social responsibility becomes inevitable in the creation of symbolic value due to the increased public demand for ethical standards (Alcañiz et al. 2010). Moreover, in the case of the analysed brand value crisis, the focus is on the brand of the company group, therefore social responsibility becomes more relevant to the situation. Considering the following, the brand value crisis is analysed through the essential symbolic value that is often associated with this type of crisis, which will be limited to subcategories that make up corporate social responsibility. Table 4 presents operationalization and examples of the company’s symbolic value components, compiled according to Zhang and Gowan, (2012), Kostyuk et al. (2013).

Table 4. Operationalization of the symbolic value of the brand value crisis

Symbolic value component	Codes/Sub-component	Essential sentences	Examples
Corporate social responsibility	Economic	The company’s difficulties in fulfilling its obligations to consumers or partners, and notifies of financial problems.	The company’s non-competitiveness, financial difficulties (e.g. inability to pay taxes or dividends).
	Legal	Violation or non-compliance with laws, activity regulations.	A violation of the established legal requirements or laws, which can be related to labour, business or environmental laws.
	Ethical	The company is associated with unethical actions.	The company’s conscious actions that society expects from the company and that have violated moral and ethical standards that are important for it, such as environmental protection, working conditions, and fair treatment of employees.
	Philanthropic	The articles present the company’s contribution (financial support, volunteering) to the community, being social.	Information in the articles presents the company’s financial or time (volunteering) investments in various areas (e.g., arts, education, research, community, humanities programs, et al.).

In the case of the analysed crisis, they will help to find out in terms of which subcomponents of the corporate social responsibility the symbolic value created by the company is damaged. Manifestations of the damage are sought by analysing media articles. It is important to note that the philanthropic component is not necessary for companies (meaning that it may not occur during the analysed crisis), thus, the non-performance of the following activity in society was not considered unethical.

Results

During the crisis, the name of *Grigeo Klaipėda* was mentioned N=656 times in media articles, of which N=126 times in company-initiated articles that presented their press releases or comments on the situation. The analysis of articles revealed that some of them could be considered as initiated by the company, as they contain its comments on the incident or press releases. There were seven key thematic groups in the media-initiated articles focusing not only on *Grigeo* itself, but also on environmental authorities and environmental pollution (see Table 3).

The analysed media articles revealed the existance of information reflecting both immorality and lack of skills, but the latter area of “framing” information appeared only in company-initiated notifications (N=10 articles). With the elimination of the following articles, the media was clearly dominated by emphasis on immorality. The articles raised questions concerning the integrity of environmental authorities and their officials, and most of all concerning the intentional and environmentally damaging actions of *Grigeo Klaipėda* and the entire group of companies (e.g.: “*Millions of tons of wastewater discharged into the Curonian Lagoon, hundreds of times exceeding the permissible pollution, <...> it has been established that bypasses have been installed, by which wastewater bypassed the treatment plants and travelled to the lagoon untreated.*”). Actually, the emphasis of immoral actions of the company is presented in articles in two ways:

1. By informing about the investments made into the environment, reminding about the company’s communication and the declared values, which were obviously violated during the incident.
2. By highlighting conscious actions of the company in carrying out environmental pollution.

Articles on news portals did not mention the possibility of a breakdown or a scourge, but clearly presented the public with information reflecting the company’s intentional and inappropriate actions that have caused damage to the *environment*.

Based on the following research, it can be concluded that the answer to *RQ1* is as follows: *In the case of a brand equity crisis, the media is dominated by immorality-oriented information.* The articles that provided information on the lack of skills were initiated by the company itself, commenting on the incident and constituted only a minor part in the general sum of articles (N=10 out of N=162). The remaining articles clearly highlighted the intentional and inappropriate actions of the participants of the incident by confirming the dominance of immoral information in the case of the brand value crisis.

In the analysed articles, it was also searched for signs of brand value crisis according to the violated elements of corporate social responsibility *(ethical, legal and economic)*.

Analysis of articles in the media revealed violations of the ethical element, with the company clearly declaring that "*…mission of the group is to create and produce environmentally friendly products and the investment in ecology is the company's responsibility*", but carrying out opposite actions and deliberately polluting the environment.

The company's action in relation to its own interests, which are thought to "*avoid taxes and other property losses*" cause millions of euros in environmental damage and reveal gaps in the morality and ethics of the company. The intolerance of the mentioned actions is also confirmed by the reaction of the *Grigeo* company partners, when the further purchase of products is stopped, as the company's behaviour violates the "*social and environmental obligations that need to be complied with when supplying products*". In the articles that provide expert comments, it is noted that *"...Lithuanians are increasingly concerned about business ethics and transparency..."*, while "consumers <...> *not only about the quality and price of the product, but also the sustainability of the business",* which suggests that *Grigeo* actions in society will be considered incorrect. The public perceives the company's responsibility and transparency in relation to the environment as a necessity; therefore, intentional pollution that contradicts not only their expectations, but also values declared by the company, violates the ethnical element of corporate social responsibility. In the case of the analysed crisis, the *information dominant in the media highlights the violation of ethical standards by emphasizing intentional actions that violate moral standards.*

In the case of the *Grigeo* brand value crisis, unethical actions taken by the subsidiary *Grigeo Klaipėda* at the same time violated the law and affected the legal component of the corporate social responsibility. Manifestations of legal violations in media articles were primarily identified through expressions, claiming that "*...the prosecutor's office <...> initiated an investigation…*", "*…criminal offences…*", "*...covered up the crime…*", "*Specialists of the Department of Environmental Protection ordered the company to immediately stop polluting the environment…*", etc. Articles on the *Grigeo* crisis revealed that the crisis was characterized by breaches of nature pollution laws and forgery of documents, related to the possession and use of an illegal emergency pipeline. The law stipulates that for the forgery of documents natural persons face an imprisonment up to 6 years, while *"...for polluting the environment one faces a fine, arrest or imprisonment up to six years*". Thus, it can be assumed that in the case of the analysed brand value crisis *the legal element is violated through non-compliance with the law in relation to the damage to the environment and forgery of documents*.

The *Grigeo group* company is considered to be a financially viable and a competitive company, but in the event of the crisis, a breach of the economic component is suspected. The analysed information shows that already at the beginning of the incident, partners like "Ikea", major Lithuanian retail chains and others, began to suspend purchases from *Grigeo* and *Grigeo Klaipėda*, the assets were seized, and trading of *Grigeo* shares was suspended three times on the stock exchange. Although *Grigeo* itself stated at the beginning of the incident that it would not experience a decrease in sales, it later admitted that "*…the company felt the decline in orders…*". The following was also confirmed by retail chains that sold their products, according to which "*...Grigeo sales are falling...*", and "*...product sales have fallen by 22%*". Losses were also incurred on the stock exchange, when the company's share price initially fell by 40%, and during the crisis "*...the value of Grigeo on the stock exchange decreased by more than 20 million euros…*". What is more, the company will receive a fine and would have to compensate for the damage to polluted nature, which may exceed 60 million euros. It is important to mention that *Grigeo* tissue paper and its products were labelled by "Ecolabel" eco-label marks that were requested to be temporarily discontinued for product labelling, and as a result "*...Grigeo will inevitably suffer financial losses…*". The following shows that during the crisis, financial losses affected the entire *Grigeo* company group, despite the fact that the pollution was carried out by *Grigeo Klaipėda*. Therefore, it can be assumed that the *economic element of the corporate social responsibility is violated, because the production and sales of the company's products are disrupted, which reduces profitability; financial difficulties due to compensation of damages are encountered, and the value of the entire company on the market decreases*.

After carrying out the analysis of media articles, comments expressing **public attitude** through *emotions, cognition* and *behaviour,* were further analysed. A total of N=1434 comments provided by *delfi.lt* and *15min.lt* accounts on the social network *Facebook*, below the analysed articles. More than half of the comments made by the public expressed their cognition; most often through beliefs based on the outcomes of previous incidents (see Table 5).

Table 5. Frequency of recurrence of the attitude elements in comments

Articles by topic	Emotions	Cognition	Behaviour	Neutral
Responses of stakeholders	65	91	38	26
Grigiškės "*Grigeo*"	15	54	-	4
Changes in the financial situation of the company	23	26	2	6
Transparency of environmental authorities, the municipality	10	52	1	1

and gaps in the law				
Environmental pollution	18	67	1	3
Position of politicians, business representatives	101	147	1	18
General information about the situation	176	455	12	21
Total N	**408**	**892**	**55**	**79**

Articles related to general information about the situation received the highest number of public comments in terms of emotions and cognition, though it should be noted that the number of articles on this topic was the highest compared to other topics. Moreover, the following articles included the very first reports about the incidents, which received more than 100 comments. Nevertheless, it was noted that articles expressing the position of politicians and business representatives were also marked by a high degree of manifestation of the mentioned elements, but at the same time they diverted a lot of emotions and cognition from *Grigeo* and focused on themselves. Politicians' speeches were often criticized, as were their personalities. The expression of the element of behaviour in articles was the weakest, with the exception of a group of articles about the responses of stakeholders. It is likely that this kind of articles, in terms of their content, led to comments related to behaviour, as they focused specifically on information covering purchases. It can be assumed that a certain topic of articles can not only enhance the manifestation of one of the elements, but also direct the public's attention to other persons or institutions.

The analysed comments showed that the element of emotions was most strongly expressed through the emotion of anger, which was repeated in the comments N=273 times (Table 6). The emotion of anger in public comments was the most frequently repeated one, but it was directed not only at *Grigeo* or its managers, but also at politicians. "Parasites" and "guilty" have become the most commonly used keywords for the public to express their anger. Moreover, it was observed that the first articles reporting on the pollution aroused the emotion of anger more than the later ones, in which the element of cognition was more pronounced. The anger expressed in public comments concerning the need to punish the perpetrators may at the same time show that *Grigeo* was immediately convicted in society, without questioning its quilt. It can be assumed that during the brand crisis, the emotion of anger, especially directed at *Grigeo*, was most pronounced among consumers, at the same time showing a negative public perception of the situation.

Table 6. Frequency of repetition of emotions in comments

Disgust	Joy	Anger	Sadness	Fear	Surprise
33	60	273	33	6	2

The expression of the emotion of surprise and fear in public comments was the weakest. The surprise or fear expressed in only a few comments suggests that *inappropriate actions of Grigeo did not surprise consumers, and the situation did not lead to manifestation of fear of the public*. However, the more significant absence of the emotion of surprise makes one wonder how the public perceived *Grigeo* before the crisis, that its actions did not evoke the emotion of surprise.

The emotion of joy in public comments was most strongly expressed in the analysis of articles on the reaction of stakeholders, where joy was expressed in support of traders' decisions not to buy *Grigeo* products, in short comments expressing joy: "Way to go!!!", "I'm glad", "Cool", "SUPER", "Amazing all chains should do this" and using the "👍" (*like*) symbol. The analysis of the latter emotion in comments suggests that the public, negatively assessing the situation, was pleased with the actions of the surrounding persons or institutions against *Grigeo*. Disgust in public comments was expressed with keywords "shame" and "horrible", but in general, the following emotion was expressed relatively little in society. The emotion of disgust in comments was also directed towards the government, being disgusted by its failure to act. Therefore, it can be assumed that the public did not tend to express obvious disgust in response to the situation. The emotion of sadness in comments was observed 33 times, of which 7 times the keyword "sad" was used.

In summary, the element of *emotion* allows to state that *the emotion of anger was most strongly expressed in public comments*, and was mostly repeated and aimed at the *Grigeo* brand. The emotion of joy was second in frequency of recurrence and expressed public support for the actions of stakeholders or comments of politicians. The mentioned emotions also showed the importance of the topic of the article, when in the case of politicians' speeches; negative public emotions were partly diverted from the *Grigeo* incident and concentrated on politicians. The amount of emotions of disgust and sadness in comments was the same (33), in the first case focusing mainly on *Grigeo* and in the second case expressing sadness about the improper actions towards the affected or to be affected groups of individuals. The expression of the emotions of fear and surprise was the weakest in comments. The latter encouraged the questioning of how the public perceived the company before the crisis, that its actions did not surprise members of the public.

The element of cognition was most strongly expressed in the comments analysed (repeated 868 times), usually expressed in subjective belief of individuals, without providing the specific facts or sources of information in comments. Public cognition, based on knowledge, is detected in comments when the specific facts that explain how the person evaluates the situation, are presented. Several comments showed that individuals assess the company negatively based on personal experience and knowledge, accumulated during that time. Other entries were on different topics, based on articles read or news learned on television. It can be assumed that *only a small number of those who commented on the situation tended to present the specific facts in support of their statements*. The majority of public comments (N=867) provided their beliefs directed at *Grigeo* or other participants of the incident, which can be divided into the following emerging topics: outcomes of the incident; not the only polluter; *Grigeo*; corruption; politicians, government and others.

The analysed comments that expressed cognition highlighted the relatively low knowledge-based assessment of the situation or at least its expression in public comments. Most of the public comments expressed their beliefs based on personal experiences or a general perception of the situation. The beliefs expressed suggest that the public did not doubt the guilt of *Grigeo* and was convinced that the illegal activity, which had been going on for many years, remained unnoticed because *Grigeo* paid bribes. Moreover, the prevailing beliefs in the comments highlighted that the outcome of the incident would be favourable to *Grigeo* without finding fault or accusing ordinary employees.

The **element of behaviour** in public comments, compare to other elements, is the weakest in terms of direct expression. A total of N=48 persons spoke about their intention to buy or not to buy *Grigeo* products. The part of society that did not intend to buy *Grite* products, made the following decision due to violated norms that are important to them, i.e. environmental pollution. Persons, who have chosen to continue to buy products, do so because these products meet their needs and should not be associated with the company that caused the damage. Moreover, innocence of the company's employees is also presented as one of the arguments, and the greatest damage would be done to them if the products will not be bought. In the case of the intention to recommend, it has been observed that the recommendation not to buy products is expressed more strongly, thus expressing one's position in terms of environmental pollution and at the same time indirectly implying that they will not buy the products.

The analysis of comments to find out the public attitude through its three constituent elements allows assuming that the *public negatively responded to the crisis*. Environmental pollution violated environmental values that are important to it, thus provoking the expression of the emotion of anger directed at *Grigeo* and other potentially guilty institutions. The emotion of joy in the public was evident when actions against *Grigeo* were taken by initiating a refusal of production or a severe punishment for the company. Public convictions have shown that there is no doubt about *Grigeo* guilt, not only in discharging sewage into the Curonian Lagoon, but also in giving bribes to cover up illegal activities. Regardless of the mentioned, the prevailing belief in the public was that the polluter *Grigeo* would go unpunished or ordinary workers will be charged. Public behaviour, nonetheless, does not allow to draw an unequivocal conclusion as to the public's intention to buy or not to buy products. Even though the public expresses dissatisfaction with their behaviour, stating that it does not intend to buy *Grigeo* products, and the information provided by traders about the decrease in *Grigeo* sales confirms the following, there remains a relatively similar part of comments made by the public in terms of not intending to give up the production. One of the reasons for such behaviour is innocent workers, who would suffer from the boycott of products. The following public behaviour demonstrates its ambiguous assessment of the situation, accepting and condemning the damage done, but at the same time avoiding harming innocent people.

RQ2 response would be: *In the context of media information, the brand value crisis has a negative effect on public attitudes towards a brand that has experienced a crisis*, because the public in response to the information provided, considered the brand responsible for environmental pollution, expressing anger, disgust and other negative emotions directed at *Grigeo*. Public cognition, based on beliefs, most strongly highlighted that the public was immediately inclined to condemn the actions of the brand and to find it guilty not only of the pollution, but also of corruption by bribing environmentalists. Moreover, based on past incidents, the public was convinced that the brand that had experienced the crisis would go unpunished, despite being guilty. Even though the public did not express a cardinal intention to abandon products offered by the brand, it revealed the reasons for the encouraging part of the public to continue to use products offered by *Grigeo*. Nevertheless, the research revealed that public attitudes have been negatively affected through all three of their constituent elements, most strongly expressed though cognition, and least through behaviour.

In the context of media information, the brand value crisis has a negative effect on the public emotions (RQ2a), as with the public's response to the brand's intentional acts of pollution; the emotion of anger directed at *Grigeo* was highlighted. Moreover, the expressed emotion of joy focused on the restrictions and the suspension of sales of *Grigeo* products initiated by partners, thus showing joy of the difficulties for the brand.

In the context of media information, the brand value crisis has a negative effect on the public cognition (RQ2b), because beliefs expressed by the public have clearly shown no doubt about *Grigeo* guilt by also attributing the alleged acts of corruption. Moreover, it was believed that the brand would succeed in going unpunished by accusing ordinary employees.

In the context of media information, the brand value crisis has a negative effect on the public behaviour (RQ2c), because some members of the public expressed their intention not to buy *Grigeo* products, and some have recommended that others do the same. The following shows that the incident was viewed unfavourably in the public, provoking the formation of unfavourable behaviour towards the brand.

The unfavourable public attitude formed in the context of media information has a negative effect on the brand that experienced a value crisis (RQ3), because the element of behaviour that is part of the public attitude has expressed the intention of N=21 members of society not to buy products of the brand in crisis, thus responding to the actions of the brand that violated moral standards important to them. Moreover, 6 other individuals urged other members of the public not to tolerate the polluting behaviour and to boycott *Grigeo* products. The public shared media articles more than 34000 times, in this way increasing the dissemination of anti-brand information among the public. It is likely that the analysed brand value crisis will serve as another example for the public to follow and remember cases of other major brand crises. Probably the strongest negative public attitude is confirmed by the information provided in the articles about the decrease in sales of *Grigeo* products in retail chains. The general attitude of other members of society also highlights the negative consequences for the brand, which include a reduction in the share price and the choice of partners to withdraw from the brand products.

All assumptions provided in the research model of the analysed case were confirmed. Research revealed that *the formed unfavourable public attitude towards the brand is characterised by feedback giving rise to negative consequences for the brand, such as intention not to buy brand products, decrease in sales and the dissemination of unfavourable information among other members of the public. Moreover, the possible indirect impact of public attitudes was evident through the decrease in the share price and the choice of partners to give up production*.

Conclusions

Research on the *Grigeo* brand value crisis showed that the incident was characterized by the violation of three elements of corporate social responsibility that create symbolic value. The environmental pollution caused by the brand contradicted its declared values and the transparency and responsibility considered necessary in society, thus violating the ethical element of social responsibility. At the same time, actions of the brand violated the prevailing laws, and the incident disrupted the process of production and sales, reducing profitability and incurring other financial losses, thus violating the economical element of corporate social responsibility. Moreover, the research showed that during the brand value crisis, the media is dominated by the "framing" of information reflecting immorality by emphasizing violated ethical standards and highlighting awareness of the actions taken. The following confirms the statement of Li et al. (2018) that the media focuses on the cause of the crisis by highlighting it in articles presented to the public. Nevertheless, content analysis has shown that articles initiated by the brand in crisis may lead to the opposite area of information, which focuses on highlighting lack of skills. It should be noted that in the case of *Grigeo*, information provided by the media showed that public authorities were also involved in the incident, and their transparency was questioned. The following confirms the statement of Yannopoulou et al. (2011) that media participation can expand the scale of a crisis by involving other institutions in the incident.

Ip et al. (2018) research highlighted that information provided by the media in the event of the brand value crisis has a negative effect on public attitudes towards the brand in crisis. Results obtained during the empirical research confirm the manifestation of the negative public attitude in the case of *Grigeo* value crisis, in the conditions of exposure to media information. Research of Sung, Lee (2015), Ip *et al.* (2018) and other researchers in analysing public attitudes was limited only to their positive, negative or neutral assessment, while the *Grigeo* case study expanded the assessment of public attitudes based on Jain's (2014) three constituent components of emotions, cognition and behaviour. Research showed that the public, in response to the articles in the media concerning immoral actions of the company, expressed anger at *Grigeo* in comments, without questioning its guilt. The incident led to a negative manifestation of the element of public cognition through the belief that *Grigeo* is guilty not only of environmental pollution, but also of possible corrupt practices to cover up the crime. Moreover, despite the company's guilt, it was believed that it would be able to evade responsibility and remain intact. It is important to note that the unfavourable public attitude was also confirmed by the choice of some people not to buy *Grigeo* products and to encourage others to do the same in this way expressing intolerance of the brand's immoral behaviour. When consumers accessed media information, all three components of attitude were characterised by negative reaction to the brand value crisis that has taken place.

Liu, Shankar (2015) and Baghi, Gabrielli (2019) claimed that in response to the crisis consumers can change their purchasing intentions, spread negative "word-of-mouth" communication, and contribute to the occurrence of financial difficulties. In the case of *Grigeo* value crisis, researchers' claims are confirmed, because not only did the public share media articles that provide information unfavourable to the brand, but also encouraged other members of the public to boycott *Grigeo* products. Moreover, comments made by the public on social networks can themselves be seen as negative, as they express dissatisfaction with *Grigeo* actions. The effects on the brand were manifested not only through the verbal expression of the public, claiming that the products of the brand will not be consumed, but also thorough the decrease in real sales volumes in retail chains.

Despite the fact that results of the empirical research confirm the relationship between the brand value crisis, public attitude and media information, the research also has limitations.

The research was conducted in April 2020, when the public was strongly emotionally affected by the pandemic. Thus, it was assumed that during the crisis (before the pandemic) public attitudes in the media and social networks during the crisis, would more accurately and realistically reflect public emotions, cognition and behaviour than could be done by the quantitative method during the pandemic period.

The content analysis performed is limited to one specific case of a brand value crisis, allowing a clearer understanding of the manifestations of the brand value crisis, but according to Do et al. (2019), each crisis is different, thus results obtained in the case of another crisis may differ. Taking the aforementioned into account, it is recommended to analyse more similar cases of value crisis in the future to ensure if similar characteristics of the brand value crisis are highlighted.

The empirical research was conducted by eliminating some elements of the brand value, i.e., emotional value and the prestige and self-expression that belong to the symbolic value (the decision is based on the type of product itself); therefore, in order to better understand features of the brand value crisis, the mentioned elements should be included in the research. Content analysis was conducted with a brand of products with low consumer involvement, and according to Yannopoulou et al. (2011), the following can affect consumer responses to the crisis when confronted with media information. Thus, it is not clear whether public response would change, if brands of products with high consumer involvement were analysed.

During the research, public attitudes were analysed through the public comments provided on the social network *Facebook*, because during the research comments on media news sites were no longer available. The following situation has led to the loss of some public comments.

The analysis of public attitudes through its three constituent components in the case of a brand value crisis has not been studied in scientific works, therefore the conducted research provided a more detailed way of analysing public attitudes. Taking the aforementioned into account, further empirical research is needed to confirm the importance of public attitudes through the mentioned components and their interaction with the brand crisis in the context of the impact of media information.

The research showed the obvious fact that the value of the brand crisis can provoke a particularly strong negative public response. The brand value crisis affects the public attitude through all three of its components, thus in the case of the following crisis, both the behaviour and communication of the brand and the role of information in the media, are important.

The public attitude, most strongly expressed through emotions, demonstrates the need for promptness, sincerity and transparency of company decisions in the media. The cynical behaviour of the brand by avoiding responsibility and acceptance of mistakes sharpens the rhetoric of media information reflecting immorality, which in turn, reinforces the negative public attitude.

The ability of the brand to demonstrate acceptance of guilt, to seek and communicate about the solutions to remedy and redress damage, would show the public a responsible attitude to the situation, an ability to accept responsibility, and at the same time would encourage the public to believe that the brand will learn from mistakes and change in a positive direction. The opposite behaviour of the brand becomes a reason for negative public attitudes, encourages the media to seek and disseminate negative information about the brand, thus further increasing the scale of the negative public attitude, which in turn can affect directly and indirectly the negative consequences of the brand crisis (e.g., financial losses).

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RECEIVED: 07 April 2022 **ACCEPTED: 28 November 2022**

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https://doi.org/10.38104/vadyba.2022.2.02

Vadyba
Journal of Management
2022, 2(38)
ISSN 1648-7974

CHALLENGES AND PERSPECTIVES OF INTERCULTURAL ETHICS IN THE THEORY OF GLOBAL MANAGEMENT

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Abstract
The development of the global market has created a need for global management ideas that can be overcome in practice by solving complex problems. The formation and development of global management ideas is strongly influenced by different cultural traditions and values of Eastern and Western cultures, which determine different management methods. The ability to organize production and manage processes on a global platform is critical to creating and maintaining high living standards. The vital foundation on which sustainable decisions in the field of management are based can have a strong impact on the fulfilment of humanity's expectations for well-being and prosperity. The reasonable question therefore is: what value system could become the universal ethical framework that integrates different cultural traditions and worldviews and underpins the field global management? Intercultural ethics is one of the most recent research projects to analyze a wide range of ethical issues arising from the multidisciplinary perspective of societies and cultures. Intercultural ethics seeks to identify the existing different cultural, value beliefs, to define universal ethical principles on the basis of which intercultural decisions and agreements on the development, implementation, management and use of digital technologies are made. Different cultures disagree on common universal moral decisions because they are based on unique worldviews and value systems, and there is no universally accepted epistemically sound way to resolve such moral disagreements. The question is, what are the basic assumptions underpinning the impact of intercultural ethics on the theory of global management that would enable the common development and application of a system of universal ethical principles governing the development of global management processes in different regions and cultures of the world? The article hypothesizes that a synthesis of classical Aristotelian virtue ethics, Confucian ethics, and African *ubuntu* philosophical ethics could underpin intercultural ethics, embodying the universal ethical values of Western and Eastern cultures in global management theory.
KEY WORDS: intercultural ethics; global management; ethics of virtues; *ubuntu* philosophy; Confucianism.

Introduction

Global management has never been more important than it is today, but the concept of global management is not a unique phenomenon of our time. Ancient trade routes that enabled international trade, dialogue between cultures and civilizations connected various regions of the world, stretching from the Baltic Sea to the Mediterranean Sea, Central Asia, and China. However, in the 20th century in the second half, the development of informational digital technologies had a significant impact on the formation of the global market today (Zolfaghari, Madjdi, 2022; Tavoletti et al., 2022; Cao et al, 2018). In the context of international and intercultural processes taking place at the macro level and individual changes taking place at the micro level, which shape the global concept of management, the question of the possibility of a universal value base becomes important (Gomes et al., 2022; Steenkamp, 2021; Kirkman et al., 2017). The significance of intercultural ethics as a source of worldview and value attitudes becomes unquestionable in the face of the challenges of the global world, when one of the most important tasks of individual individuals and societies becomes the pursuit of sustainable well-being, success, and prosperity (Kantar, Bynum, 2021; Barmeyer, Mayer, 2020). In this regard, the synergy of global management, as a practical art of organizing life, and intercultural ethics, as a theory that shapes worldviews and values, enables individuals and societies to formulate and achieve long-term goals that ensure sustainable well-being and prosperity (Schragehttps, Rasche, 2022). Intercultural ethics includes and analyses wide-ranging ethical problems arising from various globalization-induced processes for human consciousness, societies and cultures from a multidisciplinary perspective, with the aim of identifying existing different cultural and value beliefs and adopting intercultural agreements on the universal application of relevant ethical principles (Capurro, 2008; Ess, 2008; Nakada, Tamura, 2005; Himma, 2008, etc.) One of the most reasonable possibilities for the justification of universal intercultural ethics is the synthesis of classical Aristotelian virtue ethics, Confucian ethics and African ubuntu philosophical ethics, which would enable the universal ethical values of Western and Eastern cultures in global management theory (Ess, 2021; Ess, 2020a; Ess, 2020b; Lehner et al., 2022).

The article presents and defends the thesis that intercultural ethics aims to identify existing different cultural and value beliefs, define universal ethical principles, based on which intercultural decisions and agreements would be made in the field of global management theory. The article analyzes the universal possibility of intercultural ethics in global management theory based on the synergy of theoretical perspectives of Aristotle, Confucius and the African *ubuntu* philosophy. The main aim of the article is to reveal the possibility and significance of cross-cultural ethics justification in the context of global management theory. Analyzed problem / object of the research: how and in what way is it possible to establish intercultural ethics, which could become a universal value basis for the concept of global management? An object is the analysis of meta-theoretical assumptions of the implementation of intercultural ethics at the global management level. Objectives of the research: 1) to analyze the conceptual foundations of global management theory; 2) to explore and reveal the possibility of intercultural ethics justification based on the synergy of the main principles of Aristotle's virtue ethics, Confucian ethics and African *ubuntu* philosophical ethics; 3) to analyze and reveal the fundamental challenges and perspectives of implementing intercultural ethics in the conditions of globalization. The main findings: In this article the major findings and the theoretical contribution of this analysis and identify areas for future research. First, the issues of intercultural ethics are revisited and evaluated the effectiveness of the theoretical orientation in addressing these questions. Second, the key research findings are analyzed in relationship to the literature and the contributions the investigation makes to the theory of global management. Finally, article discuss the limitations and examine the implications of the intercultural ethics for future research and practice in the global management contexts, reminding us of the need for strengthened linkages between ethical values systems of East and West in the global management practice. The main scientific results of this article are to be found in the diversity of ways in which theoretical research of intercultural ethics is understood, shaped by the universal ethical systems of Aristotle, Confucius and Africa's *ubuntu* conception, and which can be applied in the field of global management theory. This theoretical study contributes to the development of the scientific philosophical discourse on the relationship between intercultural ethics and the theory of global management.

Theoretical background

Intercultural ethics is one of the current research projects dedicated to the analysis of wide-ranging ethical issues arising from the impact of digital technologies on human consciousness, societies and cultures from a multidisciplinary perspective. Intercultural ethics seeks to identify existing different cultural and value beliefs, to define universal ethical principles on the basis of which intercultural decisions and agreements would be made regarding the development, implementation, management and use of digital technologies. Intercultural ethics cannot be treated only as philosophical theories, because the problematic field of this ethics consists not only of metaphysical or metaethical questions, but also of specific technical problems, so the general goal and tasks of research in this field are not always clear. R. Capurro (2008), C. Ess (2021; 2019; 2020a; 2020b), L. Floridi (2012); M. Coeckelbergh (2020); B. Cantwell Smith (2019); M. Rozkwitalska, M. Chmielecki, S. Przytula, L. Sulkowski, and B. L. Basinska (2017); N. Kantar, and T. W. Bynum (2021). The arguments of the authors are presented in the article, analyzing the significance of intercultural ethics for global management theory.

In the global world, there is a need for innovative management strategies that correlate with the ethical systems of various cultures. The research of these authors provides strong arguments in this area: G. Josep and A. Hashmi (2018); E. M. Steenkamp, Jan-Benedict (2021); C. Barmeyer, and Claude-Hélène Mayer, (2020); L. A. de Vasconcelos Gomes, M. G. Santos, A. L. F. Facin (2022). On the other hand, it is not easy to define exactly what normative ethical or philosophical assumptions could become one common theoretical basis for the concept of intercultural ethics. The diversity of theoretical approaches raises the issue of cross-cultural ethical justification, which is revealed in this article by such authors: A. Bounfour (2018); F. Nansubuga, and J. C. Munene, (2020); K. Asamoah, and E. Yeboah-Assiamah (2019); G. Verhoef (2021); F. O. Ogola (2018); K. Ogunyemi, O. Ogunyemi, and A. Anozie (2022); L. Zhu, O. Kara, and X. Zhu (2019); Y. Jiang, Z. Ma, and X. Wang (2022); X. Tang, Y. Gu, R. Weng, and K. Ho (2022); T.-C. Ma, and L. Ouyang (2020); L. Lin, P. Li, and H. Roelfsema (2018).

The context of global management theory in this article is based on new theoretical research: V. Navickas, P. Simonavičiūtė (2022); E. Tavoletti, N. Kazemargi, C. Cerruti, C. Grieco and A Appolloni (2022); S. Schragehttps, A. Rasche (2022). Research claims that in the context of global processes, it is very important to consider whether the ethical standards that have dominated so far can be adapted to global management strategies in different cultures. Given the hybridity of cultures, a direct correlation between global management theory and intercultural ethics can be established by comparing and identifying value systems. The search for common values and ideals could lead to a universal ethical frame of reference. A significant obstacle to building trust between Eastern and Western cultures in the context of global management is worldview differences that are based on different values, which ultimately lead to different views on what ethical management should be in an organization. In order to ensure sustainable intercultural cooperation in the field of management, it is first necessary to reveal false cultural stereotypes and unfounded assessments, the unmasking of which would allow for greater intercultural trust and influence the selection and application of effective management methods. To achieve this goal, the article relies on the tuyrim of the following authors: M. E. Mogapi, M. M. Sutherland, A. Wilson-Prangley (2019); B. L. Louie, and M. Wang (2021); S. Chen, Y. Ye, K. Jebran, and M. A. Majeed (2020); N. A. Volgina, and Y. Wang (2022). On the basis of intercultural ethics, the article describes and discusses ethical principles of Aristotle's, Confucius and Africa's ubuntu philosophy contributing to the global management organizational structures such as intercultural tandems and negotiated processes in global management contexts.

Methodology

The methodology of the article consists of theoretical research methods. This design of the methodology was determined by the topic analyzed in the article. The main research methods used in the article: analysis of scientific sources, comparative and systematic text analysis, text interpretation and logical deduction research methods, based on which the main assumptions and arguments underlying intercultural ethics were analyzed.

The methods of systematic text analysis and text interpretation enabled a systematic approach to the research object, establishing the logical connections and interaction of the theoretical assumptions of intercultural ethics with the global management theory, in order to reveal the context of the investigated problem, to interpret the results of research conducted by other authors, different concepts or theoretical assumptions. The method of systematic text analysis explaines and process for identifying and critically appraising relevant research, as well as for collecting and analyzing data from said research (Snyder et al., 2016). This method in the article enables to compare global management and intercultural ethics research and highlights the challenges of conducting a systematic review in contemporary interdisciplinary research.

The method of comparative analysis enables to define different ethical systems of Eastern and Western cultures and allows to compare them in the context of global management theory. There are several advantages and potential contributions of conducting a comparative analysis method. In this article we determine whether an effect is constant across studies and discover what future studies are required to be conducted to demonstrate the effect, and discover which study-level or sample characteristics have an effect on the phenomenon being studied, such as whether studies conducted in one cultural context show significantly different results from those conducted in other cultural contexts (Davis et al., 2014). Methods of systematic text analysis and interpretation, and methods of logical deduction enable the comparison and generalization of different theories and arguments in the global management and intercultural ethics research field.

Theoretical assumptions of the concept of global management

The metatheoretical field of global management is shaped by various interrelated perspectives: culture, economics, finance, technology, marketing, ethical decision-making, politics, strategic planning, and human resource development. On a practical level, global management is related to international, multicultural corporations, projects, processes, technologies, human resources, etc. management and control, therefore, intercultural problems are inevitably encountered at various levels and the need to better understand local communities, traditional cultures, value systems and worldviews, looking for opportunities for dialogue and consensus (Coombs, Laufer, 2018). The classical concept of management is understood as a system of collective planning, organization, management, and control of organizational resources at the national level to effectively achieve specific organizational goals (Gooderham et all., 2022). The concept of global management is synonymous with the concept of international management, which defines any organizational activity carried out outside the borders of its national state to exploit the potential development of the countries of the growing economic zone and obtain greater profits by using the unique skills and competences of other cultures (Josep and Hashmi, 2018; Morschett, Schramm-Klein, Zentes, 2013; Lumineau, Hanisch, Wurtz, 2021). Global management can be understood by considering and evaluating various functions performed by international organizations, including specific operations and created production, marketing, management of production processes, finance, human resources, development strategies, market research, legal framework, etc. From a global perspective, the regulation and management of each of these functional areas at the international level poses far more complex problems compared to the management of the functions of local organizations. The global market has a huge impact on the development of management theories and their noticeable convergence into one common global management theory (Nishii; Khattab; Shemla; Paluch, 2018).

Global management practices related to planning, organizing, directing, and controlling must be viewed from a cross-cultural perspective if organizations are to maintain their productivity both within and outside the countries and cultures they belong to. Global management theory seeks to understand intercultural conflicts, the interaction of international corporations, global prospects for technological development, global politics, etc. factors that affect managerial decision-making (Stahl; Tung; Kostova; Zellmer-Bruhn, 2016). Today's economy is multicultural per se. Therefore, in the context of global management, not only the basic competencies necessary for business are considered important, but also the need for new knowledge and skills necessary to operate and work successfully in the international business arena is recognized (Stahl; Miska; Lee; de Luque, 2017). Global management seeks to enable the planning, organization, management and control of employees and other resources to achieve organizational goals across unique local cultural differences and the operational boundaries of traditional value beliefs (Tavoletti et al., 2022). However we constantly encounter different cultures and worldviews, whose ethical, religious beliefs and worldview attitudes are ignored, or the purposefully artificially implemented corporate values can cause many unwanted tensions and conflicts. In this context, the significance of intercultural ethics as a source of worldview and value attitudes becomes unquestionable in the face of the challenges of the global world, when one of the most important tasks of individual individuals and societies becomes the pursuit of sustainable well-being, success, and prosperity (Lumineau, Hanisch, 2021). In this regard, the synergy of global management, as a practical art of organizing life, and intercultural ethics, as a theory that shapes worldviews and values, enables individuals and societies to formulate and achieve long-term goals that ensure sustainable well-being and prosperity.

Global management theory should be based on universal ethical values that integrate different cultural traditions and worldview systems (Verbeke, Puck and van Tulder, 2018). Therefore, all theories of business ethics and corporate governance, including social contract and stakeholder theories, that are based on individualistic philosophical systems should be rejected. The main premise of global management theory is the belief that people are by nature communal and not individualistic, accordingly, all traditional cultures are communal cultures, based on a sustainable, ethical global management theory can be developed and implemented (Stahl, Miska, Lee and de Luque, 2017).

The African concept of *ubuntu* can make a significant contribution to the ethical justification of global management theory, as this concept is based on the fundamental notion that we truly become human only through interaction with other individuals (Barmeyer, Mayer, 2020; Karsten, Illa, 2005). It seems that the Aristotelian tradition of management, which is of great importance in Western culture, the Confucian tradition of management that is widespread in Asia, and the African *ubuntu* philosophical tradition correlate with each other and can become an important basis for intercultural ethics, normatively conditioning global management theory (de Gomes et al., 2022; Buble, 2015).

The possibility of intercultural ethics justification based on the African *ubuntu* philosophical ethics, Aristotelian virtue ethics and Confucian ethics

Discussions about the intercultural basis of ethics are noticeably taking place from a dominant Western ethical perspective conditioned by certain Western sociocultural attitudes, values, and interests (Capurro, 2008; Hongladarom, 2007; Buchanan and Ess, 2008; Floridi, 2007; Ess, 2021; 2019; 2020a; 2020b). The lack of sufficient value balance between various ethical perspectives often leads to a certain negative attitude towards the development of global processes and complicates management processes. Is it possible to create universal ethical guidelines that are compatible with the existing ethical values of different cultures and can be overcome at the international level?

Intercultural ethics is essentially pluralistic ethics, which has a diversity of different ethical systems, but there is no relativism, emphasizes the principle of objective equality of ethical systems, rejecting benefits, power, various political or various political interests depends on the existence of various ethical systems (Coeckelbergh, 2020; Kantar, Bynum, 2021). On the other hand, for example, to incorporate such value-based worldview systems as, for example, Islam, Buddhism and Confucianism into the project of pluralism? A very important challenge is the possibility of compatibility between different ethical perspectives, emphasizing the positive perspectives included in various value systems (De Gomes et. al., 2022; Steenkamp, 2021). Ethical compatibility in this case preserves the existence of fundamental identity-defining differences in cultural systems that are not hindered by agreements on essential guidelines for ethical behavior.

In Western culture, the ethical pluralism proposed by Aristotle offers ways to overcome the fundamental differences between Western and Eastern value systems. Aristotle uses the concept of "relation to" which marks the difference between homogeneous concepts, which have only one meaning, and pure concepts, which have many meanings that are not necessarily like each other. One of Aristotle's most common examples is the analysis of the concept of being, which reveals that there are many ways of saying that something "is", but all of these ways are "connected to" the same and self-contradictory essence of "being" (Aristotle, 1003a33). Such an Aristotelian structure between different ways of being and the connection with the essence of being that unites all different meanings, which does not lose its identity due to different meanings, directly correlates with the pluralism of interpretations of the meaning of Plato's idea in the epistemological and ontological sense. Aristotle's position on the possibility of the existence of pluralism fully substantiates unity and diversity. There are also examples of this type of pluralism in the philosophies of Thomas Aquinas and Immanuel Kant, which seek to justify the coherence between the one and the many. The pluralism of interpretations in Aristotle's philosophies is closely connected with the concept of *phronesis* about the activity of the practical mind and the art of decision-making. The solution allows you to cover, generalize and draw specific conclusions in ethically controversial situations. This form of interpretive pluralism leads to the very essence of the decision being made, inseparable from the existing differences. Pluralism of interpretations and practical judgment are important components of virtue ethics, which allow us to accept humanly wise (*phronesis*) practical decisions with universal legitimacy in complex and uncertain situations.

The model of Western ethical pluralism formed in Antiquity significantly contributed to the development of the project of intercultural ethics and made it possible to consolidate important principles of coherence and decision-making, which are like the essential ethical principles found in one of the oldest philosophical traditions of the East: the philosophy of Confucius. X. Tang, Y. Gu, R. Weng and K. Ho (2022) take the position that in Confucian philosophy, the concept of *ren* means authoritative humanity, a kind of inter-humanity (Tang et. al., 2022). Although a pluralism of different or even conflicting ethical judgments can be observed in Confucianism, Confucius, like Plato and Aristotle, adheres to the same system of ethical standards: *ren*, which can be understood, interpreted, and applied in many different ways. According to Confucius if two people, after a careful and conscious discussion, adhere to two different or even contradictory decisions, then both should be respected (Tang et. al., 2022). This association of the possible diversity of decisions with one and the same ethical standard directly correlates with Plato and

Aristotle's concept of practical decision: *phronesis.* In this case, one can talk about the "meta pluralism" of these two ethical traditions, because they both recognize the ethical pluralism of interpretations, which enables the diversity of interpretations of essential ethical standards.

An important principle of Aristotle's ethics of virtues: harmony correlates with Confucian concept of harmony: *he*. Harmony in both cultures is understood as the harmony of various musical components, which eventually becomes an important principle of the social plane, especially in the cases of education and harmonizing human relationships. In the ideal case of Confucian ethics, the harmonious life of individual people should fully meet or harmonize with the requirements of the general social order, and eventually this harmony would pass into a perfect resonance between heaven and earth (Chen et al., 2020; Wong, 2020). Similar notions of pluralistic harmony and resonance can be found in the ethical systems of Taoism and Buddhism.

Confucianism as a humanistic philosophy strongly influences many aspects of contemporary Chinese life, including management theory (Volgina; Wang, 2022; Jiang et al., 2022; Tang et al., 2022). On the other hand, Buddhism and Western capitalism also play a significant role in Chinese business practices (Zhu et al., 2019; Chen at al. 2020). In traditional Chinese ethics, as in traditional African ethics, great importance is attached to the institution of the family (Lin et al., 2018; Zhu et al., 2019). Confucius defines the hierarchically organized family as the most important foundation of society (Chen et al., 2020; Ma et al., 2020). Confucian ethics are also virtue ethics (Wong, 2020). The main virtues (*de*) in Confucian ethics: humanity (*ren*), loyalty (*zhong*), filial piety (*xiao*), honesty (*xin*), justice (*yi*), reciprocity (*shu*), respect (*rang*), courage (*yong*) and goodness (*shan*) (Ma, 2020). According to Kam-hon Lee, implementing Confucian ethics in management requires: 1) being honest with others (i.e., not deceiving and always seeking mutual benefits); 2) be reliable in processing transactions; 3) accept justice as profit (i.e., value justice more than profit); 4) being benevolent (i.e., not taking advantage when others are in crisis) (Lee; McCann; Yuen, 2011). Confucianism forms the philosophical foundation of the culture not only of China, but also of Japan, Korea, Vietnam, Singapore, and other East Asian nations, because the values formulated in Confucian ethics are important not only for China, but also for the entire culture of the Far East (Tang et al., 2022). Confucian ethics as ethics based on communality and universal virtues correlates with traditional African and Western ethical concepts.

The foundation of intercultural ethics in global management theory is significantly influenced by the concept of human nature analyzed in the philosophies of Aristotle and Confucius. Aristotle and Confucius describe people as a community of closely related members. In politics, Aristotle states that a person is a political animal (Aristotle, 1253a2-3), and such a person who is unable to live in society or feels self-sufficient and therefore does not need society is simply not part of the government (Aristotle, 54f./1253a). A similar position is expressed by Confucius, thinking about the place of man in society and emphasizing that the essence of man is defined by the actions, functions, and roles he performs in society, therefore man is a social being by nature. Western ethics of concern include human and ecological problems, while Confucian ethics focuses on human responsibility, which begins in the family and eventually grows into responsibility for the whole world (Jiang et al., 2022). Is such ethical pluralism possible, which would ensure the existence of universal ethical values without ignoring cultural and worldview differences?

A constructive suggestion is provided by the traditional African philosophical concept of *ubuntu*, whose most important feature is community. Community is the cornerstone of African thought and life. An African is not an autonomous individual but a person in a community (Nansubuga and Munene, 2020; Asamoah and Yeboah-Assiamah, 2019). The African mentality operates in a communal mode, according to which: “I am because we are and since we are, therefore I am” (Ogunyemi, Ogunyemi and Anozie, 2022). In a true community, the individual seeks the individual good while approaching the common good. In South Africa, the traditional understanding that a person becomes a real person only by being a member of a community is expressed in the concept of *ubuntu* (Asamoah and Yeboah-Assiamah, 2019; Bounfour, 2018). *Ubuntu* is central to African philosophy and communal cultural life (Nansubuga and Munene, 2020). The concept of *ubuntu* is difficult to translate literally into the languages common in Western culture because this concept defines the very essence of being human (Asamoah and Yeboah-Assiamah, 2019). Traditional African ethics are virtue ethics. Virtues such as patience, optimism, mutual sympathy, and empathy are highly characteristic of the African way of life and definitely indicate a distinctive existence that expands the realm of individual possibilities to include the lives and concerns of others (Nansubuga and Munene, 2020). The success of one person is highly dependent on the success of the whole community (Ogunyemi et al., 2022). K. Ogunyemi et al., distinguished the main concept of the *ubuntu* concept, according to which any action is right only to the extent that it creates harmony and reduces discord, and accordingly, any action is wrong if it does not contribute to the prosperity of the community (Ogunyemi et al., 2022). It is this interpretation of *ubuntu* that is the most promising theoretical formulation of African ethics. Anglo-American or continental normative ethical theories rarely recognize that interpersonal relationships have universal moral status (Ess, 2021; Coeckelbergh, 2020). However, the traditional European normative tradition of ethics, especially Aristotle's ethics of virtues, is inseparable from intersubjective intercultural morality (Ess, 2019). Aristotle justified the position that a person achieves self-realization through interpersonal relationships. Such a position correlates with the basic concept of *ubuntu*, according to which one becomes human only when and only to the extent that one is involved in meaningful relationships with other people (Ogunyemi et al., 2022; Asamoah and Yeboah-Assiamah, 2019). Aristotle's ethics is not essentially a materialist theory. If material goods were the only goods, then the good of one person would constantly conflict with the good of others. However, if immaterial goods exist, it is possible to reconcile the ethics of self-realization and the ethics of interpersonal relationships.

Philosophers analyzing the concept of *ubuntu* also recognize that this concept embraces intangibles (Nansubuga and Munene, 2020; Asamoah and Yeboah-Assiamah, 2019). Being a good member of the community is a hallmark of Afrocentric philosophy (Verhoef, 2021; Mogapi et al., 2019). Actions that create harmony, reduce discord, and foster community also represent the valuable nature of man as a social being. Combining self-actualization and communality is important because it solves the problem of moral motivation. Modern Western ethical theories face the question, but struggle to answer it: why should I behave ethically if it does not benefit me to do so? However, if the position is followed that by behaving ethically, one gets more for the community and at the same time for oneself, then there is a motive to behave ethically.

There is a discrepancy between traditional African cultures and management theory applied in Africa, which does not differ in its content from the Anglo-American concept of management. Theories developed in and for individualistic cultures cannot be effectively applied to communitarian cultures (Mogapi, 2019). Africa should adopt a management theory that is in line with the traditional African communal culture, where the enterprise is understood as a community and not as a structure of individual individuals. *Ubuntu* provides a strong philosophical basis for the concept of community management (Ogunyemi et al., 2022). A central tenet of Afrocentric leadership is collectivism (Ogola, 2018). Classical western management theories are fundamentally opposed to management theories focused on the pursuit of the good of the community. However, the integration of *ubuntu* into Western management theories could enrich them with values such as humanity, care, sharing, respect, and compassion (Ess, 2021).

Although some features of *ubuntu* are uniquely African, the core values of this philosophy are universal, co-human (Verhoef, 2021). However, in today's postmodern Western culture, belief in human nature or universal values has become a matter of dubious significance. The *ubuntu* philosophy asserts that the common ground of humanity is greater and more enduring than the differences that divide us (Mandela, 2006). Classical Chinese and Greek philosophical theories have much in common with traditional African philosophy (Ess, 2019).

Future discussion and perspectives

The article issue sought contributions on a range of questions relevant to the theme of intercultural ethics impact on theory of global management. Amongst these: why is a pluralistic ethical approach important in understanding the impact of global management? (Schragehttps; Rasche, 2022). How do global management theories impact different cultural and social groups differently? (Barmeyer; Mayer, 2020). How do these communities view issues in intercultural ethics such as privacy, consent, security and identity differently? (de Vasconcelos; Santos; Facin, 2022). Can we design governance frameworks for global management theories that are tailored to the ethical values of different cultures, whilst also harmonizing these frameworks at the international level? (Kantar; Bynum, 2021). Do digital global management tehoeries represent a new form of colonialism and exploitation? (Ess, 2021).

When comparing traditional African philosophy with modern European philosophy, the contrast is truly striking. However, when traditional African philosophy is compared with traditional European philosophy, the differences diminish (Rozkwitalska et al., 20147). In classical Western philosophy, from the ancient Greeks and Romans to the philosophy of the Enlightenment, man was understood as a political (communal) animal by nature (Aristotle, 1984: 1253a2-3). In other words, it is natural for humans to live in community with other humans. According to Plato, the main ethical virtues of social life are justice, moderation, courage, and wisdom (Plato, 1974: 504a. 50; ibid., 343c, 357b). However, overcoming the ethics of *ubuntu* raises several key issues.

One of them is nepotism, when following the collective attitudes of the family, ethnic or social group, and in some cases also tribal ideology, the interests of the clan or tribe are often put before the interests of the organization, and often this can mean the inclusion of close relatives in the organization, regardless of their suitability for the respective positions to hold office (Ogunyemi et al., 2022). The second problem is tribalism, when the interests of relatives or members of one's ethnic group are put before the interests of the nation (Ogola, 2018). The third problem is group thinking, when collectivist attitudes do not allow individuals to act without group consensus (Ess, 2021; Asamoah, 2019). In this case, various alliances are formed in organizations: groups and subgroups, whose members must adhere to a position acceptable to a certain group or subgroup. In such a situation, it is difficult for individuals to act independently based on their personal position. Such practices can complicate the processes of initiation of negotiations, changes, or development, and therefore are not effective (Ogunyemi et al., 2022).

In this aspect, the revision and addition of the concept of *ubuntu*, the integration of Aristotle's virtues of universal practical wisdom and Confucius' values of human harmony can enrich and strengthen the overall project of intercultural ethics. Ethical theories that claim that we must choose between selfishness and altruism, between self-love and love of others, between individual good and common good, are essentially individualist ethical theories. *Ubuntu* can be compared with the Western philosophical concept of solidarity (Ess, 2021; Asamoah Yeboah-Assiamah, 2019). John Paul II defines solidarity as a firm and persistent determination to commit ourselves to the common good, because we are all responsible for everyone (Paul II, 1987). When the company is understood as a community, then the goal of its management is to promote community good. Organizing a large multicultural corporation as a harmoniously functioning community requires decentralization of management and the principle of solidarity, according to which each group with greater power should help smaller groups to achieve common goals (Steenkamp, 2021; Gomes et al., 2022).

The position of developing a theory of business management based on natural human rights and virtue ethics is quite difficult to achieve. Western moral philosophy is complex, involving changes in metaphysics, epistemology, theology, politics, economics, and more. David Hume's *Treatise on Human Nature* was one step towards the popular belief today that there is no such thing as human nature (Hume, 1967). Still, it's hard to deny that ethics can spring from our shared human nature. Kant rejected human nature as a starting point for moral philosophy and attempted to derive an ethical theory from pure practical reason that would apply not only to humans but to all rational beings in general (Kant, 1981). Moral metaphysics should not be identified with anthropology (ibid.). However, Kant's ethical theory is unable to distinguish between ethical and unethical actions.

It is obvious that in the traditions of Western and Eastern cultures, the concept of pluralism is deeply rooted and is associated with the most frequent variety of interpretations of one and the same thing - idea, system, ethical standards, when different interpretations, attitudes, perspectives ultimately lead to the understanding of one and the same thing. Pluralism of interpretations is superior to other types of pluralisms: firstly, this type of pluralism can reduce radical differences to one harmonious understanding of some subject, secondly, pluralism of interpretations connects the ancient cultures of the East and West and becomes a sustainable basis for ethical dialogue (Ibeh; Eyong; Amaeshi, 2021). It can be argued that some classical Western and Eastern ethical theories, such as Aristotle's virtue ethics, Confucianism, Buddhism, African *ubuntu* philosophy, Confucianism, etc. provides sufficient theoretical foundations to develop a global management theory based on universal values, which enables intercultural dialogue based on pragmatic agreements and minimal value consensus, while preserving individual and cultural differences.

An intercultural ethics also establishes common ground with and among others (it will stress relationality and reciprocity), envisioning ways of creating networks of significance that can simultaneously draw from particular cultures and also establish similarities or commonalities for the benefit of transformative praxis in the field of global management. An intercultural ethics draws from the fluid and dynamic notion of culture, one that allows the otherness of others as a shared identity: a culture of excluded, resistant, resilient, and ultimately empowered human beings, willing to engage in transformation. If cultures allow us to inhabit a meaningful world, an intercultural ethics that fosters dialogical deliberation and symmetric participation might allow us to envision a world in which, as human beings, we are linked (but not trapped) to each other. It will also encourage us to engage in dialogue so that we can listen, learn, and live together as vulnerable, interdependent human beings.

Conclusions

Recent advances in the capability of global processes in the field of management have invigorated the debate on the ethical issues surrounding their use. However, this debate has often been dominated by ‘Western’ ethical perspectives, values and interests, to the exclusion of broader ethical and socio-cultural perspectives. This imbalance carries the risk that global management produces ethical harms and lack social acceptance, when the ethical norms and values designed into the field of management collide with those of the communities in which they are delivered and deployed. This article takes a step towards broadening the approach of intercultural ethics, by bringing together a range of cultural, social and structural perspectives on the ethical issues relating to the theory of global manegament. To avoid a homogenous global culture based on minimal pragmatic economic interests focused on efficient consumption, a universal ethics is necessary, which allows the preservation of cultural differences. In the context of global processes, it is very important to consider whether the ethical standards that have dominated so far can be adapted to different cultures. Given the hybridity of cultures, a direct correlation in intercultural ethics can be found by comparing and identifying value systems. The search for common values and ideals could lead to a universal ethical frame of reference. Recognizing existing multicultural differences, it is possible to identify certain cultural contexts that can be a sufficient basis for intercultural dialogue.

An intercultural ethics that seeks to avoid imperialistic homogenization must conjoin shared norms while simultaneously preserving the irreducible differences between cultures and peoples. An intercultural ethics may fulfill these requirements by taking up an ethical pluralism – specifically Aristotle’s, Confucius and Africa’s *ubuntu* ethical systems. This ethical pluralism figures centrally in both classical and contemporary Western ethics and further offers important connections with the major Eastern ethical tradition of Confucian thought. Both traditions understand ethical judgment to lead to and thus require ethical pluralism – i.e., an acceptance of more than one judgment regarding the interpretation and application of a shared ethical norm. Both traditions invoke notions of resonance and harmony to articulate pluralistic structures of connection alongside irreducible differences. After reviewing further resonances and radical differences between Western and Eastern views emerging pluralism thus fulfills the requirement for a theory of global management that holds shared norms alongside the irreducible differences between cultures and peoples.

The project of intercultural ethics in the context of global management theory should correspond to the traditional cultures of Africa, Asia and Europe and be based on common human values. A theory of global management should integrate such ethical values as solidarity, community, common good. The African philosophy of *ubuntu*, together with the traditional philosophies of China, Greece, and other cultures, can play an important role in strengthening the axiological basis of global management theory. Confucian ethical pluralism, based on Confucius's concept of *ren*, whereby different but equally tolerable ethical decisions are made by different participants. Confucius's ethical pluralism is compatible with Aristotle's *phronesis*, the concept of practical reasoning that accommodates a variety of different interpretations about something. The *pros hen* concept formed in Aristotle's *Metaphysics* substantiates the idea that more than one ethical decision conditioned by different interpretations is possible, associated with universal ethical norms. Due to the implementation of the *pros hen* concept, the connection of universalism with multiculturalism becomes possible. The integration of *ubuntu* into Western management theories could enrich them with values such as humanity, care, sharing, respect, and compassion.

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RECEIVED: 01 May 2022 **ACCEPTED: 28 November 2022**

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https://doi.org/10.38104/vadyba.2022.2.03

Vadyba
Journal of Management
2022, № 2 (38)
ISSN 1648-7974

ACADEMIC EXPATRIATION INTO EUROPEAN UNIVERSITIES: APPLICATION OF PERSON IN ENVIRONMENT THEORY

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Abstract

Academic staffs migrate from one institution to another, some within the same country while some academics migrate to foreign institutions. Academic migration to foreign institutions entails greater challenges due to various factors including different national policies, language and cultural adaptations. Based on the theoretical concept of "person-in-environment", this research focused on three factors that would appeal to foreign academics who seek engagement with universities in the European Union countries, i.e. 1) accessibility to rules of conducts at EU universities, 2) understandable languages for foreign academics, and 3) organizational units assisting with the integration of foreign academics. Thirty-one universities from countries within the EU were randomly selected for the purpose of data collection. A formal analysis was carried out on the selected university websites to assess both the presence and the extend of the three factors of this research. The findings show the existence of ethical principles in the universities' internal rules and practical manuals available to help solve situations associated with foreign academics adaptation into the work and social environment. However the availability of such support is not adequately available in all institutions and are limited in many institutions. Comprehensive support is found in the four universities - the University of Limerick in Ireland, the University of Heidelberg in Germany, the University of Malta, and the University of Utrecht in the Netherlands. The Swedish University of Linköping also has rules in place for whistleblowing, paving the way for other EU universities to emulate. The ethics of the 21st century will have to address new situations, and dilemmas in relation to migration, and different values among social, cultural, and religious backgrounds. This article provides guidelines for better integration in the working environment abroad by introducing the three factors for integration, and points out the need to shift basic standards into practice to cater for better assimilation of expats into host country environment.
KEY WORDS: expatriates; knowledge workers; rules of conduct; migration; well-being
JEL Classification: F22, I23, O15

Introduction

Factors of the 21st century are reflected in universities by an increasing share of mi-grating foreign employees (hereafter FE). Entry into a foreign country means a demanding process of adaptation to a new working environment, socio-cultural conditions. The theoretical concept for the life of FE at the university is the concept of the ecological perspective "person-in-environment" (PIE), which originated in the USA and solves the functioning of the person concerning the social role, environmental problems in the physical and social world (Kondrat, 2013; Skotakova, 2020). Stein and Cloward dealt with the effects of the environment on humans in the second half of the 20th century, and Bartlett and Gordon (Navratil, 2000; Navratil, 2003) in the 1970s.

When FE leave their home country, they commonly leave their familiar culture and the internalized system of values (Putova, 2017; Vackova, 2016). The decision for social change and working abroad may arise due to various reasons. The most common reason is professional growth in the academic and scientific research area and the attractiveness, even financial, of a new job (Ackers, 2008). Social integration into a different environment can cause problems in terms of new work conditions, culture, social networks, religion, but also different ways of behaving, mentality, and problem solving, as well as eating, etc. According to the Ottawa Charter, health and personal well-being is a result of the active creation and keeping of social, mental, and physical abilities, therefore, in the process of integration of FE at the university, the complexity of looking at all aspects of behaviour and personality dimensions is indispensable (Kozlova, 2003). Universities, as employers, issue documents that take into account all employee's well-being, including FE (Solcova, 2004; Görgényi et al., 2021), set up integration services and organizational units to support the rules of conduct arising in the multicultural life of the university. Universities ought to play this role effectively as they are deemed not only to be industry-driven but also caring for topics that will interest the greater society (Nathan et al., 2013).

The Strategy for the Internationalization of Higher Education (MEYS, 2020) leads to an increase in the competitiveness of institutions in the EU and worldwide (Eurydice, 2017). The principles of science, development and research are based on the basic code by which the European Commission already supported science and research in the EU in 2005 with the publication of The European Charter & Code for Researchers (European Commission, 2005). The Code contains 40 basic principles concerning the roles, responsibilities and rights of workers in science and research. In the Czech Republic (CR), it is followed by the Code of Ethics for Researchers of the ASCR (ASCR, 2005) and codes of ethics, codes of conduct, measures, and manuals on the rules of conduct of research and academic university staff. There are also support programs for FE going abroad - such as Euraxess, which in the Czech Republic is provided by the Center for Joint Activities of the ASCR and has its contact points at public universities (Euraxess Czech Republic, 2020).

To this extend, this study seeks answers to the following research question: Are there any rules of conduct in documents at universities that can support foreigners in their integration, and are these sources in a language understandable for foreigners, and are there organizational units to provide them assistance with expatriation into the university? In order to answer the research questions, this paper is organized in the following structure. Introduction is followed by an extensive literature review in Section 2, synthesizing the most relevant previous scientific works related to the theoretical background of academic migration, focusing on European Union countries. Section 3 presents the research methodology where data collection and analysis procedures are discussed. Followed by Section 4 which consists of relevant research findings and the results. Finally, Section 5 emphasizes the main conclusions of the study and describes the possible directions for future research.

Literature Review

The PIE theory is an approach that describes individuals and their environments as a dynamic, interactive system, in which all components affect each other (Hare, 2004). Based on this interpretation, employees influenced by their environment and they also have an effect on it through their actions (Johnson, Yanca, 2001; Kondrat, 2002). The need to integrate interventions at different levels is also emphasized in social and academic work by using codes of ethics. For example, The European Charter & Code for Researchers summarizes basic principles in scientific research work. There are also country-specific declarations such as NASW Code of Ethics (NASW, 2000), Code of Ethics for Researchers of the ASCR in the Czech Republic (ASCR, 2005) or The Israeli social workers' Code of Ethics (ISASW, 1994).

Academic mobility and migration have identity implications even if it is positive or negative. Nevertheless, mobility can be determined as a key mechanism through which internationalization occurs and, in addition, it is perceived as a key form of professional capital in the academic labour market and also a new capital in the global knowledge economy. Although only few studies (Kim, Locke, 2010; Bedenlier and Zawacki-Richter 2015; Bönisch-Brednich, 2016) deal with the staff migration in academic environment, it can be seen, that despite of their benefits – such as transcultural learning, enhanced employability and intercultural competencies – there are several negative aspects of it – such as isolation, epistemic exclusions (Morley et al., 2018; Kim, 2017).

The rules of conduct and identification with the values of the university are a motive for increasing loyalty with the visions and strategies of universities and support for proper conduct (Bohata, 2017). They are important support not only for the management of hu-man resources from abroad but are also important for the management of risks and the quality of the academic environment. The employees should be familiar with the rules and respect them. The problem may be that some documents are only formal, and their fulfilment is difficult to enforce (Bohata, 2018).

In the first issue of Human Ecology (1972), the human ecology was defined as "the complex and varied systems of interaction between man and his living and non-living environment" (Editors, 1972). Human ecology is examined in fields with different interpretations, leading to different explanations, which are addressed through environmental, evolutionary, analogical-symbolic or interactive theoretical frameworks. The framework of environmental theory covers the interactions between the environment and society. Inter-active theory covers human ecology, which supports political, cultural or individual changes in human priorities (Smelser and Baltes, 2001).

In the twenty-first century, human ecology has the potential to develop the connection between biophysical and social sciences (Odum, 1997). Therefore, the human ecology requires collaboration between social, physical, and biological scientists with substantive involvement of relevant communities, which it targets (Karim-Aly et al., 2011).

Research in the USA (on the basis of the paradigm broadly concerned with the ecology of work and health), showed that developments in the field of physically and mentally well-balanced worksites support the wellness of the employees and reflect the rapidly changing contexts of work and health. This view highlights the importance of strategies to enhance the welfare of employees (Stokols et al., 1996).

The ecological perspective emphasizes the need to deal with people, but also the environment in which they live, so it is necessary to support human development and adaptive capacity, remove socio-cultural barriers and adjust the environment so that it better suits the needs (Skotakova, 2020). The rules of good conduct are one of the supports that help FE in integration together with organizational units that provide ongoing support and counselling.

The foreign academics may encounter undesirable barriers that prevent them from adapting to the new working environment. The language of communication is a major obstacle, although most foreign experts who work at universities can use the English language as "lingua franca" (Barancicova and Zerzova, 2015).

The values, i.e. culture, traditions and customs of the majority society come from the local culture and religion. In the process of adaptation to a new environment that respects unknown values and has other social and moral habits, a foreigner may experience the so-called 'culture shock' (Putova, 2017). Such a person may feel insecure, afraid, anxious, disoriented, and or confused in relation to a foreign language, values, norms, customs, rules and social situations. He/she does not know what is expected of him/her or what he/she can expect from a foreign university. Such experiences can result in feelings of in-adequacy, helplessness, lack of confidence and loss of courage. These experiences may give rise to psychosomatic problems such as nausea, headaches, loss of appetite, but also insomnia, difficulty falling asleep, and or, conversely, excessive sleep and fatigue. The feeling of loneliness and social exclusion is also related to these experiences. Such a state usually lasts for days to weeks. After its experience, acculturation takes place, i.e. cultural learning and a gradual understanding of the new culture. The immigrant acquires language skills and his/her ties to the original culture are weakened. The process of acculturation ends with mental balance, language comprehension and mastery of everyday activities, which means orientation in a new environment, acceptance of a new culture and perception that a person becomes a part and is integrated in the new working environment (Vackova, 2016).

Strategic documents in the 21st century must reflect emerging dilemmas and multi-cultural values in order to avoid dogmatic prejudice and labelling people in predetermined categories. There should be an ongoing need for education in the multicultural field and sensitive management of human capital from abroad - based on ethical rules and internationalization strategies.

Motivation and Aim of Study

The aim of the literature analysis, especially from the websites, is to find answers to the question of whether documents setting rules of good conduct, such as codes of ethics and other documents of guidelines of conduct are available at universities (can be found on the web), in an understandable language version for FE (mainly in English) and enforceable, i.e. what organizational units FE can find in critical situations in a foreign environment.

Several studies examine the motivations and difficulties in terms of academic migration and mobility. Some of them mention language barriers as a key obstacle, in addition to the low levels of integration with local staff, and the lack of involvement in management and administration or bureaucracy (Snodin et al., 2021; Poole, 2016).

Dilemmatic, and cultural-stressful situations, when the integrity of his personality and human dignity may be violated, may have psychosomatic consequences for his health (Havelkova, 2017), and thus a decrease in his work performance or illness. The new environment presents not only new dilemmas, but in extreme cases, there may be discriminatory situations arising from racial, cultural, and religious differences, such as xenophobia, mobbing, bossing, stalking, harassment, etc. Unbalanced or declining work performance in a foreign environment is a complication also for the employer, as his performance and competitiveness in a certain field of specialization may be endangered.

FE migration has numbers of dilemmas and trade-offs arising from rights to development, education, migration, equality and ethical principles. Brain drain, gain or waste have played a role in state policy initiatives. Different issues in FE migration include political implications, economic and policy impact as well as ethical dilemmas. (Freitas et al., 2012).

There could be different types of migrants in different types of university labour markets of supply and demand in developed and developing countries. The impact of skilled migration may be limited to specific areas. National policies of various states encourage the FE movement from developing to developed countries, because developed countries can benefit from the contribution of highly educated foreign workers and liberal regimes of international mobility (Lowell, Findlay, 2001).

Europeanisation process supports minority protection and combats discrimination, but the integration of immigrant minorities in some member states is not simple. Socially integrated long-term migrant residents are sometimes at a disadvantage compared to newcomers with European citizenship. Especially the third-country nationals are encouraged to integrate into the dominant national majority. There is a division between be-longing to the country or EU in historic terms and countries outside the EU. The rights of native minorities are guaranteed, but there must be set provisions for integrating migrants under similar conditions of tolerance and respect (CIDOB, 2012).

Against this backdrop, this research aims to seek answers to the following research questions:

Firstly, where can a FE find support in the event of a crisis - in the university's ethical documents or in organizational units?

Secondly, how are these documents or organizational units traceable on the university’s website?

Thirdly, are websites and documents needed for FE available in an international language (in English)?

Materials and Methods

The research method is based on formal analysis consisting of the search and study of universities’ websites. Formal website analysis is commonly done in order to assess availability of support documents for institutions or corporations (Nathan et al., 2017). The objective of this analysis is to map the European universities, based on 31 universities from EU Member States and thus, provide a better understanding of academic expatriation into European Universities. Research methodology represented by Figure 1 contains the main phases and tasks performed during the research.

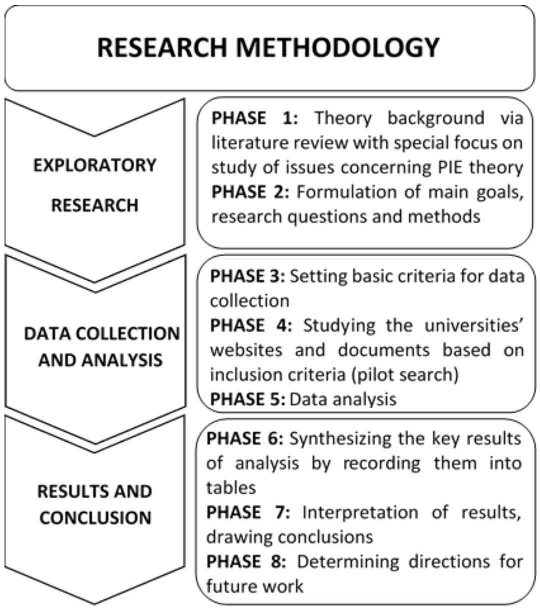

Fig. 1. Research methodology **Source:** Authors’ own edition

For the initial analysis of scientific literature, the following sources were used systematically: the book collection of the Academic Library, EBSCO Discovery Service, original scientific articles in the last 3 years, from the Complementary Index and Academic Search Complete databases. For the formal analysis based on search for university websites, following three criteria were set:

1) Availability of the document on the university website.

2) Language version of the document (as a criterion for understandability for FE was determined the English language or another language in addition to the national language in the country) and search for documents related to the rules of conduct. Content analysis was used for the found documents (Nespor, 2018), finding out whether the found documents determine the rules of conduct at the university.
3) Enforceability of the rules - the existence of organizational units that FE could turn to in the event of a crisis, dispute resolution, or dilemma was sought.

The sampling method was discretionary random sampling and the research sample consisted of public or state 26 EU universities – one of each from EU Member States. They were randomly selected by drawing lots of university names of individual state found on the web (Study in Europe, 2021). Due to a large number of universities, the core set was narrowed so that each Member State was represented by only one university. In the Czech Republic (research base), 5 universities were drawn (MEYS, 2021). The analysis of more universities would be extremely extensive, therefore, this research sample does not show the general situation at universities in a given country, but only a random sample selected from each EU country.

Based on a pilot search of websites, in which documents containing rules of conduct were searched, keywords were determined for further searches: code of ethics, code of conduct, ombudsman, ethics committee, ethical board, whistleblowing.

The analysis of university websites identified language versions of the website and documents with topics dealing with the rules of conduct and organizational units that ensure compliance with the rules of universities. The search was always performed primarily from the search box of the main university website in the English language version. University websites have different structures, and are constantly updated. The analysis is from the middle of the year (July-August) 2021. If the keyword link was not found on the university's main website, a general Google search engine was also used (keyword together with the university name in English). It was very time-consuming to orientate one-self in the variable forms of the websites of individual universities. The obtained results were recorded in tables, which show the language version of the website, the name of the document dealing with the rules of conduct at the university, and which organizational unit is in charge of this process.

Results and Discussion

This section presents the findings of research. The detailed results are tabulated in Table 1 which is placed in Appendix A at the end of this article. Table 1 shows the data obtained from Czech Republic universities and data obtained from other EU universities. From CR, 5 universities CR were evaluated and from other EU countries 21 universities were evaluated. Altogether 26 HEIs were evaluated, which forms the data for this study.

Formal Analysis of the Three Factors

Availability of documents on university websites - all analysed universities have internal standards that lead to respect for human rights, respect, gender balance and esteem, or help identify misconduct. The mission of universities also implies the need to have ethical rules for scientific research and publication work. There are also rules for the recruitment of researchers, rules for pedagogical, evaluation, and expert activities.

The research identified two basic types of documents. The first type includes codes of ethics, focused on principles and values - they are based on the culture and environment at the university, emphasizing its mission and set of values. There are no instructions for resolving controversial situations in practical life. The second type of documents deter-mines specific rules of conduct, including codes of conduct or practical manuals for employees, which, in addition to the rules of conduct, provide information for living in a university environment. Their use is beneficial for FE, although unknown (e.g. multicultural) complications may arise (Bohata, 2018). There are also documents where both types intersect. Other codes are focused specifically on, for example, the correct conduct of members of management bodies, behaviour in the workplace or directly addressing inappropriate types of behaviour. Some manuals provide practical guides (e.g. Dress Code).

FE will find these documents on the website of its host university, usually with contacts to organizational units where urgent and controversial cases can be resolved (hot-lines, ethics committee, ombudsman, vice-rector, or vice-dean for foreign relations). The search works directly from the main website of the university, but not always - in this case, it is necessary to use a general search engine (e.g. Google) with the name of the searched document and the name of the university.

The best range of documents with different rules of conduct was found at the Irish University of Limerick, which can be an inspiration in this regard. The rules are based on Irish equality and diversity policy, have guidelines for scientist-co-research ethics, acceptable workplace behaviour, governing body conduct, staff codes of conduct, and libraries' codes of conduct.

Recently, whistle-blowing protection has begun to penetrate university life. Procedures for whistleblowing were found by analysis at the Swedish University of Linköping. The aim of the introduction of the Whistleblowing Act is for the employer to find out about the illegal act and enable its correction, reduction of damage, the capture of perpetrators, etc., which can help FE in a foreign work environment. The law is intended to protect whistleblowers against the possible consequences of such notification, to implement the European Whistleblowing Directive 2019/1937 (Bicek, 2021).

Language: University websites have always been found in the national language of the country and the English language version. The English language can be considered the lingua franca of the academic environment (Barancicova, 2015). Some university websites have multiple language versions depending on the representation of the language groups operating at the university. The rules of conduct documents were in all cases found in English, only at the Spanish Universidad de

Jaen was the Code of Ethics in Spanish. This can be considered a sufficient resource for FE working at the university, as Spanish is considered the world's second most widely spoken language (ASOCHECA, 2016). The Italian University of Foggia Code of Ethics has been found in Italian only. The Portuguese University of Porto has Ethical Committee documents only in Portuguese. At the Austrian University of Innsbruck, the document Guidelines for Good Scientific Practice was found in German. Three universities have their websites in English only, as it is the official language of the country and also the world language: the Irish University of Limerick, the Cypriot University of Nicosia, and the Maltese University of Malta. There-fore, most language versions of the website were found at the Romanian University Alexandru Ioan Cuza in Iasi and the Slovak University of Zilina.

Enforceability/organizational units: The Ethics Committee, or the Ombudsman, the Academic Senate, the Disciplinary Committee, or another organizational unit of the university, which is authorized to do so, were identified as organizational units for the enforcement of the rules of conduct. Contacts for commission members are always listed directly on the website, or they can be searched in personal search engines. The ethics committee or similar unit was not found on the website of the French University of Southern Brittany. Within universities, FE can also use various counselling or career/coaching centers, which also provide information on controversial ethical situations and set rules. It is also possible to contact the offices for international cooperation or foreign relations (usually the tab named International), which provide advice on working conditions at the university and residence in the country. For emergencies, there are non-stop services in the form of so-called hotlines or emergency calls. FE in a critical situation will probably turn to his colleagues or his superior, who will provide him with contact with the organizational unit that is most suitable for his support.

The highest enforceability of ethical rules was found at the oldest German University of Heidelberg, which has several ethical commissions, the Commission for the Protection of Good Academic Practice, incl. Ombudsmen, the Senate Equal Opportunities Commission, the Confidential Information Commission, and the Rector's Commission for Good Conduct.

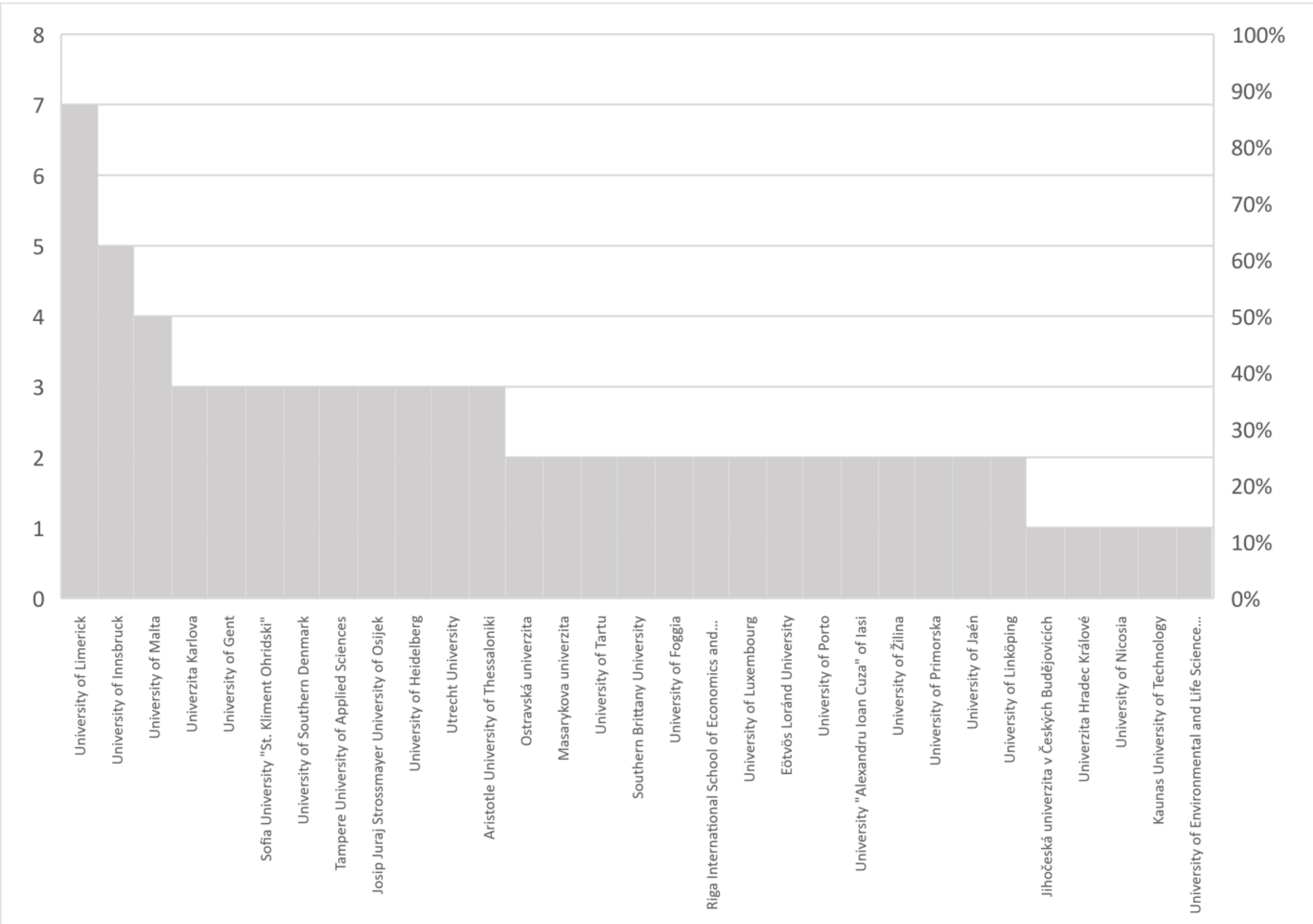

Fig. 2. Overall comparison Chart.
Legend: Blue box denotes availability and comprehensiveness of documents for FE.
Source: Authors' own visualization

Comparison Among the Universities

The graph in Figure 2 presents a comparison in the categories of availability, comprehensibility, and enforceability at all 31 universities (see Figure 2).

The results show that the best set and processed rules of conduct and representatives for their enforcement in the

EU can be found at the following four universities - the University of Limerick in Ireland, the University of Heidelberg in Germany, the University of Malta, and the University of Utrecht in the Netherlands. The Swedish University of Linköping already has rules in place for whistleblowing. It can be stated from the results that the universities of Western and Northern Europe, in particular, have a long experience in hiring FE, and therefore the setting of rules of conduct is sufficiently accessible, comprehensible, and enforceable. It is the reason for the East-West European migration (Fischer-Souan, 2018). The table lists all the identified documents and facts, many universities are based on the basic documents created by the European Commission, which are The European Charter & Code for Researchers (European Commission, 2005).

Part of the research was focused on the Czech Republic, where the greatest availability of ethical documents is at Charles University, which has many foreign students and employees. Masaryk University has a very well-developed code for professional conduct in terms of academic, scientific, and research work, as well as a code for the ethical conduct of employees. The University of South Bohemia in Ceske Budejovice has one main code with two annexes (each document was counted separately, as the main document addresses general ethical principles, its first annex is the principles for research work and the second annex is the principles for evaluation and expert work. The University of Ostrava uses the concept of coaching in the concept of human resources management. Emergency contacts in the form of emergency calls were found at three universities (UK, JU, OSU) under the International Department.

How to support brain-gain or circulation (Boeri, 2012)? The best way is good integration at a new foreign location. Active selection of highly qualified migrants means an optimal supply of labour where the state saves money on demanding professional and knowledge training (Vackova, 2017).

The international environment is the impetus for international cooperation. Without it, education and research would stagnate, and to increase the competitiveness of the institution, there is a significant continuous need to acquire knowledge, skills, and competencies from around the world. This social environment is aptly described by the motto Tolerance in Diversity (Maussen, 2012). From the point of view of an adaptation of FE at the university, it is not only about the ecology of the working environment, but also about supporting integration up to the so-called empowerment, i.e. a situation where a foreigner gains security in a new environment and control over his life and its conditions. Such a person was capable of changing thinking, feeling, values, and perceptions of oneself and others in the new society (Navratil, 2003). Such FE believe in their own ability, they prove successful at work, communicate in a foreign language, decide fully in life, and are responsible for the work performance (Dvorakova, 2008).

Migrant scientists, researchers, or academics who want to start a new life in another host society may come into conflict with the unknown environment. The rules provide them with a standard of best practice, but they can be removed from solving complex ethical issues in practice when unexpected situations arise (Zapata-Barrero, 2020). Bohata (2017, 2018) writes about codes of ethics at universities in the Czech Republic and she states that they are often the target of criticism because the set rules are not enforceable, do not contain solutions to dilemmatic situations, and when employees are not consistently guided and continuously trained for certain actions, they do not have the intended effect (Bohata, 2018).

The pitfalls of searching and orienting in documents for FE can be the inconsistent appearance of university websites, information hidden by the need for many clicks. The results mean that from the perspective of international teams at universities, that it is necessary to base the perspectives of a person in a foreign environment and understand the individuality in the contexts in which he/she lives and acts (Kondrat, 2013). The principle of equality of rights and obligations is formally set out in the codes. The rules of conduct must reflect the situation of the multicultural environment in university practical working life, be supplemented by specific guidelines that take into account different values, cultures, and religions, and lead to the well-being of FE (Kmosek, 2018).

At this juncture, the intention of this research was not to go in-depth and critically examine the values and rules, but rather to think about the situation of FE, who finds themselves in an unknown environment that affects them in various contexts and seek support for themselves in the rules of conduct of the foreign employer, want to understand and to find help in solving the problem they encountered, thanks to their migration abroad. The other purpose is to motivate professionals from the universities not to be afraid to travel for a longer stay at a foreign university, which will be an increasingly common fact in the context of the future establishment of so-called European universities (CNAIER, 2021).

Conclusion and Future Research

The article is based on the principle of human ecology in the environment and emphasizes the need for institutional anchoring of the correct behaviour towards the FE in the multicultural environment of universities (Sargent, 1974; Richerson et al., 2001; Marten, 2001). This environment is influenced by three factors - the availability of the rules of good conduct, in a language that the foreigner understands, and the existence of organizational or supportive units to assist FE with the integration. The results of the research show that all 31 analysed universities have documents with ethical principles in their internal rules, or additional rules in the form of practical manuals helping FE to solve the crisis, controversial situations associated with adaptation, and integration into the work and social environment. The enforceability of these rules should be checked by the relevant organizational units, which should also arrange continuous training or coaching of all employees in the correct behaviour.

Along with the development of technology, the ethics of the 21st century will have to address new rules of conduct, new situations, and dilemmas of an ever-evolving and changing globalized society for employee well-being (Görgényi et al., 2021). It will have to take more account of consensus, migration, and the presence of foreigners, including the different values between us. Respect, solidarity, and collegiality are important. The documents of the host universities must not lack specific instructions for solutions and practical rules facilitating FE orientation in their work environment.

Sharing examples of good practice between universities can help to increase the skills needed for the university labour market. Direct contacts between cultures are part of the prevention of hatred and intolerance. The coexistence of people from different social, cultural, and religious backgrounds helps mutual understanding and promotes an open mind. The analysis aimed to underline the importance of the rules of conduct for international cooperation, the integration and well-being of foreign colleagues and should initiate reflections on the management of human resources from abroad.

This research suffers several limitations. Firstly, only formal analysis was conducted in this study as it covered all EU countries. The research focused on the overall formal demonstration of the availability of ethical support for FE in respective EU countries. Although only one university in each EU countries and a representative sample of public universities in the Czech Republic were selected; it was time-consuming to orientate the websites of universities in various countries, as there is no uniform structure among them. Some information was difficult to find and locate, which required additional help from Google web browser search function. Secondly, a comparison of contents of the ethics documents was not possible during the process of this research due to the volume of in-formation and data obtained.

Besides foreign academics, future studies may also look at support for international students for their well-being and mental health (Thuryrajah et al., 2020). Based on the experience of FE in a local academic environment, their commitment to work, and citizenship behaviour could be analysed (Dominic et al., 2021). Future research may also conduct in-depth content analysis on the ethical documents and support materials available for FE, as well as compare two groups of ethical documents – the first group, which formally sets the rules of conduct, and the second group, which focuses more on practical aspects and guidelines for solving FE dilemmas.

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Appendix A

Universities in the Czech Republic

University	Source: Web	Availability of Documents	Languages	Enforceability (Organizational units)
University of Ostrava (OSU)	www.osu.cz	Coaching Code of Ethics; Publication Ethics and Malpractice Statement	EN, CZ	Ethics Committee, Counseling and Career Center
Masaryk University (MU)	www.muni.cz	MU academic and professional employee code of ethics; MU employment code	EN, CZ	Ethics Board of the Faculty of Law, Ethics Board of the Faculty of Medicine
South Bohemian University in Ceske Budejovice (JU)	www.jcu.cz	USB Code of Conduct; Annex No. 1 – Principles of Research and Publication of Findings and Results of Research; Annex No. 2 – Principles for Assessment, Evaluation, Reader and Expert Activities	EN, CZ	Ethics Committee, Ombudsman
Charles University (UK)	www.cuni.cz	Code of Ethics; Employee Handbook; Sexual Harassment	EN, CZ	Ethics Commission; CU Point - Centre for Information, Counselling and Social Services
University of Hradec Kralove (UHK)	www.uhk.cz	Code of Ethics	EN, CZ	Ethics Committee for Research

Country	University	Source: Web	Availability of Documents	Languages	Enforceability (Organizational units)
Belgium	University of Gent	ugent.be	Research Code of Ethics; Unwanted Sexual Behavior - What Can I Do?; A-Z for International Staff	EN, NL	Ethical Affairs Committee
Bulgaria	Sofia University St. Kliment Ohridski	uni-sofia.bg	European Charter for Researchers; Code of Conduct for the Recruitment of the Researchers; ALLEA - The European Code of Conduct for Research Integrity; Ethics Code of the Academic Community of Sofia University	EN, BG	Ethics Commission, Academic Ombudsman
Denmark	University of Southern Denmark	sdu.dk	Danish Code of Conduct for Research Integrity; Publication ethics; Code of Conduct; Dress Code	EN, DK	Research Ethics Committee, Committee on Publication Ethics
Estonia	University of Tartu	ut.ee	Estonian Code of Conduct for Research Integrity; Values Development in Estonian Society 2015 - 2020	EN, RU, EE	Research Ethics Committee, the University of Tartu Centre for Ethics
Finland	Tampere University of Applied Sciences	tuni.fi	Ethical principles of research with human participants and ethical review in the human sciences in Finland; Responsible Conduct of Research and Procedures for Handling Allegations of Misconduct in Finland; Code of Conduct for Tampere Universities Community	EN, FI	Regional Ethics Committee of Tampere Universities
France	Southern Brittany University	univ-ubs.fr	European Charter for Researchers; Code of Conduct for the Recruitment of Researchers; Guidelines for Open, Transparent and Merit-Based Recruitment of Researchers (OTM-R)	EN, FR	Not found.

Croatia	Josip Juraj Strossmayer University of Osijek	unios.hr	Code of Ethics; Ordinance on Disciplinary Responsibility of Teachers; Declaration of Commitment to the European Charter for Researchers and the Code	EN, HR	Ethical Committee
Ireland	University of Limerick	ul.ie	Protected Disclosures Policy & Procedures; Equality and Diversity Policy; Operating Guidelines for the Governance and Oversight of Research Ethics; Acceptable Behavior in the Workplace Policy; Code of Conduct for Members of Governing Authority; Code of Conduct for Employees; Library Code of Conduct	EN	UL Research Ethics & Governance committee + Faculty Research Ethics Committees, Discipline Committee, Office of the University Advocate, Ombudsman and Ombudsman for Children (Dublin)
Italy	University of Foggia	unifg.it	Code of Ethics (only in the Italian language); European Charter for Researchers; Code of Conduct for the Recruitment of Researchers	EN, IT	Academic Senate
Cyprus	University of Nicosia	unic.ac.cy	Code of Business Conduct	EN	Research Ethics Committee, Cyprus National Bioethics Committee
Lithuania	Kaunas University of Technology	ktu.edu	Code of Academic Ethics	EN, LT	Board of Academic Ethics, Ombudsman for Academic Ethics and Procedures
Latvia	Riga International School of Economics and Business Administration	riseba.lv	Mission and Values - Ethics and Social Responsibility; Code of Ethics	EN, RU, LV	Ethics Committee
Luxembourg	University of Luxembourg	uni.lu	Research Ethics Guidelines; Code of Conduct	EN, DE, FR	Ethics Review Panel, Ethics Advisory Committee, Luxembourg Agency for Research Integrity
Hungary	Eötvös Loránd University	elte.hu	Code of Ethics for ELTE students; University Ombudsman Regulations	EN, DE, HU	University Ombuds Office, Research Ethics Committee Counselling Centre
Malta	University of Malta	um.edu.mt	Research Code of Practice; Research Ethics Review Procedures; Code of Behavior; Code of Conduct - guidelines for undergraduates	EN	University Research Ethics Committee, Committee for Safeguarding the Code of Professional Academic Conduct, Committee for Gender Issues Policy, University Ombudsman
Germany	University of Heidelberg	uni-heidelberg.de/en	Rules for the Safeguarding of Good Academic Practice and Handling Academic Misconduct; Statute of ombudsperson for doctoral students and their supervisors; Senate Guidelines for Fair Conduct	EN, DE	Ethics commissions I., II., Commission for the Safeguarding of Good Academic Practice, Ombudsmen for Good Academic Practice, Senate Commission for Equal Opportunities, Confidentiality Commission; Rectorate Commission for Fair Conduct
Netherlands	Utrecht University	uu.nl	Netherlands Code of Conduct for Research Integrity; Code of Conduct for Scrupulous Research Practice and Integrity; Research Integrity Complaints Procedure	EN, NL	Ethics Review Boards of faculties, Research Integrity Committee, Confidential Advisor Research Integrity-Executive Board
Poland	The University of Environmental and Life	upwr.edu.pl	Employee Code of Ethics	PL, EN	Ethics Committee

	Sciences in Wroclaw				
Portugal	University of Porto	up.pt	Ethics Committee documents in Portuguese only; European Charter for Researchers; Code of Conduct for the Recruitment of Researchers	EN, PT	Ethics Committee of the University of Porto (CEUP)
Austria	University of Innsbruck	uibk.ac.at	Guidelines for Good Scientific Practice (in German language only); European Code of Conduct for Research Integrity; European Charter for Researchers; Code of Conduct for the Recruitment of Researchers Guidance How to Complete Ethics Self-Assessment (H2020) Code of Conduct	EN, DE	Board for Ethical Issues
Romania	University Alexandru Ioan Cuza of Iasi	uaic.ro	European Charter for Researchers; Code of Conduct for the Recruitment of Researchers; Code of Ethics	EN, FR, DE, RO	Ethics Committee
Greece	Aristotle University of Thessaloniki	auth.gr	Code of Ethics in Research; European Charter for Researchers; Code of Conduct for the Recruitment of Researchers; Ethical Aspects in Research and Technology for Human (member of EARTHnet)	EN, GR	Ethics Committee, UNESCO Chair on Education for Human Rights, Democracy and Peace
Slovakia	University of Zilina	uniza.sk	Code of Ethics of University of Zilina; Code of Ethics of University Employees	EN, RU, UA, SK	Publishing Ethics of Crisis Management Journal - Editorial and Technical Board
Slovenia	University of Primorska	upr.si	European Code of Conduct for Research Integrity, revised edition published by ALLEA - Association of European Academies Code of Ethics of University of Primorska	EN, SI	UP Ethical Issues Commission, UP Commission for Ethics in Research Involving Work with People
Spain	University of Jaén	ujaen.es	Human Resources Strategy For Researchers Action Plan; Código Ético del Personal de Administración y Servicios dela Universidad de Jaén – only in Spanish language	EN, ES	University Ombudsman-Defensor Universitario, Ethical committee with three commissions (animal testing, human research, and GMO and biological agents)
Sweden	University of Linköping	liu.se	Ethics, Values, and Norms; The whistleblower procedures	EN, SE	Centre for Applied Ethics, Chief Legal Advisor

Source: Authors' own compilation

RECEIVED: 01 May 2022 **ACCEPTED: 28 November 2022**

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https://doi.org/10.38104/vadyba.2022.2.04

Vadyba
Journal of Management
2022, № 2 (38)
ISSN 1648-7974

IMPLEMENTATION OF SUSTAINABLE PASSENGER MOBILITY PRINCIPLES IN RAIL TRANSPORT

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Abstract
The article analyzes the implementation of sustainable passengers mobility principles in railway transport in Lithuania. Railway transport occupies a special place in passenger transportation, it has great potential, as it is an alternative to road transport. The goal of article is to reveal the prerequisites for the implementation of the principles of sustainable passenger mobility in railway transport in the Republic of Lithuania. To achieve the goal, analysis of theoretical sources, analysis of LR and EU legal acts, development strategies of the transport sector, statistical data analysis, monitoring, situation assessment have been committed. The principles of sustainable passenger mobility are modern approach to the saving of natural resources, personal and public interests, taking responsibility for the consequences of own actions as a user of transport services. Railway transport has potential in passenger transportation, as passengers flows are not high, compared to other modes of transport. Electrified railway transport is a competitive, friendly to nature and future generations choice. The opportunities of the tourism sector and railway transport are not exploited. It is necessary to assess the public's favorable attitude towards changes in transport due to ecological aspects, but the public transport sector must ensure high-quality services that meet EU standards and customer expectations. In order to achieve sustainable mobility in rail transport, priorities are set: measures are applied to reduce the negative impact on the environment, measures are applied to reduce the noise level, measures to contribute congestion reduction in the city area, to contribute to the promotion of physical activity of residents. Strategy of Lithuanian mobility development until 2050 projects in railway transport are directly related to the implementation of the principles of sustainable mobility and measures to increase passenger flows. To attract passengers to use railway transport in a sustainable way, to reject to use their own road transport, particular attention must be paid to speed, comfort, costs, connections with other transport modes or modes of travel, road transport, private or public, cycling or walking, and the compatibility of terminals with modern users needs. To implement the principles of sustainable mobility in railway transport, while simultaneously increasing passenger flows, the tasks must be solved in a complex manner, with close cooperation between institutions with different responsibilities. In addition, measures such as ensuring multifaceted connections between modes of transport and other movement alternatives, integration of tourism and railway transport, adaptation of city infrastructure to tourist needs, compliance of railway terminals with the main needs of passengers must be evaluated.
KEY WORDS: railway transport, sustainable mobility, railway infrastructure, passengers

Introduction

Modern society willingly accept changes in the transport sector for the past few years, which are conditioned by ecological aspects, for personal travel, daily or recreational, or cargo movement organization schemes. Preservation of natural resources, sustainable consumption, public interests, personal responsibility for one's health are the main force in today's progressive citizen's approach to transport. Railway transport occupies a special place in passenger transportation, it has great potential, because it is land transport, which can be an excellent alternative to road transport, i.e. for the use of private cars (because road transport is the most harmful type of transport for the environment and the population)

The subject of this article is the sustainable mobility of passengers in railway transport.

The goal is to reveal the prerequisites for the implementation of the principles of sustainable passenger mobility in railway transport in the Republic of Lithuania.

Tasks are set to achieve the goal:

1. to present the theoretical aspects of the conditions for the implementation of the sustainable passenger mobility principles in railway transport;
2. to carry out an analysis of the conditions for the implementation of the principles of sustainable passenger mobility in railway transport in the Republic of Lithuania;
3. provide additional directions for the implementation of the principles of sustainable passenger mobility in railway transport in the Republic of Lithuania.

The methods used in the research are analysis of relevant scientific literature, analysis of LR and EU legal acts, development strategies of the transport sector, statistical data analysis, monitoring, assessment of the situation.

Theoretical framework

Travel methods and transport evaluation indicators. As it was already mentioned, modern society is already willingly accepting changes that are conditioned by ecological aspects, in the transport sector, for personal travel, daily or recreational, or cargo movement organization schemes. Society has already been introduced to the negative impact of transport on the environment, can assess its own personal contribution, and reduce the importance of that personal contribution by changing its travel habits.

Mobility undoubtedly has an impact on the internal market and the quality of life of citizens enjoying the freedom to travel. Transport also provides an opportunity to ensure economic growth and job creation, so it must meet the principles of sustainability in view of the new challenges that arise. Transport is global, so active international cooperation is necessary to take effective results (European Commission, 2020).

The main idea for planning the sustainable urban mobility is to seek to establish the sustainable transport system in the city – through achieving goals such as e.g.: improved safety of transport, limiting adverse impact on environment, improved efficiency and effectiveness of transportation of passengers and goods, improved attractiveness and quality of urban area, and improved availability of transport ser-vices for the inhabitants. Mobility planning covers all types and modes of transport in the city – public transport, private, passenger and freight transport, motorized and non-motorized transport. (Marcin Wołek, 2018)

Mobility is an integral part of every person's life, regardless of the type of transport used, how often and how far they travel. For some people, travel is very important and significant in their daily life, for tough people it is less important, but less or more often, but everyone travels. In this way, travelers have a great influence on tourism and its development sector, and the formed travel habits affect the environment (Garliaskienė, Stravinskienė, 2015).

The impact of transport on the environment is usually associated with negative results, i.e. air pollution, noise, congestion, traffic accidents, waste, landscape pollution, but the impact can and must be reduced by changing travel habits. Transport demand is concentrated at a certain time, which is related to the current pattern of society's activity. In this case, the demand is both temporal and spatial. In some cases, e.g. travel to work or school, the demand has a certain regularity that allows for detailed estimates. In other cases, e.g. there are many uncertainties in social and leisure travel and in such cases demand forecasting will be unreliable (Johnson Viktoras, Ponnusvamy, 2012). Therefore, the positive point is that most trips, such as trips to work and educational institutions, can be calculated and predicted into the future, leisure trips are undefined, they are characterized by spontaneity, but certain forecasting is possible.

The most important factor for traveling is a properly chosen mode of transport, vehicle, and method of travel. The following types of transport are distinguished: road, water, air, railway transport. According to the ways in which goods and passengers are transported, land (road transport, rail transport, including metro, pipeline transport, cart transport, non-well transport, bicycle and other), water (sea transport, inland water transport) and air transport (civil aviation) are distinguished, according to the nature of the provided services - freight and passenger, according to the ownership of the vehicles - private and public transport, according to the purpose - general use, special (commercial) and personal (residents' cars, motorcycles, bicycles, boats, yachts, airplanes and others). Public transport (city transport, suburban and intercity buses, passenger railway trains, etc.) routes are regular, performed according to the schedule, while private transport carries passengers and cargo at any time and in any direction at the discretion of its owner.

Each person can freely choose the type of transport, the means of transport, with the help of which the trip will be made. Such a choice is determined by the availability of the type of transport and the vehicle at a certain time, in a certain geographical region, as well as price, quality or reputation. The higher the level of public transport service is created, the more the choice of this type of transport and means of travel is ensured, which also ensures greater public transport passenger flows. Assessing passenger needs is mandatory to change established travel habits. Analyzing international experience, it was found that attracting car drivers to use public transport is a difficult task. This is because car drivers have a negative attitude towards public transport, due to travel times and conveniences such as multi-purpose travel: privacy, independence, transporting children, pursuing personal interests, etc.

To improve the quality of the transport system, the transport system evaluation indicators are distinguished:

1. Fast, convenient and cheap transportation of passengers and cargo.
2. Convenient intercity, interdistrict transportation.
3. Inexpensive infrastructure and operation.
4. Connections with other modes of transport
5. Conformity of terminals to passenger needs

Considering these presented indicators, it is possible to find out the possibilities of expanding the sphere (Sivilevičius, 2012).

Transport infrastructure - the totality of land and waterways, traffic management systems, related structures (including buildings), specially equipped territories and facilities and constructions intended to ensure transport activities. Trips can also be recreational or educational. People use them on weekends, on vacation or in their free time. To get the most out of this type of trip, it is important to choose the right type of transport and vehicle.

Leisure is a phenomenon of industrial society, which gave freedom to choose and satisfy different needs. The scale of choice, ranging from possible to necessary and necessary, becomes a considerable problem for modern man. Leisure has become an attractive and profitable market commodity. Leisure-time activities are becoming a major driver of the international or national economy as they create many jobs in various fields, from travel and tourism to art, various hobbies, sports, health and beauty. On the other hand, the choice of free time depends on a person's social and spiritual values, cultural environment (Liutikas, 2009). It benefits not only the person who uses his free time to travel, but also the surrounding businesses and the country's economy.

When examining the historical aspects of the development of transport, it is obvious that traveling was not always as simple and easy as it is now. Most of the country's citizens worked hard to meet their basic needs. Travel required a lot of expenses, so most of the society could not afford it. The trips were most popularized by merchants and craftsmen who often changed their place of residence due to a better standard of living. Also, the development of transport and the improvement of infrastructure contributed to the popularity of travel (Beležentis, Žuromskaitė, 2012).

Various typologies and classifications of travel and tourism can be distinguished. According to the topic related to the trip, such forms of tourism are distinguished as ecotourism, cultural tourism, religious tourism, tourism for medical purposes, sports tourism, political tourism, economic tourism, village tourism. Travel and tourism can be divided according to the duration and time of the trip, characteristics of the geographical space, and the motives of the travelers. When classifying, the number of tourists, the method of travel, and the chosen entertainment are often taken into account (Liutikas, 2009). The potential of rail transport and tourism links is currently underrated, although it has great prospects.

Tourism is a rather complicated branch of business directly related to different sectors of society and economy. Without correct and accurate planning tourism

may cause undesirable negative impacts on ecology, social-economic processes and protection of cultural heritage. Strategic planning on national and regional levels should cover policy of tourism development, structural plan, standard of sites, institutional factors and

all the other elements necessary for the further promotion

and management. (Kadagidze, 2016)

Europe's transport system has succeeded in connecting people across the continent and reducing travel times. As society has become more mobile, the carbon residual of transport activities has increased. Transport currently accounts for a quarter of the EU's greenhouse gas emissions, and this figure is growing as demand grows. EU aims to reduce these pollutants by 90% by 2050 shifting to more sustainable modes of transport provides more affordable, accessible, healthier and cleaner alternatives [European Commission, 2020].

The most used vehicle is a private car. A motor vehicle is a vehicle designed to travel on the road, to carry goods and/or passengers or to tow other vehicles, excluding motorcycles, light quadricycles, powered quadricycles, mopeds, tricycles, tractors and self-propelled machines. Cars also include trolleybuses, which are non-rail vehicles that are powered by electric cables [Law of the Republic of Lithuania on Road Traffic Safety, October 12, 2000, No. VIII-2043].

Each user can freely choose the type of transport and means of transport that are more acceptable to him, usually he chooses from road, water, air, railway transport. The choice of the type of transport is determined by such criteria as price, availability, quality, travel distance and time ratio. Traveling for various purposes, e.g. necessary daily trips to work, educational institution, episodic trips, as well as recreational trips and tourism. Leisure trips can be educational or recreational. Every type of transport is important for the country's economy, and the ecological aspect is essential in the modern world. Interaction between modes of transport ensures smooth passenger service in the transport system. Electrified railway transport is a competitive choice, friendly to nature and future generations. The main indicators of the evaluation of the transport system are fast, convenient and cheap transportation of passengers and cargo, convenient intercity and interregional communication, inexpensive infrastructure and operation, connections with other modes of transport and the suitability of terminals for passenger needs. The potential of the tourism sector and railway transport links is currently not being used.

Impact of travel mode choice on society and the environment. The impact of the mode of travel on the environment and society is direct. Since the entire country's passenger transport sector is treated as a system, the interaction between modes of transport must be fully evaluated. Personal dependence on a private vehicle is significant, and changing this attitude is a difficult task.

Each person's choice in the use of transport has an impact on the person, society and the environment. Sustainable development is inseparable from reducing the negative impact of transport on the environment, the social side of the transport sector and changes in mobility behavior and the formation of mobility demand. The impact on the environment or the safety of the environment due to the increase in traffic flows, and especially the significant growth of road and air transport services, has become very relevant in the recent period. In this case, the goal is to reduce the harmful impact of transport on the environment. This can be done in several ways:

- limiting the transportation process itself;
- tightening operational requirements for vehicles;
- financially supporting and promoting technologies, applying economic sanctions, fines, taxes;
- controlling the choice of the mode of transport through administrative measures

These are some of the most stringent ways to combat pollution. However, a more difficult but more socially acceptable way would be to introduce and encourage innovation. Because only a voluntary change of travel habits, without strict restrictions and without additional financial burden, when the user takes responsibility himself, realizes the importance of his contribution, ultimately gives a significant sense of satisfaction that every citizen is important in contributing to a common noble goal. Social responsibility, emphasizing the importance of sustainable development, is possible to analyse by various aspects: from debate, posed for the formulation of the concept, or socially responsible activities’ benefit to society and the environment, to the impact of individual groups on the development of social responsibility and its benefits. Social responsibility is a relatively new concept that is becoming increasingly important relevance (Kareivaitė R. 2015)

Over the past five years, there has been a tendency to increase the use of road transport, as well as a systematic decline in transport by other transport modes. The development of road transport infrastructure (hereinafter also referred to as road transport), the increase in the number of vehicles traveling on the roads have a negative impact on the environment. (Antoszak, 2019)

Cities and their designers are under enormous pressure to overcome today's mobility challenges. Rapid urbanization, infrastructure, population growth and climate change continue to challenge the world's cities. Those who are determined to boldly improve and diversify their urban transport systems will gain a competitive advantage - investments in better and more sustainable mobility will give cities greater productivity, attractiveness and overall quality of life (Arcadis, 2017). Such a statement is also valid for the country. Europe remains the safest transport region in the world. Although traveling by air, sea and rail is very safe, it is not satisfactory, especially when it comes to traffic safety. In 2019 around 22,700 people are died on the EU's roads, and around five times as many suffer serious, life-changing injuries (European Commission, 2020).

Air quality is of particular importance in ensuring the sustainability of urban development. Transport, industry, power plants, agriculture, households and waste management contribute to Europe's air pollution. Emissions of the main air pollutants in Europe have decreased in recent decades, which has generally improved air quality. However, some sectors have not reduced their emissions enough to meet air quality standards, or have even increased their emissions of some pollutants. For example, nitrogen oxide emissions from road transport have not decreased enough to meet air quality standards in urban areas [European Environment Agency, 2020]. Deterioration of air quality is not the only negative impact of the transport system on the environment. Noise is also an element of negative impact on the environment. Noise is caused by traffic, construction, industry and some recreational activities. The external costs of noise in the EU amount to at least 0.35% of its GDP and are mainly driven by road traffic equivalent external costs of over 40 billion EUR per year. [European Environment Agency, 2020]. One of the most common sources of noise is road traffic, which accounts for up to 80-82% of the total noise. This noise is created by running vehicle engines, wheel-road contact while driving, and vibrating structures (Bernotienė et al. 2019). According to medics, noise affects the central nervous system and causes various disorders. Even low levels of noise can cause headaches, insomnia, memory loss, disorientation and difficulty concentrating. Noise has a significant impact on efficiency, coordination of movements, and increases nervous tension (Bernotienė et al. 2019).

The EU meet increasing challenges to develop efficient, resilient and low-emission transport networks that improve citizens' lives and economic performance while reducing environmental impact. The choice of private motor vehicles to move people and goods is a major source of growing problems related to air pollution and congestion. These issues raise concerns for the health, accessibility and quality of life of the population and can negatively affect business through delays and reduced reliability of the road transport network [European Commission, 2020].

The mobility of each person is also determined by the infrastructure. All investments in transport infrastructure have a positive impact on economic growth, help create jobs, promote trade, universal geographical accessibility and the movement of people. The organization and development of infrastructure is mandatory in such a way that the economy grows and the impact on nature is as low as possible (European Commission, 2020). Better transport infrastructure reduces the distance that goods and people have to travel, reduces traffic congestion, allows businesses and people to better predict travel times, provides opportunities to centralize logistics units and build production buildings, warehouses and other objects in geographically diverse areas

The EU is increasingly meet transport-related problems. The question of how to enhance mobility while reducing congestion, accidents and pollution is a common challenge for all major European cities. Congestion in the EU often occurs in and around urban areas. According to data, they cost almost 100 billion annually EUR or 1% of EU GDP [European Commission, 2020].

The possibilities of the road transport mode to achieve economies of scale are limited. This is due to size and weight restrictions imposed by the government and the technical and economic limitations of the engines. Most jurisdictions have specific weight and length limits for trucks and buses, which are imposed for safety reasons, but also because the heavy use of heavy trucks damages road infrastructure and increases maintenance costs (Rodrigues, 2020).

Road users must observe all necessary precautions, not endanger the safety and environment of other road users, other persons or their property, and also, in order to avoid harmful consequences or reduce them, must take all necessary measures, except in cases where this would endanger their own, other people's life or health, or such measures would cause even more damage compared to that which could be avoided (Law of the Republic of Lithuania on Safe Traffic on Automobile Roads, 10/12/2000, No. VIII-2043).

Sustainable ways of traveling are already presented, and society is willing to accept it. The issues of the negative impact of transport on the environment are understandable even to the youngest generation of society. Now is an excellent time to capitalize on the public's favorable attitude towards changes in transport for the ecological aspects. BDA possibilities are not widely used in the formation of social responsibility rules and mechanisms, but it has great potential for the expansion in this area (Miao Li). However, the public transport sector must also provide its customers with high-quality services that meet EU standards and customer expectations. Many vehicles still emit harmful gases into the environment, emit annoying noises harmful to health, change the landscape unattractively, and also cause traffic jams or accidents. Another of the main problems caused by transport is the decreasing physical activity of the population and, as a result, negative consequences for health. All these issues need to be assessed in order to achieve sustainable mobility in rail transport, i.e. measures are applied to reduce the negative impact on the environment, measures to reduce the noise level, contribute to congestion reduction measures in the city area (by diversifying train schedules, combining railway and road transport schedules), contribute to the promotion of residents' physical activity (bicycles and walking trips).

The most common modes of travel. People choose their type of travel based on their financial situation and needs. One of the most popular ways to travel is by own car. According to the European Automobile Manufacturers Association [2019], more than 70% of trips are made by car - private car, taxi or car sharing. Without individual mobility, adequate participation in social and economic life would not be possible in many cases, especially for people living in remote areas, the elderly and the disabled. The automobile greatly improve communication, the speed of movement and adaptation to the environment.

Cities have become the centers of humanity - their planning and design is favorable for the development of businesses. Over the past 10 years, much discussion has focused on sustainability, with the goal of reducing greenhouse gas and carbon dioxide (CO_2) emissions. However, progress is proving elusive in the transport sector, where private cars still rely heavily on petrol or diesel. In almost all cities, transport emissions are increasing, urban air quality is degraded, and travel by private car is first choice. Many people complain that their daily commute is "the worst part of their daily life". It appears that planning for attractive future lifestyles is becoming more difficult and the quality of life in cities often improves more slowly (Hickman, Banister, 2014).

Although car emissions and noise are a major problem in the world and in the EU, according to the European Automobile Manufacturers Association, the average new car emissions were 123g CO2/km, compared to 186g CO2/km in 1995 - decreased by 33.9% in just 25 years, and since 1970 the noise caused by passenger cars decreased by 90 percent.

The increased needs of the population and a relatively better developed road infrastructure network have led to rapid car using grow in the country. Residents choose cars as a means of travel because of faster travel and the possibility to travel "door to door". The number of vehicles is constantly increasing, but it is dependent on the country's economic indicators, so it can be said that it would be one of the indicators of the country's development trends. (Valieka et al. 2019).

With the increasing role of senior citizens in modern societies it is important to know, their transportation preferences and travel behavior (Hebel, 2018).

The characteristics of the Lithuanian railway transport infrastructure and the operated technically and morally outdated passenger rolling stock do not allow increasing the speed of passenger trains. For this reason, rail transport is less attractive to passengers than much faster road transport (The approval of the National Transport Development Program for 2014-2022, 12/18/2013, No. 1253).

The technical state of the railway infrastructure has a significant impact on the safety of cargo and passenger transport. A technical state and the outdated traffic control devices resulted in various speed limits being introduced to increase the safety. This led to a decline of the attractiveness of this transport mode. (Wulgaris, 2018)

Increasing the rail transport competitiveness in the transport services market be achieved may by reducing the transportation time and ensuring the regularity of the passengers and freight delivery. Reducing the passengers and goods time transportation is an urgent problem of all transport modes. On the railway transport, travel time reduction is possible by reducing the train’s stoppings and increasing the running speed (Myronenko, 2018)

According to EUROSTAT data, trips in Lithuania are made by own cars, which ranges from 88 to 92 percent, by public transport from 7 to 11 percent, while traveling by railway is unpopular at all, accounting for only about 1 percent of travel. The volume of passenger transportation by rail transport increased after the rolling stock was partially renewed, but a large part of it is still outdated and reduces the attractiveness of rail transport (On approval of the National Transportation Development Program for 2014-2022, 12/18/2013, No. 1253). Therefore, considering the current situation, travel by public transport and railways should be encouraged.

There are 271 million cars on European roads today - their average age is 10.8 years. Alternative powered cars (electric, hybrid, natural gas, LPG) make up 3.8% of the total EU vehicle fleet and 10.6% of all new passenger car registrations in 2019. [European Automobile Manufacturers Association, 2021].

The location of the given area in the agglomeration affects the modal split of the journey. An increase in the distance from the core of the agglomeration increases the propensity to use passenger cars. Also, the increase in the difference in travel time between car and public transport encourages the use of a car, but these dependencies require more detailed analysis. The most important reasons for choosing a car when traveling, regardless of the place of living in the agglomeration, are convenience and shorter travel times. The increase in the share of rail transport in travel affects the increase in the importance of waiting time and the lack of interchanges as a factor deter-mining the choice of cars on travel (Grzelec, 2019)

According to all the data, it can be concluded that the most used transport is still road transport (own car), but it is necessary to use the potential of public transport and railways for local journeys. To achieve the goal, the interface between modes of transport must be attractive, convenient and acceptable to users. Obviously, due to maneuverability, lack of time, convenience, most of the population chooses a car, although it is the most polluting mode of transport, but it is the most popular means of transport, which is difficult to replace according to the needs of consumers. In such cases, it is important to change the attitude of consumers towards the choice of travel mode. To strengthen the positions of the principles of responsible consumption in society. Free choice, the satisfaction of a personal choice of a well-thought-out sustainable way of travel will give the user a sense of the importance of his contribution.

Sustainable travel methods and combinations. Sustainable ways of traveling are emphasized in the EU transport sector development policy. It is only possible to achieve positive ecological results through consistent action in society.

From the point of view of the concept of sustainable development, economic growth and consumption cannot be regulated or supervised, it must be coordinated with social needs and it is necessary to safe natural resources for future generations. It is believed that the concept of sustainable development was first mentioned and recognized at the international level in 1972 at the UN conference (Jociutė, 2013). A sustainable transportation system is understood as an effective interaction of social, cultural, economic and ecological aspects. A good transportation system ensures close cultural and social links, increases population mobility, expands international cooperation and tourism, improves business conditions and promotes its development, without harming the environment and people (Approval of the National Transportation Development Program 2014-2022, 12/18/2013, No. 1253).

Sustainable mobility policies are very focused on environmental protection; sometimes, sustainable mobility is identified only as mobility that is able to reduce environmental impacts. Even if this concept is not correct, indeed most of the interventions aimed at the development of sustainable mobility have as their main objective the reduction of pollutant emissions and greenhouse gases (Gallo, 2020).

Sustainable travel is defined as tourism that manages resources in such a way as to satisfy economic, social and aesthetic needs, while maintaining cultural integrity, ecological processes, biological diversity and all life support systems (Garliauskaitė, Stravinskienė, 2015).

Several sustainable travel systems are distinguished:

1. A political system that ensures the participation of broad sections of society in decision-making.

2. An economic system that guarantees expanded reproduction and technical progress since its base.

3. A social system that guarantees the minimization of tension after making a harmonious economic decision.

4. A technological system that ensures continuous search for new solutions.

5. A financial system that enables stable trade and financial relations.

6. Administrative system, sufficiently flexible and promptly self-correcting.

It is important to popularize the concept of sustainable tourism (its essence is education and training that positively affects the formation of a responsible attitude to recreation and tourism). Also to change the attitude of tourists towards tourism and recreation. Educational programs are necessary to help preserve the potential of world tourism

Passenger awareness, mobility education and sustainable transport marketing are considered part of the mobility management system. Some theorists specializing in agility management consider these aspects remote from the system. It is almost impossible to draw any boundaries [EPOMM, 2019].

The Sustainable and Smart Mobility Strategy (2020) for the future created by the European Commission, whose main intermediate goals for reducing the current dependence on fossil fuels are:

1. Until 2030 at least 30 million cars and 80,000 trucks will be in operation without emissions.

2. By 2050 nearly all cars, vans, buses and new heavy vehicles are low-emissions.

3. Zero-emission ocean liners and large zero-emissions aircraft will be ready for market by 2030 and 2035, respectively.

Stakeholder and public involvement are basic requirements for sustainable mobility. The goal is that citizens and stakeholders can express their ideas, concerns, and contribute creative and innovative ideas to solving transport problems. In addition, it encourages citizens and stakeholders to take action to implement sustainable mobility ideas. (Lindenaua, Böhlera-Baedekera, 2014).

Cycling is an efficient way to use precious and scarce spaces in cities in a healthy, clean and cheap way. This has huge potential when we recognize that almost half of all car journeys in cities are less than five kilometers. However, according to experts, the attractiveness and principles of using bicycles in Lithuania correspond only to the situation of the seventies of the last century (Kučinskienė, 2014)

In the informal meeting of EU transport ministers in 2015 October, The declaration on cycling as a climate-friendly mode of transport was adopted in Luxembourg [European Commission, 2020].

Cycling is increasingly considered a key part of a multimodal and integrated transport system for several reasons:

• It is a more economical choice compared to other modes of transport;

• It is a convenient mode of transport for a large part of short trips, dominating when traveling in the city;

• It has many co-benefits for health, environment and urban life [European Commission, 2020].

City bike systems are also a substitute for travel modes such as walking and cycling. The possibility of renting a bicycle and using it on a one-way journey without incurring costs associated with the maintenance of the bicycle and storage increases the efficiency of travel of people who do not have their own bike or have their own bike, but encounter their problems associated with transporting it in avail-able means of public transport (lack of space in bus, no security guarantee of leaving the bike around interchange places). The development of city bike systems should be related to the possibility of moving between intermediate destinations, i.e. place of residence / work and bus stop / station. A city bike allows to combine different modes of transport and provides higher mobility than standard public transport. (Suchanek, 2019)

A trip on foot is a way of traveling, a component of ecological, nature-lovers tourism or tourist hikes, the purpose of which is to get to know the environment better and not harm nature; in cities, it is associated with visiting famous places. A 30-minute brisk walk or bike ride most days of the week, even if it's just 10 to 15 minutes, provides effective health benefits. The average walk in Europe is around 1.5 km and the average bike ride is around 3.5 km, each taking around 15 minutes: two such trips each day would be enough to provide the recommended daily dose of physical activity.

Another very sustainable and growing way of traveling is electric or hybrid cars. They do not emit harmful, poisonous gases into the environment like cars that run on petroleum-based fuels. Battery electric vehicles are powered entirely by an electric motor, using electricity stored in an on-board battery that is charged when connected to the mains. Plug-in hybrids have an internal combustion engine (running on gasoline or diesel) and a battery-powered electric motor. If necessary, the combustion engine supports the electric motor and the battery is charged when connected to the grid (European Automobile Manufacturers Association, 2021).

Railway transport is one of the most environmentally friendly types of transport, which consumes up to ten times less fuel than road transport when transporting passengers and goods. Together with the constantly improving legal system of the European Union and balanced financial support, this creates the prerequisites for developing a more environmentally friendly railway transport business, improving the technical-technological and organizational mechanisms of the interaction of railway transport with other modes of transport.

The strategic communication plans and challenges envisage three main directions:

• Saving of natural resources, reduction of carbon dioxide emissions;

• Development of ecological, safe and quiet transport;

• Application of environmental protection measures and control system (SC "Lietuvos geležinkeliai" Environmental report, 2017).

There are few electrified railways in the Lithuanian railway network - only 9 percent of all railway. This is the lowest indicator among EU member states. Electrification of railways is one of the provisions of the TEN-T development guidelines. After the electrification of the railway network, the prerequisites would be created to switch from fossil fuels to the use of renewable energy resources in the railway transport sector, to reduce the impact on the environment and to increase the attractiveness of railway transport for passengers and freight using environmentally friendly means (The approval of the National Transport Development Program 2014-2022, 2013-12-18, No. 1253).

Thus, connections with road transport are extremely important for sustainable passenger rail transport, i.e. with sustainable passenger road transport (electric cars, public urban electric transport), and the possibility of using railway transport to reach the destination by bicycle or on foot (whether it is a tourist, recreational or necessary trip) must be ensured. To increase the use of public transport without reducing service quality, it is essential to construct a demand-based timetable (Özbakır. L., 2021)

It should be taken into consideration that the city is a system, a system of connected points and parts. The individual subsystems of this system cannot be considered independently of each other. When analyzing the problems of transport in a city, all its subsystems should be taken into account, in particular with regard to different groups of users or types of transport. It should also be remembered that cooperation between urban and regional self-government is necessary in many aspects because, although it is a city, it is the voivodeship government that may have the right to decide on the railway transport issues (Jurczak, 2019).

After the initial analysis, the following directions for ensuring coherence can be emphasized:

1. Links with sustainable road transport
2. Possibility to transport own bicycle (on all routes)
3. Network of bicycle paths near transport terminals (railway stations)
4. Bicycle storage facilities
5. Integration of railway transport and tourism

The specified directions undoubtedly require additional detailed planning, coordinated inter-institutional cooperation, and financial investments.

Mobility management is the concept of promoting sustainable transport and managing the demand for car use by changing the attitudes and behavior of travelers. At the core of mobility management are "soft" measures such as information and communication, organization of services and coordination of activities of different partners. "Soft" measures usually increase the effectiveness of "hard" measures in transport. Mobility management measures (compared to "hard" measures) do not necessarily require large financial investments and can have a high cost-benefit ratio [EPOMM, 2019].

The sustainable European transport system that the EU is aiming for must be smart, flexible and adaptable to ever-changing transport patterns and needs, based on cutting-edge technological advances to ensure seamless, safe and secure connectivity for all European citizens. Transport should demonstrate European ingenuity and diligence - be at the forefront of research, innovation and entrepreneurship and promote twin transitions (European Commission, 2020).

The EU's sustainable development policy has unambiguously set the directions for the development of transport markets. It carries the hallmark of qualitative changes in transport systems. According to the assumptions, in the near future the share of road transport should significantly decrease by supporting rail transport and inland navigation over long distances. In addition, the increase of social awareness in the field of sustainable development will be conducive to pro-quality and pro-ecological changes (Rucińska, 2018).

Intelligent Transport Systems (ITS) are vital to improving safety and tackling Europe's growing pollution and congestion problems. They can make transport safer, more efficient and more sustainable by applying various information and communication technologies to all modes of passenger and freight transport. In addition, new services can be created by integrating existing technologies. PTS are crucial to promoting jobs and growth in the transport sector. However, for the implementation of PTS to be effective, it must be consistent and properly coordinated across the EU [European Commission, 2020].

Sustainable transport systems are designed to improve the quality of services, reduce pollution, limit state subsidies for transport, increase the efficiency of transport networks and land use, and increase people's mobility.

Sustainable mobility is understood as the interaction of economic, social, cultural without harming the ecosystem and preserving resources for future generations. In cities, the transition to sustainable mobility is easier than in the countryside, because the distances covered are shorter and the population is larger. Movement that requires physical activity is the most sustainable for the environment and the human body, such as cycling and walking. Railway transport is one of the most environmentally friendly modes of transport, which consumes up to ten times less fuel than road transport when transporting passengers and goods. Therefore, it is necessary to use the possibilities of railway transport, assessing the interaction between modes of transport, as well as alternative possibilities of movement. The integration of the tourism and rail transport sectors can have great potential to achieve the highest level of passenger traffic.

Methodology

To carry out an analysis of the conditions for the implementation of the principles of sustainable passenger mobility in railway transport in the Republic of Lithuania and provide additional directions for the implementation of the principles of sustainable passenger mobility such research directions are selected:

1. assessment of the current passenger transport situation in railway transport considering the available resources;
2. analysis of statistical data (capacity, transport dynamics, possibilities, perspectives)

3. analysis of Lithuanian mobility development strategy until 2050 (possibilities, plans)
4. identification of unmentioned possibilities

The assessment of the current situation of passenger transportation by railway transport is necessary when examining the prospects, the analysis of statistical data reveals the real transportation indicators and transportation opportunities, the analysis of the development strategy presents the actual development plans, and the unmentioned opportunities are highlighted by comparing the collected data and theoretical sources

Results

Trends of sustainable passenger mobility principles implementation in Lithuania railway transport. Passenger railway services in Lithuania are provided by "LTG Link" (previous name "LG Keleiviams"), the Company is located at Geležinkelios st. 16, Vilnius. Legal form – joint - stock company. JSC "LTG Link" is a subsidiary company under the patronage of SC "Lietuvos geležinkeliai" (https://www.litrail.lt/), 100 percent. shares belong to SC "Lietuvos geležinkeliai". The sum of nominal values of shares belonging to SC "Lietuvos geležinkeliai" is EUR 156,237,000. SC "Lietuvos geležinkeliai" shares are managed by the Ministry of Transport. LTG Link is a part of the "Lietuvos geležinkeliai" group, operating as a separate company since September 2019, responsible for train travel in Lithuania, international travel and transit travel to the Kaliningrad region. The company's mission is to become the first choice for travelers and to create a new travel experience by encouraging the choice of a comfortable, safe and nature-friendly means of transport - the train. Over the past few years, the number of the company's passengers has consistently grown, and in 2019, a record number of people traveled by train in Lithuania - 5.5 million. The LTG group of companies, responding to the geographical and economic changes in the transport services market, which determine the changing directions of trade and passenger flows, plans its activities not only in the short-term, but also in the long-term perspective. In order that LTG's long-term corporate strategy for 2018-2030 planned strategic directions and goals would be focused as much as possible on specific activities carried out by the LTG group of companies, long-term strategies of individual LTG business units were prepared. One of them is LTG Link's long-term strategy for 2018-2030, which is reviewed and improved annually.

JSC "LTG Link" is part of SC "Lietuvos geležinkeliai" group, which encourages people to travel with an ecological and safe means of transport - the train. The company's goal is to create a new travel culture and become the first choice for passengers, valued for its high level of service, operational efficiency and management. From 2019 September 1 the company continues its activities as a separate legal entity, which was previously known as SC "Lietuvos geležinkeliai" Passenger Transport Directorate.

LTG Link identifies the following priorities and development plans - it is environmentally and socially friendly transportation. To increase the number of passengers, new flights and routes, both domestic and international, are planned, as well as the adjustment of routes and schedules to the needs of passengers and the implementation of a new ticket sales system. New services such as additional sales on trains, rental services, etc., dynamic pricing, and greater average travel distance are expected to increase revenue. Measures such as optimization and modernization of the rolling stock, automation and digitization of daily work operations are planned to increase operational efficiency. The priority activities for strengthening the partnership are integration with other modes of transport, international partnership.

The updated strategy also presents summarized priorities:

• Renovation of the train fleet by purchasing environmentally friendly electric trains adapted to passengers with different needs. Including passengers with mobility issues.

• A long-term contract with the state is the basis of successful passenger transport.

• Train travel tickets - in modern ticket sales channels.

• New routes that meet the needs of passengers: connecting the capitals of Lithuania and Poland with a comfortable train that meets the needs of modern travelers

• Business digitization solutions

In Lithuania, the railway network consists of 1520 mm and 1435 mm gauge railways, thus creating connections both with EU countries and Eastern countries. Based on the 2020-2021 according to the regulations of the official train schedule network, the Lithuanian railway transport network in 2019 consisted of 1910.7 km of operated railway roads, of which: 1459.2 km (76.3%) were single roads; 449.4 km (23.6 percent) of double-road; 2.1 km (0.1 percent) of triple-road.

The major part of the railway network (93.7%, 1790.6 km) in Lithuania consists of railway lines with a gauge of 1520 mm, the rest (120.1 km, 6.3 %) – from 1435 mm in Lithuania in 2019 only 152.4 km (7.97 percent of the network) were electrified. Electrified traction in 2019 only passengers were transported, freight transportation by railways is carried out by locomotive traction (diesel fuel is used), which causes GHG emissions into the environment.

2010-2019 during the period, the number of passengers transported by railways increased by 22 percent. (4.3 million passengers in 2010, 5.5 million passengers in 2019). Main travel directions of residents: Vilnius – Kaishiadorys – Kaunas, Vilnius – Šiauliai – Klaipėda, Vilnius – Turmantas.

Below is a summarized extract from the SWOT analysis of railway transport from the Lithuanian mobility development strategy until 2050, relevant for sustainable passenger transport.

Strengths are:

• The part of the railway network that transports the largest volumes of cargo and passengers belongs to the main TEN-T network.

• Corridors of European importance stretch through Lithuania in the east-west direction, and the Rail Baltica project is being developed in the north-south direction.

• There are two main railway systems in Lithuania (1435 mm and 1520 mm wide tracks), which allow serving different markets and ensuring compliance with the requirements of both systems.

• Demand for passenger and freight transportation has been growing for the past fifteen years.

• Part of the railway sections are electrified, on the most popular passenger route Vilnius - Kaunas, passengers are transported by low-impact electric trains, as well as on the international route Vilnius - Minsk.

Weaknesses are:

• Part of the main TEN-T network is not electrified.

• Most of passenger railway stations and platforms are not adapted for persons with special needs.

• There is a lack of compatibility of railway transport infrastructure with road transport, which ensures efficient interaction for passenger and cargo transport.

• Most of the fleet of passenger vehicles does not meet the quality requirements established by the EU and national law, and is not adapted for persons with special needs.

• The railway network is more suitable for freight transport than for passenger transport.

• Diesel traction is mostly used in freight transport and passenger transport, which causes GHG and environmental pollution.

• There is no long-term and consistent funding for the provision of public services by rail transport, which would allow service providers to clearly plan investments.

• No mechanism has been developed to finance the railway infrastructure from the taxes collected by the state.

Opportunities are:

• Construction and extension of the Vilnius Airport - Kaunas Airport branch of the Rail Baltica project to Klaipėda for fast passenger transportation.

• Electrification of the entire railway network in use (including conversion of rolling stock to electric traction).

• Railway development in cities and industrial zones, in combination with the directions of urbanization and job development.

• Development of international passenger transport routes.

• Increasing the volume of passenger transport by attracting passengers from passenger cars.

• Launching of high-speed trains from Kaunas / Vilnius to the cities of EU countries.

• Synergy of the development of passenger transport with strategic directions of development of other types of passenger transport (development of airports, maritime transport, etc.).

Threats are:

• Delayed Rail Baltica project.

• The capital costs of the infrastructure created with EU funds are not included in the costs, but in the future it will be necessary to maintain the infrastructure from income.

• The geopolitics of the eastern neighbors may lead to the fact that goods from eastern countries will not be transported through Lithuania in the direction of Klaipėda port and passenger flows (especially transit flows) will decrease.

• The expectations of the Government of the Republic of Lithuania regarding the financing of public projects (e.g. the Rail Baltica project) do not meet the financial capabilities of LTG.

So, in summary, it can be said that the opportunities to increase passenger transportation by rail transport by applying the principles of sustainable mobility are real, it is important to properly set priorities and direct investments to the most demanding areas, i.e. development of passenger transport routes, electrification of the railway network, development of international passenger transport routes, increase in the volume of passenger transport (various directions and measures must be provided for this), attracting passengers from passenger cars, launching high-speed trains from Kaunas / Vilnius to cities in EU countries

Thus, the potential of passenger transportation by railways is not fully used, as the sector is currently more focused on freight transportation, and the infrastructure is not fully adapted to users with special needs.

Below is an excerpt from the Lithuanian mobility development strategy until 2050, Annex 1 "Projects until 2030 list" (it is emphasized that the list of projects must be constantly reviewed and changed/completed according to emerging needs and changing circumstances. The list of projects also includes projects provided for in other National documents, so project scopes, budgets and indicators may change depending on the changes made in other documents).

Only projects relevant to the implementation of sustainable passenger mobility in rail transport are presented.

The following data are indicated: instrument, project type, project, description of the project or the values to be achieved, responsible entities, period (beginning - end)

• Electrification of railways. Investment project. Electrification of the section Kaišiadorys - Klaipėda (Draugystės st.). After electrification of the planned section, the length of electrified railway tracks would increase to 478.8 km. i.e. 25.1 percent of the operated network, and in the entire section V.S. – Kena – Klaipėda (Draugystė st.) the IXB corridor belonging to the TEN T core network would provide conditions for activities using electric traction (LTG Infra 2019-2023)

• Electrification of railways. Investment project. Electrification of the Vilnius railway hub. After the electrification of the railway sections Kyviškės - Valčiūnai - Vaidotai - Paneriai and Vilnius - Kirtimai - Valčiūnai, which make up the Vilnius bypass, the attractiveness of railway transport for passenger and cargo transportation will be increased, and environmental pollution will be reduced. The implementation of the project will significantly contribute to the integration of the country's railway communication system into the TEN-T transport networks. (LTG Infra 2019-2023)

• Electrification of railways. Investment project. Electrification of the railway sections Kaunas–Kybartai, Palemonas–Vaidotai–Stasylos, Kužiai–Bugeniai. 50 percent electrified railway network (EU average 52.7%), which would contribute to lower CO2. (LTG Infra)

• Electrification of railways. Investment project. Development of infrastructure at battery charging stations for passenger trains. Infrastructure in battery charging stations would contribute to CO2 reduction in the transport sector. (LTG Infra 2022-2024)

• Encouraging the habits of the population not to use polluting vehicles. Communication / investment project. Wide social dissemination, public information, habit formation, pilot projects that reduce fossil fuel consumption The fuel consumption of the affected population will decrease by 3.7 percent due to the application of the measures. (Ministry of Transport, Ministry of Environment, Ministry of Energy, Ministry of Health, Ministry of Economy and Innovation, Ministry of Education and Science, municipalities. 2021-2030)

• Development of efficient communication. Regulation project. Long-term contract with the institution authorized by the Government on the provision of public passenger rail transport services. Signing and implementation of a long-term contract with an institution authorized by the Government on the provision of public passenger transport services by rail in order to ensure the sustainability of passenger transport activities and stabilize the profitability of the activity. (LTG Link, Ministry of Transport 2021-2030)

• Promotion of sustainable mobility in cities and promotion of sustainable mobility in non-urban areas. Investment project. Construction or reconstruction of pedestrian and bicycle paths. Built/reconstructed pedestrian and bicycle paths, 343.9 km. (Municipalities 2021-2030)

• Adaptation of infrastructure for persons with limited mobility and persons with special needs. Investment project. Adaptation of railway transport services for persons with reduced mobility. Implementation of a specialized service program for persons with limited mobility in railway transport. (LTG Link 2021-2024)

• Adaptation of infrastructure for persons with limited mobility and persons with special needs. Investment project. Station information system and barrier-free route adaptation for people with disabilities in station areas. Adaptation of bus and railway infrastructure for persons with limited mobility and companies with special needs, ensuring the requirements of the WHO agreement. (LTG Infra, LTG Link, municipalities 2019-2022)

• Adaptation of infrastructure for persons with limited mobility and persons with special needs. Investment project. The ratio of public transport (buses, city transport, trains, ferries) adapted for persons with disabilities to the number of all public transport means is 40 percent. (LTG Infra, LTG Link, municipalities 2019-2022)

• Ensuring intermodality and functional compatibility in passenger transport. Investment project. Creation of a unified open transport database,.(Ministry of Transport, municipalities)

• Ensuring intermodality and functional compatibility in passenger transport. Investment / regulatory project. One electronic ticket system when traveling throughout Lithuania. A single electronic ticket system when traveling in the country. (Municipalities)

• Development and maintenance of TEN-T railway infrastructure. Investment project. Development of new railway lines in Lithuania (Klaipėda–Kretinga–Palanga, Kaunas–Kaunas SEZ–Kaunas airport, etc.) Increased population and workforce mobility. Increased volume of rail transportation. (LTG Infra, municipalities 2021-2030)

• Development and maintenance of TEN-T railway infrastructure. Investment project. Reorganization of the infrastructure to increase train speed and capacity (e.g. Kaunas–Vilnius– Klaipėda, Panevėžys (Gustonys)– Klaipėda) – Reduced CO2 emissions; – 0 railroad fatalities. (LTG Infra 2021-2031)

• Development and maintenance of TEN-T railway infrastructure. Investment project. (LTG Infra 2015-2026)

• Development of railway transport infrastructure. Investment project. Reconstruction of the Marcinkonys - Druskininkai railway section. (LTG Infra, municipalities 2021-2025)

Summarizing the data presented, it can be said that all planned until 2030 projects in railway transport are related to the implementation of the principles of sustainable mobility and means of increasing passenger flows, i.e. electrify lines, renew, develop and adapt infrastructure for persons with limited mobility and persons with special needs, ensure links between modes of transport, as well as ensure intermodality and functional compatibility in passenger transport, promote the habit of residents not to use polluting vehicles, promote sustainable mobility in cities and non-urban areas .

However, it should be emphasized that the user's dependence on a personal car is a high, and such aspects are important when choosing a travel method:

1.Fast, convenient and cheap transportation of passengers and cargo.

2. Convenient intercity, interdistrict transportation.

3. Infrastructure and operation.

4. Connections with other modes of transport

5. Conformity of terminals to passenger needs

Thus, in order to attract passengers to use sustainable rail transport, special attention must be paid to speed, comfort, price, connections with other modes of transport or modes of travel, i.e. by road transport, private or public, by bicycle or by walk, and for the adaptation of terminals to the needs of the modern users.

To reveal the trends of passenger transportation by railway transport in Lithuania, the article will examine the statistical data of passenger transportation by rail (according EUROSTAT and Official LT Statistics portal).

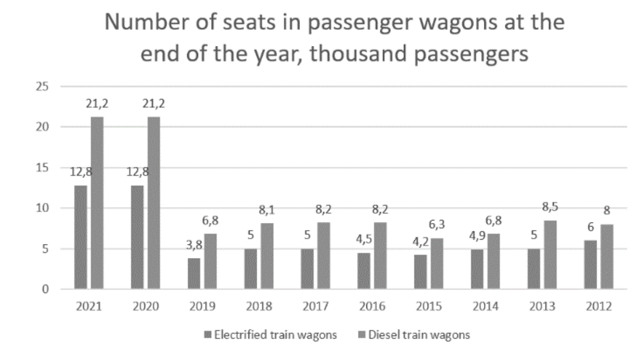

Fig. 1. Number of seats in passenger wagons 2012-2021
Source: Lithuanian official statistics producers

Fig. 1 presented changes in the possibilities of passenger transportation in railway transport in 2012 - 2021, i.e. the total capacity of passenger wagons, or otherwise available passenger transportation capacity during the specified period. The unit of measurement is the number of seats in passenger wagons at the end of the year. There are two groups, i.e. the number of seats in electric train passenger wagons and diesel train wagons. In 2020, there is an obvious increase in passenger seats, both in electric and diesel wagons. Thus, the offer to passengers is consistently implemented.

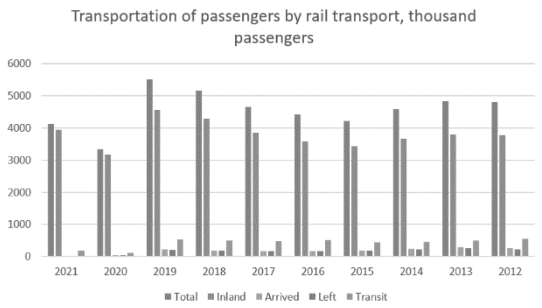

Fig. 2. Transportation of passengers by railway transport in 2012-2021.
Source: Lithuanian official statistics producers

The presented diagram (fig. 2) shows the distribution of passenger transportation by railways in 2012-2021 by types of transport - inland transport, arrivals, departures and transit. It should be noted that the essential passenger flows, which make up the volume of passenger transport in the territory of the Republic of Lithuania, are domestic transport (inland), i.e. movement in the territory of the Republic of Lithuania, transit, arrival and departure make up only a few percent of the total volume of transportation during the entire period under consideration.

Due to this trend, a fundamental attention should be paid to ensuring the quality of domestic transport (timetables that meet the needs of passengers, flexible price policy, infrastructure, connections between modes of transport, etc.) so that the positive indicators do not decrease over time, i.e. promoting the use of public rail transport. High results were achieved in 2019, has already decreased significantly in 2020 - the impact of the pandemic on the number of transported passengers is reflected in the presented graph.

With low arrival and departure rates, it would be appropriate to develop these activities to increase the volume of transportation in the segment.

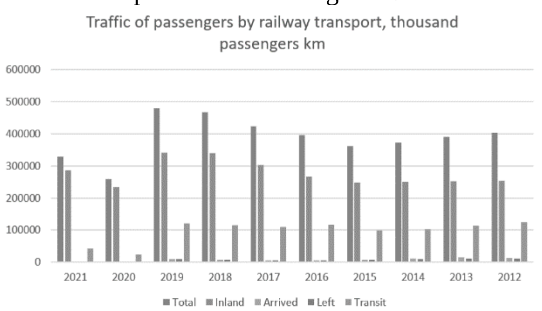

Fig. 3. Traffic of passengers by railway transport in 2012-2021
Source: Lithuanian official statistics producers

Passenger turnover (fig. 3) is an indicator of passenger transportation, which is measured as the product of passengers and the distance traveled, i.e. passengers multiply by km. The diagram also clearly shows the consequences of the pandemic and, as a result, decreased passenger flows in 2020-2021, although in 2012-2019 an obvious increase in passenger flows in rail transport was observed. Also, domestic carriages form the main part of all carriages.

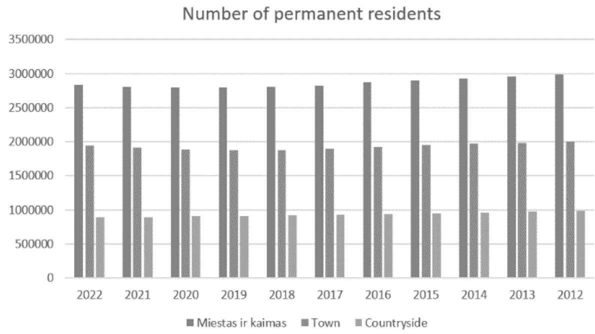

Fig. 4. Number of permanent LR residents 2012-2022
Source: Lithuanian official statistics producers

The presented statistical data (fig. 4) confirms that the total number of permanent residents in Lithuania decreased by 5.27% during the considered period decreased in total, 2.87 % population decreased in the city, 10.10 % in the village. The change in demographic indicators also affects the mobility of passengers within the country.

Passenger railway services in Lithuania are provided by "LTG Link". JSC "LTG Link" is a subsidiary company under the patronage of SC "Lietuvos geležinkeliai" (https://www.litrail.lt/), 100 percent the shares belong to SC "Lietuvos geležinkeliai". The shares of SC "Lietuvos geležinkeliai" are owned by the Ministry of Transport and Communications. In Lithuania, the railway network consists of 1520 mm and 1435 mm length railways, thus creating connections both with EU countries and Eastern countries. Possibilities to increase passenger transportation by rail transport by applying the principles of sustainable mobility are real, it is important to properly set priorities and direct investments to the most demanding areas, i.e. development of passenger transport routes, electrification of the railway network, development of international passenger transport routes, increase in the volume of passenger transport (various directions and measures must be provided for this), attracting passengers from passenger cars, launching high-speed trains from Kaunas / Vilnius to the cities of EU countries. All planned until 2030 projects in railway transport are related to the implementation of the principles of sustainable mobility and means of increasing passenger flows, i.e. electrify lines, renew, develop and adapt infrastructure for persons with limited mobility and persons with special needs, ensure links between modes of transport, as well as ensure intermodality and functional compatibility in passenger transport, promote the habit of residents not to use polluting vehicles, promote sustainable mobility in cities and non-urban areas. Thus, in order to attract passengers to use sustainable rail transport, special attention must be paid to speed, comfort, price, connections with other modes of transport or modes of travel, i.e. by road transport, private or public, by bicycle or by walk, and for the adaptation of terminals to the needs of the modern user. The increase of passenger transportation capacity in railway transport is consistently implemented. The main passenger flows that make up the volume of passenger transport in the territory of the Republic of Lithuania are domestic transport, i.e. movement in the territory of the Republic of Lithuania, transit, arrival and departure make up only a few percent of the total volume of transportation during the entire period under consideration. Attention should be paid to ensuring the quality of domestic transport (timetables that meet the needs of passengers, flexible price policy, infrastructure, connections between modes of transport, etc.), so that the positive indicators that have changed do not decrease over time, i.e. promoting the use of public rail transport. The change in demographic indicators also affects the mobility of passengers within the country.

Additional measures for the implementation of the principles of sustainable passenger mobility in rail transport. After the analysis of theoretical sources, the assessment of the current situation and the analysis of statistical data, the Strategy of Lithuanian mobility development until 2050, analysis of relevant to sustainable passenger transportation by rail transport, additional measures for the implementation of the principles of sustainable passenger mobility in rail transport are noted. Thus, it can be concluded that connections with road transport are extremely important for sustainable passenger rail transport in Lithuania, i.e. with sustainable passenger road transport (electric cars, urban public electric transport), and must be ensured the possibility to reach the destination by bicycle or by walk when railway transport is the main (whether it is a tourist, recreational or necessary trip).

The following additional directions for ensuring coherence can be emphasized:

• Links with sustainable road transport, i.e. parking lots, e. recharge at terminals, car rental points, e. car taxi services, location of public transport station and stops.

• The possibility to transport bicycle without physical damage and without a significant financial cost (on all routes)

• The network of cycle roads near transport terminals (railway stations) must be particularly modern and safe, regardless of the importance of the station.

• Bicycle storage/rent in the terminals

• Attractiveness of sightseeing tours of the city (trails, routes, tourist attractions) and connecting them with the railway passenger terminal - a complex task, the implementation of which must include representatives of the city municipality and the tourism sector. It is a difficult task, because usually the station areas are not attractive, not safe enough, due to high passenger flows, criminal situation, although most of the stations are geographically located in the historical parts of the city.

It is clear, that LTG Link's strategic plans are precisely focused on the implementation of sustainable passenger mobility principles. Priority infrastructure renewal, electrification of routes is the first step to ensure changes in the ecological direction. However, to ensure the implementation of the principles of sustainable mobility, aspects of the customer's needs must also be evaluated.

Also important moment is the conformity of terminals (stations) with the needs of users. Physiological, safety, convenience, and equal opportunity requirements of users must be ensured. Terminals in railway transport must fully meet the needs of the modern users, regardless of whether it is a central railway station or a regional station (the primary needs of users must be satisfied, i.e. physiological - hygiene, rest, comfort, food and safety). Obviously, the size of the terminal will vary depending on the hierarchical position of the station, but the minimum range of services available must be ensured in all terminals.

Among the measures already mentioned, an important element is cooperation in the regional and not only with the tourism sector, since internal and external tourism can promote the use of rail transport, abandoning road transport trips. The train route may additionally include stops with tourist attractions, if the facility is far from the terminal, it must be possible for the passenger to easily reach the facility. However, cooperation between institutions must be an essential prerequisite for the successful implementation of the goal.

The tourist object and the railway station must be connected by a clearly visually presented route, so that without additional help (guide) the object can be reached by bicycle, by walk or by public transport. The infrastructure and decisions must ensure this possibility. Another possible alternative is a special train route focused on visiting tourist attractions. However, not only the terminal, the tourist object and the existing infrastructure must be attractive to users, it is very important to have a safe, aesthetic area near the railway station, which is already the responsibility of municipalities. Thus, to implement the principles of sustainable mobility in railway transport, while simultaneously increasing passenger flows, the tasks must be solved in a complex manner, with close cooperation between institutions with different responsibilities. In addition, such measures as ensuring connections between modes of transport and other mobility alternatives, integration of tourism and railway transport, adaptation of city infrastructure to tourist requirements, matching of terminals to passenger needs must be evaluated.

Conclusions

The principles of sustainable passenger mobility are a modern approach to the saving of natural resources, personal and public interests, taking responsibility for the consequences of one's actions as a user of transport services. Railway transport occupies a special place in passenger transportation, it has great potential, as it is a land transport that can be an alternative to road transport, i.e. for the use of private cars (because road transport is the most harmful mode of transport for the environment and the population)

Each user can freely choose the type of transport and means of transport that are more acceptable to him, depending on the transport need, he chooses from road, water, air, railway transport. The choice of the type of transport is determined by such criteria as price, availability, quality, travel distance and time ratio. Interaction between modes of transport ensures smooth passenger service in the transport system. Electrified railway transport is a competitive choice, friendly to nature and future generations. The potential of the tourism sector and railway transport links is currently not being used.

It is necessary to take advantage of the favorable public attitude towards changes in transport due to ecological aspects, but the public transport sector must provide customers with high-quality services that meet EU standards and customer expectations. Many vehicles exhaust harmful gases into the environment, make tiring noises harmful to health, change the landscape unattractively, and also cause traffic accidents. One of the main problems caused by transport is the decreasing physical activity of the population and as a result, negative consequences for health. All these issues need to be assessed in order to achieve sustainable mobility in rail transport, i.e. measures are applied to reduce the negative impact on the environment, measures to reduce the noise level, contribute to reduction measures of traffic overload in the city area (by diversifying train schedules, combining railway and road transport schedules), contribute to the promotion of residents' physical activity (bicycles and walking trips). The most used mode of transport is road transport (private car), due to maneuverability, lack of time and convenience, most of the population choose their private car, even it is the most environmentally polluting mode of transport. It is important to change consumers the way of thinking about the choice of travel mode. To strengthen in society the positions of the principles of responsible consumption. Voluntary choice, the satisfaction of a personal choice of a sustainable way of travel will give the user the opportunity to feel the importance of his action. Sustainable mobility is understood as the interaction of economic, social, cultural without harming the ecosystem and preserving resources for future generations. Mobility that requires physical activity is the most sustainable for the environment and the human body, such as cycling and walking. Railway transport is one of the most environmentally friendly types of transport, which consumes up to ten times less fuel than road transport when transporting passengers and goods. Therefore, it is necessary to use the possibilities of railway transport, assessing the interaction between modes of transport, as well as alternative possibilities of movement. The integration of the tourism and rail transport sectors can have great potential to achieve the highest level of passenger traffic.

Lithuanian mobility development strategy until 2050 projects in railway transport are related to the implementation of principles of sustainable mobility and means of increasing passenger flows, i.e. electrify lines, renew, develop and adapt infrastructure for persons with limited mobility and persons with special needs, ensure links between modes of transport, as well as ensure intermodality and functional compatibility in passenger transport, promote the habit of residents not to use polluting vehicles, promote sustainable mobility in cities and non-urban areas . In order to attract passengers to use sustainable rail transport, special attention should be paid to speed, comfort, price, connections with other modes of transport or travel modes, rejecting own road transport, i.e. by road transport, private or public, by bicycle or by walk, and for the adaptation of terminals to the needs of the modern user. The increase of passenger transportation capacity in railway transport is consistently implemented. The main passenger flows that make up the volume of passenger transportation in the territory of the Republic of Lithuania are domestic (inland) transportation, i.e. movement in the territory of the Republic of Lithuania, transit, arrival and departure make up only a few percent of the total volume of transportation during the entire period under consideration. Attention should be paid to ensuring the quality of domestic transport (timetables that meet the needs of passengers, flexible price policy, infrastructure, connections between modes of transport, etc.), so that the positive index that have been achieved do not decrease over time, i.e. encouraged using of public rail transport.

To implement the principles of sustainable mobility in railway transport, while simultaneously increasing passenger flows, the tasks must be solved in a complex manner, with close cooperation between institutions with different responsibilities. In addition, measures such as ensuring multifaceted connections between modes of transport and other movement alternatives, integration of tourism and railway transport, adaptation of city infrastructure to tourist needs, compliance of railway terminals with the main needs of passengers must be evaluated.

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RECEIVED: 01 May 2022 **ACCEPTED: 28 November 2022**

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https://doi.org/10.38104/vadyba.2022.2.05

Vadyba
Journal of Management
2022, № 2 (38)
ISSN 1648-7974

EXAMINING THE COMPONENTS OF ORGANIZATIONAL SOCIAL CAPITAL IN HUNGARIAN COMPANIES

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Abstract
The measurement of organizational social capital (OSC) is extremely important, since numerous studies have found that social capital in organizations significantly affects employee job satisfaction, workplace creativity, innovativeness, and organizational performance. In this study, the strength of social capital in Hungarian organizations was assessed using a three-dimensional approach (cognitive, relational, and structural). Data collected from 405 Hungarian employees were used in empirical research to validate research model and hypotheses. IBM SPSS Statistics 27 and AMOS 23.0 were utilized for the statistical evaluations. Confirmatory factor analysis (CFA) was used for construct validation. An empirically validated model of eight dimensions and thirty items was developed to assess various aspects of organizational social capital in a work environment. Relationships among OSC components were examined using structural equation modeling (SEM). In order to determine if there were any differences in distribution of values of research dimensions among groups based on the business sector (public, private, non-profit) and the organization size (5-9 employees, 10-49 employees, 50-249 employees, 250 employees or more), the Kruskal−Wallis test was used. In the case of a significant result of the Kruskal−Wallis test, the groups showing significant differences were determined using the Dunn−Bonferroni post hoc test. In order to examine differences between managers and subordinates, the Mann−Whitney test was applied.
This study found that of the three elements of organizational social capital, the cognitive dimension is the basis of the relational dimension, which in turn determines largely the structural element. Additionally, it was demonstrated that there are significant differences among sectors, company sizes, as well as between managers and subordinates in terms of the comparative evaluation parameters of organizational social capital. The study results provide insight into the structure of social capital in the workplace, which can be useful to managers and HR professionals.
KEY WORDS: organizational social capital, confirmatory factor analysis, structural equation modeling, cognitive, structural, relational OSC

Introduction

In numerous studies, social capital has been demonstrated to influence employee job satisfaction (Yamaguchi 2013; Lange 2015), workplace creativity (Bhatti 2020), innovativeness (Bylok 2021; Orlova 2022), and organizational performance (Szabó 2021,) by determining the quality of cooperation within organizations. In this sense, organizational relationships, a company's structure, and policies, as well as the characteristics of workers to adapt to the work environment play a significant role (Nahapiet & Goshal 1998). Among the main outcomes of this dynamic is the quality of organizational relationships, which allows firms to respond effectively to customer demands and competing actions. In order to better understand these previously mentioned behaviors that have occurred within any enterprise, the literature has considered them as elements of organizational social capital, innovation, creativity, engagement, and work satisfaction, which when taken together help us to understand how individuals bounce back from adverse situations and achieve positive outcomes.

In recent years, it has become increasingly obvious that research on the empirical measurement of organizational social capital does not adopt a single approach. There are some studies that do not provide any breakdown of structural, related or cognitive dimensions; instead, the strength of organizational social capital is determined by a set of statements (scales), which are often is noteworthy, however, that there is a group of statements (Pérez-Luño *et al*. 2011) that do not divide organizational social capital into dimensions but cover all three dimensions.t divide them into dimensions. Another part of the study (Maurer & Ebers 2006; Chow & Chan 2008; Fandiño *et al*. 2015; Akram *et al.* 2017; Ha & Nguyen 2020) measured organizational social capital from a cognitive-relational-structural perspective, but the divisions and elements of the dimension are not identified. Accordingly, the measure of the structural dimension in this situation is usually related to connectedness, social and work networks (Jaworski & Kohli 1993; Inkpen & Tsang 2005) measured by statements related to trust, whereas the measure of relationships is based on scales of `common vision` (Tsai & Ghoshal 1998). The studies in the third group use a much more complex approach than in the first two groups: the measurement of organizational social capital or a cognitive-relational-structural three-dimensional approach with the division of dimensions into divisions and elements (Ganguly, Talukdar, & Chatterjee 2019) or in other multidimensional approaches other than the structural-relationship-cognitive model (Jamshidi & Kenarsari 2015). The theoretical basis of the research is developed in accordance with the cognitive-relational-structural three-dimensional model, with the division of measurements into professional divisions and elements of capital, which provides an integrated approach to measuring organized social capital. The breakdown of capital into elements is also important because it provides an opportunity to study the individual impact of each element of capital on employee satisfaction, creativity, and autonomy, as well as innovation.

Thus, there is no consensus among researchers regarding the structure and content of organizational social capital. There is a lack of empirical research regarding the validity of specific models in terms of their key constituent elements. As a result, there has been no attempt made in the literature to determine the nature of the interaction between the dimensions of organizational social capital. The present study fills some of these gaps in the literature on organizational social capital.

Conceptualizing of research

Organizational social capital (OSC) - a brief description

As previously indicated, this research work is taken as a basic structural definition contends that organizational social capital consists of structural components (overall relationship pattern between actors or relationships among employees), relational (characteristics of personal relationships within the network of trust among employees) and cognitive dimensions (shared meanings and values among network participants) components (Nahapiet & Ghoshal 1998; Inkpen & Tsang 2005). The next step is to discuss the literature which supports our`s model consideration of each of the three main OSC elements mentioned above.

Cognitive dimension of OSC

The norms, values, attitudes, and beliefs that influence cooperation are forms of cognitive social capital (Uphoff & Wijayaratna 2000). The nature of social capital in this context is more internal and subjective (Uphoff 2000). Or relates to the understandings that arise from organizational membership, including organizational identification (Kroll, Dehart-Davis, & Vogel 2019). As the context in which collective action takes place, cognitive social capital is formed by the broader organizational mission and values (Andrews 2010). This cognitive dimension refers to those resources in a social system that lead to shared representations, interpretations and systems of meaning (Nahapiet & Ghoshal 1998). Therefore, that could be determined by the degree to which colleagues have a shared understanding of their work tasks and their collaboration. In a number of studies, shared goals have also been considered to be a key construct of cognitive capital (e.g. Chow & Chan 2008; Fathi, Eze, & Goh 2011), or even suggested as a common definition of social capital (Engbers, Thompson & Slaper 2017).

The conclusion that can be drawn from these arguments, as well as the one on which the research will be based, is that the cognitive dimension plays a fundamental role in determining the very nature of all organizational behaviors. In other words, this is the initial root cause of everything that is discussed regarding OSC. It is reflected in proposed model by the acceptance of common goals among employees, which is expressed as one subdimension - Shared goals (SHG).

Relational dimension of OSC

The relational dimension refers to ‘those assets created and leveraged through relationships’ (Nahapiet & Ghoshal 1998, p. 244). Essentially, it focuses on the quality of relationships between actors (Kroll, Dehart-Davis & Vogel 2019). In this regard, the relational dimension consists of OSC elements that define working relationships. Based on the literature reviewed in this research, three key things stand out: (1) Trust & reciprocity (TRUST); (2) Willingness to knowledge sharing (WKS); (3) Justice & fairness (FRNS).

Structural dimension of OSC

According to Nahapiet & Ghoshal (1998), the structural dimension OSC is the pattern of connections between actors within a social system. A discussion of this topic has been developed in structural theories of social capital in particular the role played by the patterns and configurations of social ties. Hezlett & Gibson (2007), for instance, propose that individuals whose social ties span gaps in otherwise unconnected networks benefit from the diverse information they have access to and can use. Thus, the structural dimension of social capital may refer to aspects of organizational climate that aid these interactions and networks (Wah *et al*. 2005).

In the opinion of many researchers, the OSC structural dimension is essentially an amalgamation of the elements that define the constructive working relationships themselves. This understanding will serve as the basis for future discussions. To further develop the proposed vision, the following elements have been included in this dimension based on the research literature: (1) Perceived managerial support (MNGSP); (2) Teamwork (TW); (3) Colleagues support (CLGSP); (4) Interpersonal relations (PSR).

Aims and Research Questions

A major goal of this study is to develop the concept of organizational social capital, propose a theoretical model that can be used to measure the structure and strength of organizational social capital, and empirically prove the model. Furthermore, it is interesting to examine whether there are differences across sectors, industries, company sizes, and positions in an organization in terms of the comparative evaluation parameters of subelements of organizational social capital.

The following research questions have been formulated.

1. What are the structural elements of organizational social capital, and how do they interact?

2.In what ways do the effects of determining factors of the organizational environment differ depending on the sector, company size, and position of the respondent?

Research Model and Hypotheses proposed in the current study

Hypotheses 1

Figure 1 explains the research model of this study suggests positive associations between elements of organizational social capital. Three-dimensional measures are used to measure the power of organized social capital: structural, relational, and cognitive. According to the model, the structural dimension, which includes working relationships, is represented by four elements: perceived management support, employee support, teamwork, and interpersonal relationships. The element of social capital is measured by trust and reciprocity, as well as willingness to share knowledge and constructs of justice and integrity. Cognitive capital is assessed in terms of shared goals and values.

Each proposition is represented within the conceptual model. Additionally, the direction of the relationships is shown in addition to the paths among the variables.

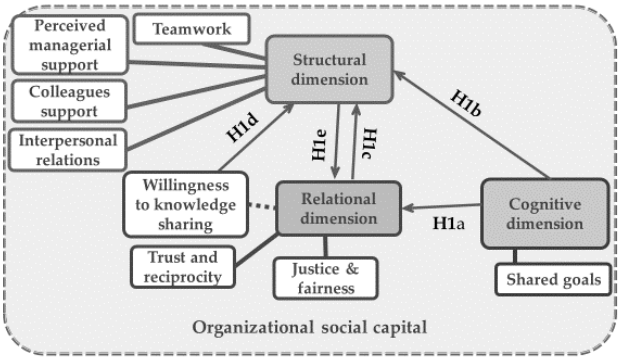

Fig 1. Research Model
Source: Authors' own construction

There were not many research papers that discussed the topic of predestining dependencies between the elements of organizational social capital. In the meantime, predestining relationships can be established based on interactions between sub-dimensions.

Proposition H1a: Shared goals → Relational OSC
According to research, trust is closely related to common organizational goals. Work network members who share common goals are more committed to each other and have a stronger sense of trust among them (Song *et al*. 2019; Huang *et al*. 2020). Indirectly, some outcomes show common goal commitment related to distributive and informational fairness. In addition, the relationship between procedural fairness and goal commitment may also be significantly positive (Groen 2018).

Proposition H1b: Shared goals → Structural OSC
According to Chowdhury & Murzi shared goal/value is the first attribute of successful teams (2019). In relation to all measures of organizational performance, management support and shared goals are considered single-order factors (e.g., Chen *et al*. 2019). In her concept of aligning goals, Laack (2021) advocates cooperation by coordinating personal and organizational goals. A natural and strong form of support from colleagues will emerge during this process, leading to the formation of the most stable personal relationships and professional ties.

Proposition H1c: Relational OSC → Structural OSC
A high level of interpersonal trust among team members encourages open discussion, understanding of work-related problems, and effective communication within a team (Politis 2003). Having a high level of trustworthiness enables an individual to be more approachable and communicate with others, thereby enhancing the quality of their interpersonal relations (Willem & Scarbrough 2006). It has been shown that supervisors' fairness and support are associated with employees' trust (Kalshoven, Den Hartog & De Hoogh 2011). The development of trust is generally closely related to the support of management as well as that of colleagues (Hayton, Carnabuci & Eisenberger 2012).

Organizational justice is an antecedent to both management and colleagues support (Moorman, Blakely & Niehoff 1998). Justice is one of the foundations of the resources of any relationship (Cordelli 2015). Actions that express interactional fairness foster high-quality interpersonal relationships (Kyei-Poku 2014). Peer procedural justice strength influenced team outcome variables, including performance, through teamwork processes (Cropanzano & Benson Iii 2011).

Proposition H1d: Willingness to knowledge sharing → Structural OSC[1]
Nathan et al. (2019) found that corporations' financial performance is significantly impacted by knowledge and innovation management dimensions. A positive effect of the intention to share knowledge has been observed on construction teams (Zhang & Ng 2012). Golden & Raghuram (2010) examine the central role of knowledge sharing in interpersonal relationships and argue that it plays a key role in the quality of these relationships. As employees' intentions to share knowledge act as a moderator in building organizational citizenship behaviors (Han *et al*., 2019), it may well predict organizational support, including both management and colleague support.

Proposition H1e: Structural OSC → Relational OSC
Working together for the sake of mutual benefit and reciprocity is an integral part of teamwork (West, Tjosvold & Smith 2008). Trust and reciprocity are an integral part of personal relationships (Eisenstadt, Aizenshṭadṭ & Roniger 1984). According to Kalshoven, Den Hartog & De Hoogh (2011), supervisors' fairness and support are associated with employees' trust. According to Settoon & Mossholder (2002), trust is extremely closely related to co-worker support. Supervisory support has a reciprocal effect on subordinates (Chen *et al*. 2008).

Nielsen (2015) shows that organizational justice, colleagues' support, and supervisory support are connected. Positive social relationships contribute to interpersonal justice at the individual, organizational, and community levels (Prilleltensky 2012). Peer procedural justice strength influenced team outcome variables,

[1] At the stage of initial testing of the model one of the three components of Relational OSC - `Willingness to knowledge sharing` demonstrated much greater internal validity when viewed autonomously. Therefore, mathematically, it is more accurate to consider WKS as an independent component of organizational social capital, which is associated with relational dimensions although it is not an integral part of this element of OSC.

including performance, through teamwork processes (Cropanzano & Benson Iii 2011).

(H1) In light of this, the following hypothesis was formulated: ***Organizational social capital elements can be categorized based on their hierarchical structure, according to the theoretical research model.***

Hypotheses 2

Previous research has shown that different considerations for any research model may be influenced by the sector, size of the company, and position of the respondent (e.g., Borisov & Vinogradov 2019A; Borisov & Vinogradov 2019B). Because of this, the study included as control variables the respondent's position (manager or boss/subordinate employee); company size (6-9 people/10-49 people/50-249 people/250 or more) and sector focus (public/private/non-profit).

(H2) Accordingly, the following hypothesis was formulated: ***Organizational social capital components' differ depending on the sector, company size, and position of the respondent.***

Materials and methods

Questionnaire

Developing the questionnaire began with a review of the literature for measuring dimensions that were similar to those included in the model. An important selection criterion was the quality of the statistical results achieved by the authors during the testing of their research models. In light of the results of this initial selection, a sample of studies has been compiled on the elements of the proposed model.

In order to measure organizational social capital (the first light groups), a sample survey was selected from Anderson, Coffey & Byerly (2002), Rooney & Gottlieb (2007), Andrews (2010), De Schrijver *et al*. (2010), De Clercq, Dimov & Thongpapanl (2013), Chuang, Chen & Chuang (2013), Fandiño *et al*. (2015), Demirel, Ketken & Kunday (2012), Kiratli *et al*. (2016), Kim (2017), Parfyonova *et al*. (2019) and Cech & Rothwell (2020). A list of selected statements for each dimension of organizational social capital can be found in table 2 (see Appendix).

Measures & Instrument development

Following the back translation methodology developed by Brislin (1970), all the scale items were translated into Hungarian with the assistance of Hungarian colleagues. During this process, it is taken into consideration that cultural differences may affect the semantic equivalence of different versions of the questionnaire (Schaffer & Riordan 2003).

In order to convert the items into a survey format, they were written as declarative statements that contained an active verb, referred to employees' workplace experiences, and could be rated on a 5-point frequency scale from Totally Agree to Totally Disagree. The scores for all classes of relationships are reported as the means of the constituent items.

There were eight key groups of questions that were used to construct the main variables of the study: perceived managerial support, teamwork, colleagues support, interpersonal relations, trust & reciprocity, willingness to knowledge sharing, justice & fairness and shared goals.

Data collection

Respondents comprised a random sample of full-time workers employed by organizations or entrepreneurs with at least one other colleague. Participants were invited to complete an online survey between March and April 2022.

There were 438 responses to the survey. It was decided to exclude incomplete responses (failure to complete more than half of the full items) and those who failed screening questions, as well as follow-up questions, from further analysis. This resulted in only 405 responses, allowing them to be analysed.

Description of the Sample

The generalized characteristics of the organizations from which the data were collected are as follows. Depending on the number of employees, these organizations are grouped into five categories: 0 to 4; 5 to 9; 10 to 49; 50 to 249; and 250 or more. The 56.3% of the sample consisted of organizations with more than 250 employees. The organizations belong to three different activity (industrial) sectors, and the majority are service organizations. In addition, these organizations are grouped into three different business sectors, and the majority are private companies. Prior to the recent period, the majority of organizations (93.8%) had been in operation for more than 10 years.

Data Analysis

The constructs identified based on the literature review in the conceptual model subsequently validated by conducting a confirmatory factor analysis (CFA) as a part of structural equation modeling (SEM). A reflective measurement model was used to indicate the contribution of each item to its associated construct (Garson 2016). For every item, no less than 0.6 factor loading was used as a criteria.

In accordance with recommendation of Malhotra & Birks (2018), the Cronbach`s coefficient for all constructs exceeded 0.6, meaning that the constructs are reliable.

Convergent validity and reliability of latent constructs were also assessed using average variance extracted (AVE) and composition reliability (CR). AVE is the share of total variance explained by the latent construct, a number greater than 0.5 is a generally accepted level of convergent validity (Hair *et al*. 2009, Baumgartner & Homburg 1996). In construction reliability (CR), the common variance ratio of statements (items) belonging to the construct is expressed. Generally, CR higher than 0.7 is considered a good level of reliability (Hair *et al*. 2009). Latent structures are considered reliable if the value of AVE does not exceed the threshold value of 0.5, but the composition reliability exceeds the threshold value of 0.7 (Fornell & Larcker 1981; Henseler, Ringle & Sinkovics 2009; Lam 2012; Hair *et al*. 2017).

Additionally, Cronbach's alpha represents the lower limit of internal consistency reliability, while composite reliability represents the upper limit. Hair *et al*. (2017) suggest that the true reliability may lie between Cronbach's Alpha and composite reliability. It is therefore necessary to report both Cronbach's alpha and composite reliability. Since Cronbach's alpha has some limitations, the composite reliability of the constructs will be primarily used to assess the internal consistency of the constructs.

Structural equation modeling (SEM) was applied to test hypothesized causal effects between OSC dimensions and elements of collaborative work environments. The model fit was deemed acceptable if $\chi 2/df \leq 5$ (Podsakoff *et al*. 2003), since comparative fit index (CFI), and Tucker-Lewis index (TLI) values were > 0.90 and Root-mean-square error approximation (RMSEA) < 0.08 (Hu & Bentler 1999; Steinmetz *et al*. 2009; Cieciuch *et al.* 2014; Schwartz & Butenko 2014).

In order to determine if there were any differences in distribution of values of research dimensions among groups based on the business sector (public, private, non-profit) and the organization size (5-9 employees, 10-49 employees, 50-249 employees, 250 employees or more), the Kruskal−Wallis test was used. In the case of a significant result of the Kruskal−Wallis test, the groups showing significant differences were determined using the Dunn−Bonferroni post hoc test. The Friedman test was used to examine the differences in the evaluation of the research dimensions. In order to examine differences between managers and subordinates, the Mann−Whitney test was applied.

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The statistical analyses were conducted using IBM Statistics SPSS Version 25 and AMOS Graphics Version 23.0.

Results and discussion

Validity and Reliability of Measurement (Outer) Model

Descriptive statistics of items and examined dimensions

Willingness to knowledge sharing has the highest mean value (4.12) among the elements of organizational social capital (Appendix, Table 2). In OSC, the lowest mean value (2.99) is associated with the cognitive dimension (Shared goals). In terms of the Justice and fairness dimension, the respondent showed the lowest agreement (2.74) with the item: "My organization rewards employees according to their performance".

Internal Consistency Reliability

Further, all Cronbach's alpha values lie between 0.609 and 0.919, indicating acceptable reliability, with Cronbach's alpha for Interpersonal relations (alpha = 0.690) and Perceived managerial support (alpha = 0.919) lower than 0.70 but greater than 0.60.

Convergent Validity

The degree to which a measure correlates positively with alternative measures of the same construct is known as convergence validity. In order to determine whether a data set is converging, the average variance extracted (AVE) is used, which represents the cumulative mean of squared outer loadings from a group of items of a latent variable. AVE scores should equal or exceed 0.50, indicating that the construct accounts for more than half of its own variance (Hair *et al*. 2017). All values of AVE are greater than 0.50 (see Appendix, Tables 2,3). As such, the requirements for convergent validity have been met.

(H1) Organizational social capital elements can be categorized based on their hierarchical structure, according to the theoretical research model

Proposition H1a: Shared goals → Relational OSC

This proposition was supported by the findings of the study. In line with previous research, this finding is quite consistent (Cugueró-Escofet, Fitó Bertran & Rosanas 2019; Song *et al*. 2019; Huang *et al*. 2020).

Proposition H1b: Shared goals → Structural OSC

Cognitive social capital formed by 'Shared goals' is fully explanatory for Relational OSC (β= 0.651; S.E.=0.053; p<0.001) as well as Structural OSC (β= 0.194; S.E.=0.076; p=0.041). Previous studies have found similar results (Chowdhury & Murzi 2019; Chen *et al*. 2019; Laack 2021)

Proposition H1c: Relational OSC → Structural OSC

According to the findings of the study, this proposition is supported. This finding is very consistent with previous studies that have been conducted (Politis 2003; Willem & Scarbrough 2006; Halbesleben & Wheeler 2015).

Proposition H1d: Willingness to knowledge sharing → Structural OSC

Research results confirm the causal relationship between intention to knowledge sharing and structural organizational social capital, which is specified in the proposed model (β= 0.092; S.E.= 0.048; p=0.025). This is similar to the results of the following authors: Ren, Kraut & Kiesler (2007); Golden & Raghuram (2010); Zhang & Ng (2012).

Proposition H1e: Structural OSC → Relational OSC

This proposition appears to be supported by the results of the study. The structural OSC has had limited effects on a relational OSC (β= 0.244; S.E.=0.081; p=0.006).

Thus Hypothesis 1 is supported by the data. Results of hypothesis 1 testing can be found in table 1.

Table 1. Details regarding the testing of hypothesis 1 for each assumption

Hypothesis		Standardized Regression Coefficient (β)	S.E.	p	Conclusion
H1	**Cognitive OSC → Relational OSC → Structural OSC**				**Supported**
H1a	Shared goals → Relational OSC	0.651	0.053	<0.001	Supported
H1b	Shared goals → Structural OSC	0.194	0.076	0.041	Supported
H1c	Relational OSC → Structural OSC	0.558	0.132	<0.001	Supported
H1d	Willingness to knowledge sharing → Structural OSC	0.092	0.048	0.025	Supported
H1e	Structural OSC → Relational OSC	0.244	0.081	0.006	Supported

Note: SEM: $\chi 2/df = 3.295$, CFI = 0.908; TLI = 0.892; RMSEA (90% CI) = 0.078 (0.076–0.080)

Source: Authors' own calculations

Nonetheless, it is worthwhile to consider not only the fact of hierarchy, but also the sequence of its elements. In order to increase clarity, it may be necessary to make a conditional simplification and provide an element of the research model that includes only the ratios of the dimensions of organizational social capital. In Figure 2, significant paths are shown among OSC's main components.

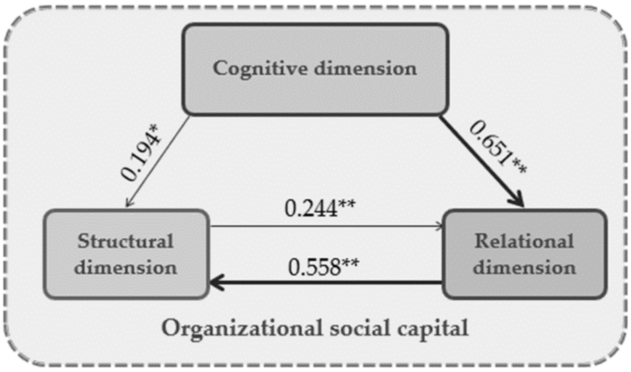

Fig. 2. A significant paths among the components of organizational social capital

Note: Based on the standardized regression coefficient, the line patterns (dashed line, thin line, medium solid line, solid line) indicate the strength of effects: non-significant, low, medium, and strong.

Source: Authors' own construction

In the chain of Cognitive OSC → Structural OSC → Relational OSC, there is a connection, but it is weak. While at the same time, the chain of Cognitive OSC → Relational OSC → Structural OSC can be thought of as medium-strong or moderate in strength. Hence, according to the research model, organizational social capital is hierarchically subordinated or aligned according to the second scenario rather than the other way around.

(H2) Variations in components of organizational social capital based on the sector, company size, and employee's position

The hypothesis was tested with the Mann-Whitney test, Kruskal-Wallis test, and Dunn-Bonferroni post-hoc test.

The radial diagrams are presented below in order to clarify and generalize the results of the second hypothesis test. The results that are significant are highlighted in bold in each diagram.

(1) Depending on the position of the respondents, significant differences were observed in their assessments of aspects of the working environment (Fig. 3). According to Mann-Whitney test results there is a significant difference between manager and subordinate perception of two out of eight examined dimensions: Perceive managerial support and Willingness to knowledge sharing.

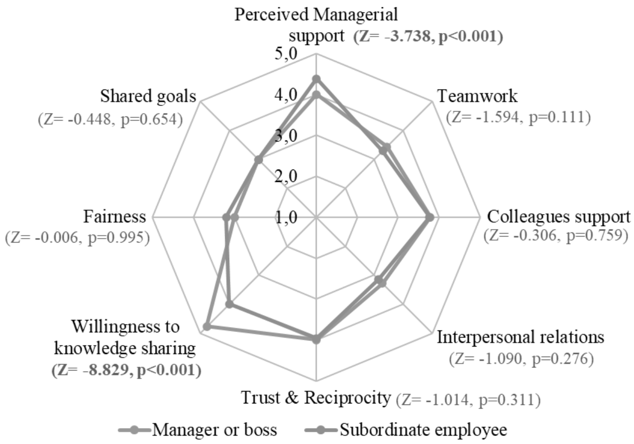

Fig. 3. Comparing managers and subordinates according to mean values of organizational social capital dimensions

Source: Authors' own construction

The support provided by management to managers is generally less than that provided to subordinates (Z= -3.738, p <0.001). The fact that managers are in charge of support rarely implies that managers themselves are in need of support and guidance as well. It is essential, however, that management provides support to subordinate managers to ensure that the roles and abilities of every manager to lead in an organization are balanced.

Managers are generally more likely to share their knowledge than subordinates (Z=-8.829, p<0.001). It has been demonstrated by Connelly and Kelloway (2003) that employees' perceived management support for knowledge sharing significantly affects their willingness to share knowledge.

(2) According to the Kruskal-Wallis test and Dunn-Bonferroni post hoc test results (Fig. 4), there is a significant difference among sectors in each of the eight dimensions evaluated. Compared to private and nonprofit sectors, the public sector's OSC elements have significantly lower mean values. Moore (2000) suggests that non-profit organizations produce value that can be attributed primarily to social purposes.

Despite the positive attitudes of public sector employees regarding willingness to share knowledge, Sandhu, Jain & Bte Ahmad (2011) concluded that knowledge sharing is not clearly communicated to them and many do not know whether their organization has a knowledge-sharing strategy. Employees in the public sector also exhibited self-serving biases when it came to their willingness to share knowledge compared with their perception of their colleagues' willingness to do so. In addition, respondents perceived organizational barriers as being more critical than individual barriers.

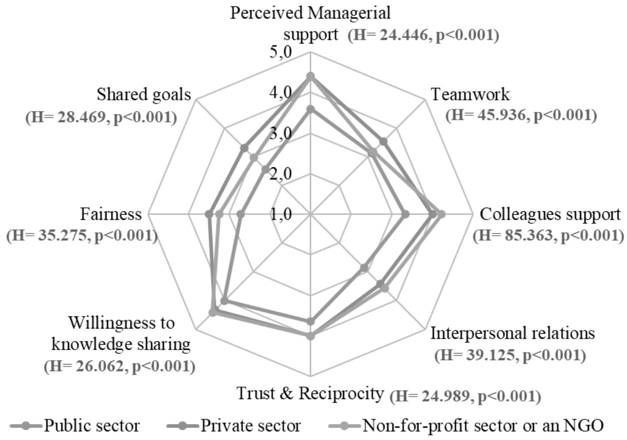

Fig. 4. Sector comparison based on mean values of organizational social capital dimensions
Source: Authors' own construction

(3) According to Kruskal-Wallis and Dunn-Bonferroni post hoc tests (Fig. 5), seven out of eight dimensions examined show significant differences depending on the organization size: Perceive managerial support, Colleagues support, Interpersonal relationship, Trust & reciprocity, Willingness to knowledge sharing, Justice & fairness, Shared goals. Compared to other size groups, micro companies' employees rated OSC components significantly higher.

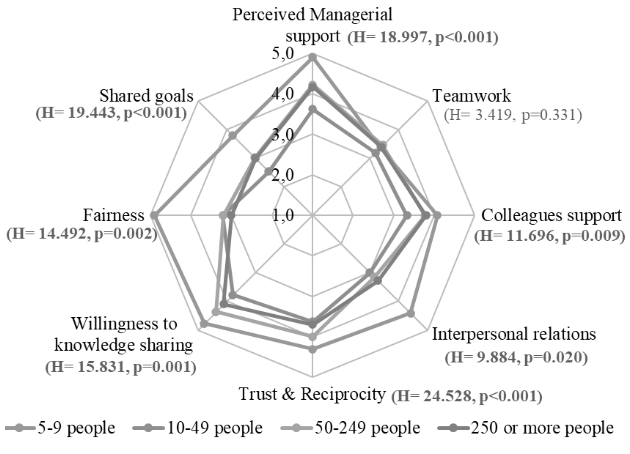

Fig. 5. Comparison of the size groups of enterprises based on mean values of organizational social capital dimensions
Source: Authors' own construction

Based on Pearce and Herbig (2004), the psychological distance between team members can also increase as team size increases.

There is no conclusive evidence that organizational size correlates with the willingness to share knowledge in the literature review. According to Lekhawipat et al. (2018), the size of the firm is related to internal attributions and individual beliefs concerning knowledge-sharing behavior. In comparison with larger companies, smaller firms (fewer than 500 employees were considered small) are more sensitive to such barriers and individual beliefs.

According to Gould-Williams (2003), there are conflicting arguments concerning the relationship between shared goals and organizational size. One argument suggests that employees in large organizations have difficulty forming personal attachments and identifying with the organization's goals. In contrast, the opposing view asserts that large organizations offer individuals greater opportunities for advancement and interpersonal interaction, which can have the opposite effect. Most of these views are based on intuition on the part of researchers. In spite of this, the evidence is far from conclusive and it is difficult to predict whether or not there is a relationship between organizational size and shared goals.

These results support all perceptions with full support for Hypotheses 1.

Conclusions

The study was conducted according to a concept that identifies three dimensions of organizational social capital: cognitive, relational, and structural. The multidimensional scale has been developed and tested through a series of exploratory and confirmatory studies, which show that it is reliable and valid. Despite a significant number of subdimensions, in the sequel, this structure has shown high internal validity based on the proposed model.

The sequence of processes leading to organizational social capital formation has been explored. The use of structural equation modeling has demonstrated that the dimensions of organizational social capital are mutually influenced. The cognitive element determines the relational; and the relational element is the predominant structural element of organizational social capital. A framework such as this may also serve as a foundation for the conduct of further empirical research on the subject of organizational social capital. This also implies the significance of placing emphasis when selecting a particular development strategy and highlighting the need to maintain balance in developing the social capital of the organization.

Comparative analyses of various parameters depending on the sector, size, and position of the respondent in connection with the work environment are explicit and promising for managers from all sectors of the Hungarian economy. Essentially, the results stimulate a differentiated and, therefore, accurate approach to management.

Furthermore, it is worth pointing out that the role of organizational social capital has not been extensively researched in English-speaking literature in Hungary to date. As such, the study may be the first to develop an integrative perspective on organizational social capital within Hungarian organizations.

The general findings of the study emphasize the importance of organizations investing in the development of a positive working environment. Particularly it implies the need for managers and employees to set aside time for reflection and dialogue.

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Appendix 1

Table 2. Descriptive statistics of items, internal reliability and convergent validity of the first-order constructs

Code	Construct/Items	Mean (SD)	Loadings
Perceived managerial support (Cronbach's α= 0.919, AVE=0.758, CR=0.967)		**3.81 (1.11)**	
MNSP1	My supervisor provides me with clear expectations of my work responsibilities	3.75 (1.22)	0.799
MNSP2	My supervisor is supportive when I have a work problem.	3.99 (1.21)	0.909
MNSP3	My supervisor treats my mistakes as a problem to be solved rather than a focus for criticism	3.87 (1.26)	0.884
MNSP4	My supervisor explains the reasoning behind decisions that affect me	3.60 (1.38)	0.902
MNSP5	My supervisor communicates with me in an open and direct manner	3.82 (1.29)	0.855
Teamwork (Cronbach's α= 0.830, AVE=0.665, CR=0.934)		**3.44 (0.95)**	
TMWK1	My company encourages employee teamwork.	3.24 (1.16)	0.866
TMWK2	Teamwork is part of the problem-solving process at my company.	3.46 (1.19)	0.873
TMWK3	I feel I am really a part of the group of people I work with	3.68 (1.13)	0.698
TMWK4	There is team spirit among employees in this organization	3.49 (1.08)	0.812
Colleagues support (Cronbach's α= 0.784, AVE=0.617, CR=0.919)		**3.72 (0.82)**	
CLSP1	In our team, we openly share our thoughts without fear of rejection	3.82 (1.07)	0.773
CLSP2	I can rely upon my coworkers especially when things get tough at work	3.96 (0.92)	0.862
CLSP3	My work team is one of the most meaningful social groups to which I belong	3.25 (1.19)	0.735
CLSP4	Frequently, my colleagues offered me assistance when the situation called for it	3.75 (1.04)	0.767
Interpersonal relations (Cronbach's α= 0.609, AVE=0.574, CR=0.874)		**3.23 (0.88)**	
IPSR1	The company provides training to improve the interpersonal skills of employees to build good relationships	2.78 (1.36)	0.699
IPSR2	Personal relationships in our company encourage a trustful working environment.	3.46 (1.08)	0.857
IPSR3	I look forward to being with the people I work with each day	3.34 (1.03)	0.707
Trust & reciprocity (Cronbach's α= 0.807, AVE=0.722, CR=0.935)		**3.77 (0.80)**	
TRST1	There is mutual friendship between employees	3.71 (0.94)	0.844
TRST2	Employees have confidence in one another in this organization	3.59 (1.00)	0.894
TRST3	Employees in this organization show a great deal of integrity	4.07 (0.86)	0.808
Willingness to knowledge sharing (Cronbach's α= 0.633, AVE=0.613, CR=0.890)		**4.12 (0.64)**	
WKS1	I actively share my professional knowledge with my colleagues	4.34 (0.78)	0.870
WKS2	I share my ways to solve problems at the request of other group members	4.50 (0.68)	0.819
WKS3	I am quite often attempting to convince people to support an innovative idea	3.09 (1.10)	0.642
Justice & fairness (Cronbach's α= 0.882, AVE=0.743, CR=0.955)		**3.14 (1.04)**	
FRNS1	My organization treats its employees fairly	3.16 (1.16)	0.878
FRNS2	My organization rewards employees according to their performance	2.74 (1.20)	0.889
FRNS3	Employees in my organization are rewarded fairly	2.99 (1.34)	0.852
FRNS4	Employees can count on being treated with courtesy and respect in my organization	3.74 (1.10)	0.826
Shared goals (Cronbach's α= 0.896, AVE=0.763, CR=0.960)		**2.99 (0.94)**	
SHG1	In my organization, employees share the same ambitions and vision for the organization	2.80 (1.12)	0.891
SHG2	In my organization, employees enthusiastically pursue collective goals and mission	2.97 (1.06)	0.925
SHG3	There is a commonality of purpose among employees in this organization	3.06 (1.06)	0.811
SHG4	Employees in this organization are committed to the goals of the organization	3.15 (1.03)	0.863

Table 3. Second-order constructs

Dimensions	Mean (SD)	Loadings
Structural OSC (Cronbach's α= 0.833, AVE=0.768, CR=0.927)	3.53 (0.77)	
Perceived Managerial support	3.81 (1.11)	0.544
Teamwork	3.44 (0.95)	0.770
Colleagues_support	3.72 (0.82)	0.661
Interpersonal_relations	3.23 (0.88)	0.752
Relational OSC (Cronbach's α= 0.654*, AVE=0.788, CR=0.867)	3.62 (0.63)	
Trust & reciprocity	3.77 (0.80)	0.794
Justice & fairness	3.14 (1.04)	0.735
Willingness to knowledge sharing**	4.12 (0.64)	0.571
Cognitive OSC (Shared goals)	2.99 (0.94)	

*Pearson's correlation coefficient

**Based on the theoretical model, this element is related to Relational OSC, but shows low consistency with the other two elements, so it was not included in Relational OSC

RECEIVED: 01 May 2022 **ACCEPTED: 28 November 2022**

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https://doi.org/10.38104/vadyba.2022.2.06

Vadyba
Journal of Management
2022, № 2 (38)
ISSN 1648-7974

LABOUR MARKET MOBILITY IN THE PUBLIC AND PRIVATE SECTORS IN HUNGARY

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Abstract
In this study, we examine the labour market of the public and private sectors, as well as the willingness to move from one to another based on specific factors, such as age or working position. Our research concerns the Hungarian labour market. It is important to determine the reasons behind employees deciding to switch from one sector to the other, as these two areas hold significantly different expectations and characteristics. In the literature review, we explore the characteristics of the two sectors separately, determine which factors are attractive and repulsive, followed by a comparison of them. We examine the expectations young graduates have towards employers, as well as which priorities have been showing an ever-increasing tendency. It is interesting to explore which areas young graduates imagine their futures in the most, as this may not correspond to where they can actually find employment. There are some cases where they use one sector to gain experience, only to accept a job in the other environment at the right moment. A properly established employer brand is important to young people, which may encompass internal, organizational and external labour market expectations, such as to establish a proper internal value system, offer a career path and ensure satisfaction. An organization recognizes what it can do to be desirable to the labour market and attract the professionally trained employees it needs as a result. As part of the empirical research, survey respondents from both sectors evaluated multiple positive workplace characteristics. During our research, we discovered discrepancies compared to our sector-specific ranking of leading characteristics. The typical features that received the highest evaluations served as feedback to employers and HR managers on what to pay attention to and how to improve upon these areas within their means. The study examines cases wherein the influencing factors that motivate employees during job selection can be determined.
KEY WORDS: public sector, private sector, labour market, mobility, expectations

Introduction

While analysing the mobility between the public and private sectors, we sought to find an answer as to what motivates employees in making their decision in favour of one or the other sector with regard to employment, as well as the reasons why they change, or may want to change jobs. We pay particular attention to the expectations young graduates have towards their first jobs, as they have high expectations regarding salaries, allowances and other working conditions. Public service careers have become increasingly appealing to young people, if the employer brand development clearly aims to improve the quality of service, while the desirability of the private sector remains nearly unbroken. As to why an employee chooses the public sector, the possible answers are usually that it gives them a good feeling to serve the public interest, it ensures a stable livelihood and has them perform responsible work, whereby they can do something for other people, and thus provides them with a valuable activity to pursue. Whereas upon choosing the private sector, employees expect a successful, high-level career, exceptionally good working conditions, wages and a possibility of employment opportunities abroad. If any of these notions are jeopardized, they may consider the possibility of switching.

The public sector and the private sector offer different conditions in several respects, and an employee can have a realistic chance to gain employment in either of them. The two sectors create a firm divide in the world of labour and are both are viable possible choices as well. If there is a common value that is important to everyone (though not necessarily in an equal manner), they are willing to make sacrifices for it. We have the following hypotheses about our research:

H1: We assume that certain workplace characteristics apply primarily (significantly) to the private sector or the public sector. The public sector includes relaxed work, a long-term career, a secure job, professionalism, the possibility of starting a family, establishing work-life balance, monotonous/routine work activity and the adherence to strict rules. In turn, the private sector includes the possibility of a fast career/promotion, an esteemed position, secure livelihood, the opportunity for independent work, the creation of an effective network, gaining experience, the opportunity to develop competencies, and exemplary leaders.

H2: Changing jobs or sectors is significantly influenced by the age of the employee: the older they are, the less willing they are to change.

Literature Review

The Public Sector

According to Bábosik et al. (2017, p.12.) “Public need is a specific societal need that emerges arises in the majority of society, recognized as a communal need on the basis of a communal (political) decision (…)”. Under this approach, public service refers to efforts towards maintaining and increasing the common good. However, anyone can contribute to the common good, be it an individual or an organization, representing either the public sector or the private sector.

Monopolistic positions are prevalent in the field of state enterprises, whereas regulations aim to avoid such in the private sector. The leaders of the state apparatus assume their positions through general elections and have to devote significantly greater attention to aspects such as justice, equal treatment, honour and accountability. Their decisions, in addition to the activities of their colleagues and employees, as well as the functioning of the institution they operate is much more symbolic in society, than what would be typical of a private enterprise. Whereas the objective and environment of a private enterprise is firmly defined and has a narrow range, the system of objectives of a public institution is diverse, difficult to grasp and often unclear. It must account for numerous interactions as a result of its actions, and as such, has to consider significantly more aspects in advance. The public employee archetype is motivated more by communal values, commitment and the incentives of community service, than a private enterprise employee, with whom there is a much stronger connection between their wage and measurable performance. It is worth noting at this point that the private sector is not as powerless and is much more open to innovation, whereas the public sector is more conservative (Papp, 2015).

On the subject of public service as a whole, HR activities are characterized by an administrative, bureaucratic nature. The other significant issue is that the legal background differs to such an extent that it hinders, rather than facilitates the development of the field. The development of this field is further held back by the disorderly nature of the roles various jobs possess. This refers to the borderline common practice of how public administrations often determine a job description for a specific jobholder, rather than find a person who meets the requirements of the job. Thereby work becomes more difficult within the organization and after a while, only few can perform their functions. However, these colleagues may feel that their managers are overwhelming them, while others barely receive any substantive tasks, even though their wages are nearly identical. The proliferation of these crises can upset balance between jobs, and in addition to increasing fluctuation, may also lead to the rapid professional depletion of these organizations. (Szabó – Stréhli-Klotz, 2014)

The pure form of the Weberian administrative model had the goal of establishing an administrative branch relatively separate from society and the other parts of the market sector. Its human resource management system was built on the hypothesis that the public administration profession requires specialized knowledge that cannot be obtained in or transferred to other areas of life, therefore, mobility between the public sector and the private sector should be considered exceptional. This means that in addition to being practitioners of their own profession, each official is also a professional capable of representing and promoting public interest to a high degree. As such, their jobs must be secure, and their advancement should reflect their individual professional ability and experience (career system). Officials must be encouraged towards self-improvement, while also made independent from external pressures, particularly economic pressures, through an adequate remuneration and benefit system (Gellén, 2013).

Molnár and Kapitány (2013) have determined that the probability of dismissal is lower in the public sector, while advancement is more predictable. Those who enjoy predictability and security may choose the public employee career over the private sector, even if it means a compromise in terms of wages. This decision also tends to occur in cases where the need for stable employment increases as part of a family's course of life, which may be a result of many typical situations: the issue of missing work as a result of a family member who is sick and in need of care, a divorce and the consequently raising of children as a single parent, or just due to raising multiple children. The public sector providers better opportunities to manage such difficulties and is safer as a result. There is a greater chance of people suffering from chronic illnesses (such as people with visual or auditory disabilities) finding employment in the public sector, and the difference in wages when compared to their healthy peers is not as significant as in the private sector. The probability of being employed in this sector increases in proportion to the educational attainment level and is higher for women, particularly those who are single parents. Non-material reasons are prevalent.

Trust in the public sector lies mainly in the assumption that the employees believe their job is more secure in the public sector, as opposed to the private sector. This assumption, however, is shared by less and less people employed in the public sector, as lifelong loyalty and commitment within this context is increasingly less present (Bozeman – Ponomariov, 2009).

Ito's (2003) research was conducted in three clusters of public service: the technical (case manager), professional (administrator) and manager levels. With regard to the question of what drew a specific person to the public sector, some studies identify and inquire easily defined and thus easily searchable factors, such as income, job security, wanting to help others (altruism), as well as the desire for an individual to be a productive member of society (Lewis – Frank, 2002). Other studies instead asked questions about organizational theory factors that are harder to inquire, e.g., the nature of the employer-employee relationship (Jurkewich – Brown, 1998).

According to Ito (2003) the motivations for choosing a job in the public sector are as follows:

- the opportunity came at the right time (89%);
- I had the opportunity to utilize my profession or my university degree in my work (69%);
- good career opportunities within public service (48%);
- I seriously considered other private and non-profit opportunities as well (47%);
- wages (41%);

- the fact that I can serve public interests (41%);
- the good reputation of the specific body (29%).

Once they have been hired into the public sector, the subjects involved in the study were thinking much more within the public sector for a possible advancement.

Telegdy (2006) examined the realization of government plans of 2002 on the significant public employee wage increases, as well is their effects on the relative wages between the two sectors. In the period between 2002 and 2004, the highest relative wage increase involved low-skilled employees and those working unskilled jobs. In the final year under review, these employees received a 14 and 18 percent wage premium in the public sector. The wages of the skilled clerical staff and highly skilled employees continued to remain below the wages of their counterparts working in the private sector. One possible, albeit unproven reason for the sustainability of this situation may be that the other allowances paid within the public sector, or the non-salary characteristics, such as the reduced amount of stress, the lower hours of work and the lower chance of job losses, offset the disadvantages resulting from the lower income.

Employer brand development in public service

Employer brand development is a proactive process following a precisely predeclared method, during which an organization recognizes what it can do in order to be desirable to the labour market. In terms of direction, this includes internal, organizational and external labour market needs. Accordingly, the quality of the employer brand determines how the current workforce performs and the category of employees the specific organization can attract. From a labour market viewpoint, the organization that is seen as more desirable by employees than its competitors is considered successful.

In line with the innovation objectives of the Zoltán Magyari Public Administration Development Program (MP), it is essential that the professional competence and commitment of the Hungarian public administration gain the trust of its employees. “The MP is human-centric rather than sterile, building upon the personal emotional and supportive approach of colleagues as a primary resource” (Magyari, 2012). The train of thought above represents a good example of the indisputable role of those working in public administration. The efficiency of the work organization depends to a considerable degree on the professional competence and motivation of the people who work there. It is important from a sustainable professional quality viewpoint that the rising new generation looks upon the performance of public service tasks as professional challenges. Furthermore, in accordance with the current economic mentality, conscious development of the employer brand is an absolute prerequisite for finding, attracting and retaining talent. A strong employer brand reflects the internal values of the organization in a credible manner, offers a foreseeable career path and increases employee satisfaction. Successful brand development boosts loyalty and decreases fluctuation, in addition to increasing the number and quality of applicants for a particular position. This absolutely provides an edge in the competition to acquire young talents. It can be used to improve the high level of human resource management within the scope of public service.

It is not enough to know the external factors that define our era. The ability to consciously shape them presumes a more profitable behaviour, beyond just adaptation. The employer brand is no exception to this. The two directions referred above cover different expectations and motivations. Of these, the internal is the image of the profile that is directed towards the organization. It affects the organizational culture, the motivation of the people who work there, while also having an impact on loyalty, as well as fluctuation in an indirect manner. The external is the brand developed for the outside world, directed at market participants, from competitors, through the labour market and the prospective employees. It determines the overall standing of the organization. Despite the different direction, no order of importance can be established between the two options, however, the absence of one negatively influences the function of the other as well. The emergence of the employer brand in public service definitely aims to improve the quality of service, in accordance with the approach presented by the Zoltán Magyari Public Administration Development Program.

The quality of the three psychological needs of older workers (i.e., autonomy, competence and attachment) affects their performance (St-Onge – Beauchamp Legault, 2022). A reconciliation between the system of preferences young people have and the “brand” represented by the public sector. It is not enough to be present in the market of future employees, as accurate knowledge must be gained of their expectations, so the most qualified people will be hired for the right job. Knowledge of the system of expectations dictated by present times constitutes an essential element of establishing an effective image.

The Private Sector

The decisive portion of the economic performance of a country is determined by the so-called private sector. This is the segment of the nation economy that works mainly in accordance with economic laws, in order to attain the highest economic performance possible. If performance dwindles in this area, then almost every other economic indicator will suffer as a result, meaning that employment will decrease and the GDP will not increase in the proper manner (Boda et al., 2012).

The private sector operates in a market environment, its revenues are derived from products and services sold, whereas the public sector is financed by the budget. The private sector operates along entirely different principles, wherein the pursuit of profit is the main objective, necessitating a daily renewal and keeping up with competitors, if a company wishes to remain active in the long run.

The competitiveness and effectiveness of a company compared to its competitors can only be ensured, if it reacts to rapid changes and necessary transformations quickly, and with the proper activities. Human Resource

Management (HRM) is a field of ongoing transformations, which determine the competitiveness of an organization, as well as related priorities in connection with employees (Poór, 2011). These tasks include seeking out potential employees and encouraging them to apply, as well as the selection, introduction, training and eventually retention of well-performing candidates with the proper amount of creativity (Juhász, 2014). Efficiency must be taken into account even while employing workers, additionally, the job offered must provide competitive wages, adequate challenges and meaningful tasks. The company must be made desirable for both current and future employees. In order to achieve this, the motivation, satisfaction, commitment and performance of employees must be increased. Companies need to focus on reaching, selecting and securing potential employees. In order to ensure successful implementation and competitiveness, companies must develop their own employer branding strategy (Chovan, 2012). During the development of the employer branding strategy, they have to address both the external (recruitment for unfilled positions) and the internal (improving the performance of and providing motivation for existing employees, increasing their satisfaction) labour market (Chovan, 2015).

Globalization opened a new frontier in the battle for employees, wherein competitive companies expand to parts of the world where they can find talents that are of value to them. The key to securing a workforce lies in companies possessing a well-established, recognized employer branding in the specific country or city (Bersin, 2013).

Comparing the two sectors

According to Elek and Szabó (2013), employees in the private sector are twice as likely to transfer to other jobs or become unemployed than those in the public sector. The difference between the probabilities to become inactive is also of a similar value, though much lower. The authors looked at the intensities of the flows from employed to unemployed separately. Within the public sector, compared to those with primary education, workers with tertiary education are roughly one-fourth, while those with secondary education are about one-third as likely to become unemployed. When broken down by education level, eliminating other societal and demographic characteristics, those who are at a higher level of education have an even less chance of transitioning to unemployment, if they are employed in the public sector. The chances of reintegration for those exiting the public sector are somewhat lower than for workers who became unemployed in the other sector, but this difference is eliminated as the level of education increases.

The differences lie not only in wages and the chances of dismissal though – the objectives and tasks of the operating environment, as well as the potential tools of the two sectors are also different from one another. Let us briefly examine the characteristics of both sectors, focusing on the differences. While the private sector operates in a market environment, and its revenues are derived from products and services sold, the public sector is financed by the budget. Public service workers are always under a strong political influence, while the employees of private enterprises are less prone to such. Public management units produce public goods and intervene in parts of the economy where external influences are common (Papp, 2015).

However, an interesting observation made by Molnár and Kapitány (2013) is that for those engaged in civil partnerships, there is a greater chance of employment in the private sector, than for couples in a marital relationship. The authors consider it a possible explanation that for those whom security is less important, do not strive to officiate their relationship with the institution of marriage. Based on regional unemployment data, the authors found that the higher the unemployment is somewhere, the greater the chance that employees work in the public sector. The chance of being employed in the public sector was also greater among women whose husbands were unemployed before the age of 40. Finally, those who are socially committed also tend to work as public employees. Social commitment was estimated by the authors of the study based on the time spent doing volunteer work. In this respect, however, the sector is not homogeneous: the previous statement is definitely true for those who work in the areas of public education, culture and research, but in this context, those working in the area of public administration are basically no more committed than those in the private sector.

The following trends formed in the literature to describe the movement of labour between the public sector and the private sector.

Mobility within the public sector:

- horizontal mobility – mobility between institutions and mobility within institutions and organizational units;
- vertical mobility – mobility towards managerial positions within hierarchal organizations (Tudorel – Profiroiu et al., 2012).

Mobility between the public sector and the private sector:

- mobility from the private sector to the public sector;
- mobility from the public sector to the private sector (Bozeman – Ponomariov, 2009).

According to Gellén’s research in 2013, pertaining to the mobility between the public and the private sector, the following sector selection criteria were considered:

- the importance of personal and horizontal workplace relationships, proper handling of workplace conflicts;
- manager-employee relationship;
- commitment to public service;
- predictable advancement;
- absence of wage (decrease or increase) being tied to actual performance;
- wages being paid definitely and on time;
- relatively good wages (including other allowances);

- predictable work hours, compatibility between family and work;
- limited level of politicization.

These criteria change in the following manner for public enterprises:

- wages are very good, relatively speaking;
- fluctuation is generated by internal structural changes;
- personal and familial integration is decisive; – non-politically motivated rent-seeking behaviour.

The public employee sector can be characterized as having the lowest level of satisfaction; motivation and individual effort observed here is highly varied. The satisfaction of the government and municipal administration sector can be assessed as mediocre or mixed. In this segment, the atmosphere of the workplace, the existence of development and advancement opportunities, or lack thereof, significantly influence everyday motivation, and the effort put towards performing work.

The level of satisfaction within the sector of large public enterprises can be considered high. Most employees of large enterprises are satisfied with their workplaces and its conditions. This is mainly due to the workplace-specific benefits, moreover, in terms of operation, many large enterprises have begun to incorporate performance-based wage supplements into their philosophies, which is a characteristic of the private sector (Magyar Posta [Hungarian Post]). Only employees in the low segment of the hierarchy show similarities with the attitudes of public employees in health care and social sectors. Upon exploring the overall standing of the public sector, they gained a homogeneous picture over the course of the study, regardless of the area.

The respondents predominantly believe that employment within the commonly understood public sector currently has:

- a deteriorating, decreasing prestige;
- the negative opinion is primarily the result of the negative material balance of the past years, the increase of burdens and the lack of appreciation;
- employees do not feel they are important in the current system or hierarchy, and consider themselves mainly executors;
- they usually receive negative feedback from their environment with regard to the prestige of the public sector, which are usually the following: low wages, overworking
- in especially the health care and social sector; fixed schedule, low wages and pencil-pushing are typical in perceptions regarding the administrative sector; workplace conditions are more transparent in certain large enterprises (Magyar Posta, MÁV [Hungarian State Railways], BKV [Budapest Transport]) (Gellén, 2013).

Public service competes with the private sector, as well as sometimes the non-profit sector, in obtaining high-quality labour. Certain analyses show that public service has been losing ground more and more in this competition. For it, the nature of the labour market is primarily that of providing supply, which means that supply-side pressure pushes a significant portion of those dismissed from the private sector into the public sector, as well as public administration (Gajduschek, 2010). If we wish to change this, a staff policy that uses remuneration and predictability to influence those preparing to choose a career must be followed, as these two motivations play a key role in their decision regarding career choice. Job seekers, especially young people, will choose public service as a vocation only if they can expect a decent livelihood and career safety. Fair pay is obviously a relative term, which can be assessed through, among others, the development of real incomes. Based on this, the most striking characteristic of the wage policy of the past two decades is that while shifts in GDP, public sector and private sector income usually happen in synchrony, the revenues within the public sector periodically break away to a more significant degree, only for this sector to make up for lagging behind and produce a greater increase in average earnings (Hazafi, 2015).

Dirzyte and Patapas (2022) has revealed that private sector employees demonstrated higher optimism scores than public sector employees, and public sector employees demonstrated higher self-efficacy scores than private sector employees.

The increasing demands of young people towards employers

There is currently a sharp change emerging on the labour market, and the generational aspect is not immune to it either. Both the employer and employee side are facing new challenges. It is essential for young talents to recognize the attitudes and expectations employers have set up towards them. Today, a talented young graduate enters the labour market with several years of professional experience, impeccable language skills and high levels of motivation. As a result, this person has their own expectations towards employers, having recognized the advantages of their position. Talents are no longer the only ones competing with each other for better jobs and positions, but instead, employers also wish to bring the most talented members of the new generation into the fold. This is the explanation for the phenomenon of high fluctuation observable within the current labour market among members of the young generation (Biba, 2015).

In the private sector, they much rather expect graduates to be “self-directed colleagues” from the very beginning, whereas the public sector needs obedient, compliant and professionally trained “good soldiers”. However, it is important to note that this is partly just speculation, as there has been no study that actually measured the competence requirements towards young graduates employed in the public sector (Boda, 2015).

A significant portion of those newly entering the public sector leave the organization within a relatively short period of time. This is because the other labour market segments drain the people in question with relative ease, as they can provide them with more favourable financial conditions in entry-level positions. Conversely, the labour market demand for the older age group is not quite as high, furthermore, due to their seniority, they possess a developed sense of commitment and a high degree of loyalty (Szabó, 2013). Based on feedback from public service personnel, a rearrangement is evident with regard to preparedness and expectations. Members of the staff much rather call for changes against reform fatigue. They support the introduction of a job-based public service career and a performance-based recognition scheme.

Taking the mobility factor into account, those working in the public sector performed much worse than those working in the private sector. There are certain differences between various generation (Z, Y, X, baby boomer, veteran) (Szakács, 2014).

Due to the generational differences, Biba believed it important for the research to highlight the analysis of fluctuation factors based on age. The data received confirmed the presence of the foregoing labour market anomaly in the area of public service. Members of the young generation have a fluctuation indicator that could be classified as significant. This is especially true for 20–29-year-olds, where the fluctuation is 46.2%. The 30–39-year-olds following them experience the worst of this. The break-off comes at 40 and above, where fluctuation is almost negligible. This reinforces the reasoning of Szilvia Szabó, that young people have significantly less sense of dedication and commitment than employees over 40, within the context of public service (Biba, 2015).

Materials and Methods

The topic of our study was examined via two surveys: one used in the assessment of the public sector, while the other for the private sector. By public sector employees, we mean officials who operate as civil servants or government officials (together: public officials) in mayors' offices, government offices or ministries. As for private sector employees, we asked people who operate in large multinational or Hungarian enterprises. The results were analysed through SPSS. The case number is a total of 297 derived from the two surveys, filled out by 150 people from the public and 147 from the private sector. The examined persons are 32% male, 68% female. A two-sample t-test was used to analyse the differences in means between the two sectors. ANOVA with Tukey post hoc test was performed to determine significant differences among age groups in considering changing jobs. Pearson's correlation coefficients were used to examine the relationship between the probability of switching and three work-specific factors: fast careers/promotions, esteemed positions, and exemplary leaders.

Examination of H1

Figure 1 shows how many the respondents believe the relevant workplace aspects to be typical in their current situation. The responses had to be indicated on a scale of 1 to 5.

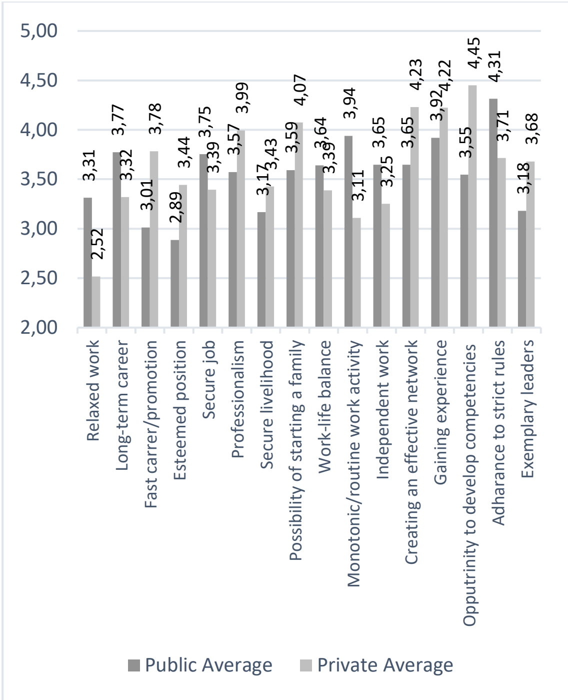

Fig. 1. Means by area **(**n297)
Source: Own creations

Significant difference can be observed

The following are more typical of the public sector than the private sector: relaxed work, long-term career, secure job, professionalism, possibility of starting a family, establishing work-life balance, monotonous/routine work activity, independent work and adherence to strict rules. Of these categories, the highest values were given to the adherence to strict rules, with monotonous/routine work activity in second place, and gaining experience in third. The three lowest values were awarded to the secure job, fast career/promotion and the esteemed position characteristics.

Within the private sector, the fast career/promotion, esteemed position, professionalism, secure livelihood, opportunity for independent work, creation of an effective network, gaining experience, opportunity to develop competencies, and exemplary leaders characteristics were significantly more pronounced. Of these, the opportunity to develop competencies, effective network and opportunity to gain experience were first in line. Last in line were independent work, establishing work-life balance and relaxed work.

With regard to workplace characteristics, Table 1 showcases the entire ranking, including means.

Table 1. Ranking and mean of job characteristics by sectors

	Public Sector	Mean	Private sector	Mean
1.	Adherence to strict rules	4.31	Opportunity to develop competencies	4.45
2.	Monotonous/routine work activity	3.94	Creating an effective network	4.23
3.	Gaining experience	3.92	Gaining experience	4.22
4.	Long-term career	3.77	Possibility of starting a family	4.07
5.	Secure job	3.75	Professionalism	3.99
6.	Independent work	3.65	Fast career/promotion	3.78
7.	Creating an effective network	3.65	Adherence to strict rules	3.71
8.	Work-life balance	3.64	Exemplary leaders	3.68
9.	Possibility of starting a family	3.59	Esteemed position	3.44
10.	Professionalism	3.57	Secure livelihood	3.43
11.	Opportunity to develop competencies	3.55	Secure job	3.39
12.	Relaxed work	3.31	Work-life balance	3.39
13.	Exemplary leaders	3.18	Long-term career	3.32
14.	Secure livelihood	3.17	Independent work	3.25
15.	Fast career/promotion	3.01	Monotonous/routine work activity	3.11
16.	Esteemed position	2.89	Relaxed work	2.52

Source: Own creations

As it can be observed from the means of responses employees in various sectors had to the questions, Figure 1 shows all of 16 characteristics had significant differences. These are relaxed work, promotion, monotonous work activity, the creation of an effective network, and the possibility to develop competencies. Relaxed work was moderately favoured (d=0.796, p<0.001) by the public sector, fast career/promotion (d=-0.769, p<0.001) had a moderate private sector preference, while monotonous/routine work activity (d=0.831, p=0.001) once again appeared for the public sector to a moderate degree. Therefore, the public sector showed a much higher value for a relaxed and monotonous/routine work activity, than the private sector.

Significant difference in favour of the private sector was observable with promotion, creating an effective network and the opportunity to develop competences. For fast career/promotion, the mean difference was (d=-0.769, p<0.001). The mean difference for creating an effective network was - (d=0.585, p<0.585). The largest difference was for competences, with a value of (d=0.902, p<0.001).

Figure 1 demonstrates that while there were differences, they were not significant in the cases of secure livelihood, work-life balance and gaining experience. The smallest difference, as well as the smallest value that was not significant occurred with work-life balance, which we originally thought would be an outlier in the public sector. Instead, it appeared in the private sector. The overall highest mean occurred for the development of competences, which also showed the largest difference as well. Regarding the esteemed position question, the lowest mean was obtained in the public sector, though it was not quite valued by the private sector either.

The ranking of the statements, the expected sector and sector later obtained as a result, as well as the significant differences can be observed in Table 2.

Workplace characteristics	Expected sector	Result sector	Significant
Relaxed work	public	public	no
Long-term career	public	public	no
Professionalism	public	private	yes
Possibility of starting a family	public	private	yes
Work-life balance	public	public	no
Monotonous/routine work activity	public	public	no
Adherence to strict rules	public	public	no
Secure job	public	public	no
Fast career/promotion	private	private	no
Esteemed position	private	private	no
Secure livelihood	private	private	no
Independent work	private	public	yes
Creating an effective network	private	private	no
Gaining experience	private	private	no
Opportunity to develop competencies	private	private	no
Exemplary leaders	private	private	no

Table 2: Distribution of job characteristics by sector

Source: Own creations

Table 3 shows the mean attained from the “Have you ever considered changing jobs” question, grouped by workplaces. There were no significant differences between the two sectors.

Table 3. The idea of changing jobs in sectors

Workplace	Have you ever considered changing jobs? (1=NO, not at all, 5=Yes, definitely)?
Public Sector	3.21
Private sector	2.99
Difference	0.22

Source: Own creations

Figure 2 shows the mean values grouped by ranking. Based on the positions of the respondents, there was a higher mean (d=0.22) for the private sector but there was no significant difference.

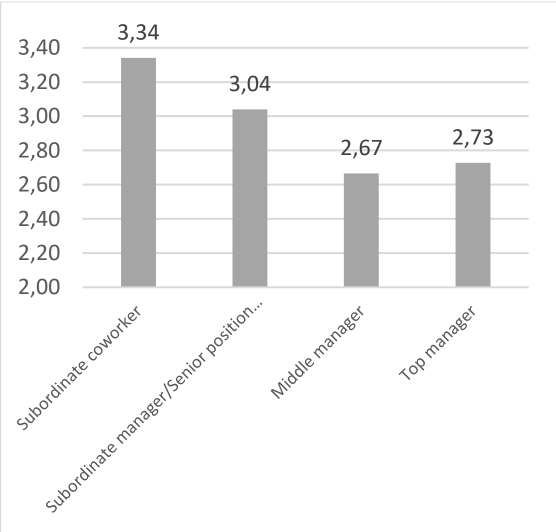

Fig.2. Have you ever considered changing jobs?
Source: Own creations

The first two columns clearly received a higher value on the scale of 1 to 5, therefore it is obvious that those who work in employee, employee manager, or specialized functions are more likely to change jobs. The first three columns show a decreasing trend, with upper managers having the higher values. We also need to note, that this group accounts for the least number of respondents. Figure 3 shows the responses by age to the question of changing jobs. It is clearly demonstrable that the first age group of 21–25-year-olds have not yet considered leaving their first jobs. However, the next group of 26–30-year-olds are seriously considering the possibility of moving on. The last group, those over 56 have the least inclination to find a new job for themselves.

When comparing the means there was significant difference only in the groups containing differing letters in the Fig.3. based on the Tukey post hoc test results.

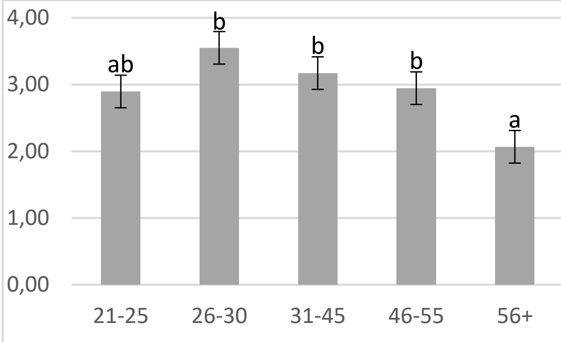

Fig.3. Have you ever considered changing jobs?
Source: Own creations

Figure 4 highlights the willingness to change jobs based on how this may be connected to other work-specific factors. Here, thoughts of a change were influenced and reinforced by a lack of promotions, esteemed positions and exemplary leaders. As the respondents do not feel satisfaction in relation to these areas, the possibility changing jobs begin to occur to them. For instance, the higher the values were for exemplary leaders, the less they considered switching. The analysis reveals that, for example, the possibility of relaxed work, monotony and the adherence to strict rules does not influence switching to another job whatsoever. Table 3 contains the only three factors that have significant connections with the willingness to change jobs. These correlations are shown in Table 4.

Table 4. Correlations

Statement	Correlation at the 0.01 level
Fast career/promotion	0.334
Esteemed position	0.349
Exemplary leaders	0.309

Source: Own creations

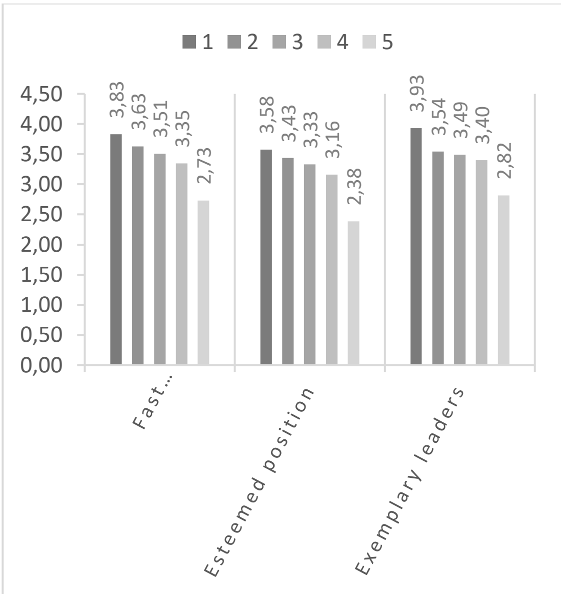

Fig.4. Correlation between the mean values of characteristics of job sector and the probability of switching sectors (1-5)
Source: Own creations

On Figure 4, we demonstrated the relationship between the probability of switching and three work-specific factors: fast career/promotion, esteemed position and exemplary leaders. It is evident that the lower value a factor was given, the higher the probability of switching becomes.

Justification and rebuttal of the hypotheses

Figure 1 and Tables 1 and 2 show the answer to our first hypothesis. The statement of Figure 1 shows that we assumed the statements for the public sector and the private sector correctly for the most part, though some elements show discrepancies, which refute it. We believed professionalism to be more typical of public sector careers, but the answers revealed that higher values averaging around 4 were given by the private sector, whereas this value in the public sector is 3.5. The possibility of starting a family also received higher marks in the private sector, where the mean is above 4, whereas this mean is around 3.6 in the private sector. Therefore, this also deviates from the statement of our second hypothesis. However, the opportunity for independent work was confirmed to be more typical of the public sector, whereas we had stated this to be more accurate for the private sector.

Judging from this, respondents working in the private sector hold a strong degree of professionalism, consider what they do to be important, and do not feel pressured on whether they could reconcile their position with the possibility of starting a family. Meanwhile, respondents working in the public sector do not think that they are afforded less freedom in doing their work. We would like to highlight the statements that received nearly identical values from both sectors, with very minor differences. These include secure livelihood, work-life balance and gaining experience. For these, it was practically irrelevant which sector responded to the specific characteristic. This means that there is no major difference with regard to livelihood, and respondents of both sectors consider it ensured. Work-life balance can be maintained in every area and a great deal of experience may be gained in most positions. These answers typically depend on the position of the individual.

The considerations listed in Table 1 are all positive, driving characteristics, for which the traits listed in the top 3 ranks show the priorities of the two sectors from an employee point of view. These evaluations are extremely important to HR managers and require their attention, as the employees consider these important.

As it is observable in Figure 2, the higher position an employee has, the less they consider changing jobs. These values can be explained by the possibility that middle and upper managers have already reached their goals, feel comfortable at their specific jobs, and as a result, do not wish to switch or have much more to lose, since it is not certain that they could attain such a position at another place. Although for senior managers, the willingness towards mobility is somewhat higher than for middle managers. We believe this may be because they are more burdened by pressure and responsibility in their everyday lives and may wish to switch in hopes of more relaxed work.

The results clearly show that our second hypothesis, which is supported by Figure 3, was justified almost completely, as it is indeed characteristic of the steadily aging group to think less about moving jobs. Those who have found their proper place, based on the criteria that are important to them, are satisfied with their current work. Another influence for them is that they are no longer fuelled by constant challenges and the pursuit of a greater career arc. The difficulty of finding employment, which carries its own risks, is also an obstacle for them.

It is important to note that the willingness to switch jobs is less prevalent in the younger age group of 21-25, which may be because they are willing to settle for an entry position, as they are only just beginning to experience working life and wish to gain experience. The willingness to switch is high for the next group, and afterwards, this factor starts to decline once more in accordance with the age groups. 26–30-year-olds are much more confident, experienced, flexible and are looking for challenges. The willingness to switch is lower for the next two groups, as they rather wish to settle and focus their time and energy on their personal lives and families. People over 56 are characteristically inflexible, comfortable and are getting ready to retire, thus it is understandable that they do not wish to look for a new job.

Conclusions

The results clearly indicate that opinions differ from one individual to another in terms of how much they feel like they have an ideal job, what their professional opportunities are and how much they can reconcile these with home life. It is also difficult to determine the extent to which these can be separated along the lines of the public sector and the private sector. Typically, those in a higher position tend to be more satisfied with their jobs and conditions, which is independent from the sector they belong to. As a result, if they can choose freely upon finishing university, young graduates are more likely to make their choice regarding employment based on their personal attitude. However, they do not always have this opportunity, as often they will choose one that does not completely meet their demands, so they could begin their independent lives within a short period of time. This compels them to move to a higher or completely different position or sector as soon as possible, where they could truly make something of themselves.

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RECEIVED: 01 May 2022 **ACCEPTED: 28 November 2022**

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https://doi.org/10.38104/vadyba.2022.2.07

Vadyba
Journal of Management
2022, 2(38)
ISSN 1648-7974

KNOWLEDGE-BASED RESOURCES IN MARKET SHARE DEVELOPMENT

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Abstract
Knowledge management (KM) is described as a crucial element for business success and competitiveness. KM practices are commonly linked to continuous business renewal, productivity and efficiency improvement. Building knowledge-based resources (KBRs) in the organization is of particular importance, as they create opportunity to achieve a competitive advantage, develop market share, and strengthen the overall performance of the firm. It should be remembered that KBRs are always strongly related to human resources and refer to such attributes as individual knowledge, abilities, skills, experience and innovation. The main aim of the article is to identify the relationship between selected areas of KBRs and the change in the firm's market share. To realize of the main aim, the survey study was developed on a group of 355 enterprises in Poland in early 2022. The respondents, who represent managerial stuff or firms' owners, express opinions on selected KBR elements using a 5-point Likert scale. To analyze the research results, the common statistical methods in management studies were used, as descriptive statistics and Kendall Tau correlation analysis. As a main conclusion, there are positive correlation between selected KBRs and firm's market share. Hence, building and constant renewal of KBRs brings several advantages for organizations, including development of market share, and, consequently, competitiveness improvement.
KEY WORDS: competitiveness, human resources management, knowledge-based resources, knowledge management, large enterprises, market share, SMEs

Introduction

Contemporary markets are characterized by being highly turbulent, dynamic, and presently highly unstable which requires firms to develop advanced dynamic capabilities to overcome the challenges and threats related to the new political, social and economic situation (Pacheco et al., 2022; Mahto et al., 2022). Currently, well-established management methods are increasingly being questioned, which have proved ineffective in the face of the pandemic and war in Ukraine. However, management, as a social science, is constantly revised and modified, requiring constant empirical research to help adapt existing tools to a changing environment.

Nowadays, knowledge management (KM) is one of the most important and necessary resource for any type of organization (Garcia, SosaFey, 2020). Many previous studies have described KM as a key tactical element of business processes (Pepple et al., 2022). The importance of KM as a determinant of the firm's success in the era of technological dynamics is also widely emphasized (Srinivasan et al., 2020). In practice, knowledge management in firms, especially in small and local businesses, is highly disordered and ad hoc, and thus turns out to be insufficient or unreliable (Al-Kurdi et al., 2018).

Organizations now appreciate the special importance of KM as an operational tool used in ensuring market competitiveness. The prevailing belief is that information gathering, dissemination, and use for the business advantage is the most important factor that determines the performance of organizations (Sun et al., 2022).

Considering KM as the driving force of social and economic development and firm's competitive strength, the determining role of KM in improving the management performance of organizations, and internal process efficiency should be emphasized (Deng et al. 2022). Previous studies linked KM practices to continuous business renewal, productivity and efficiency improvement, and enhanced project efficiency (Yap, Shavarebi, 2022).

KM capitalizes on the collective knowledge of organization, and the expertise of its members and stakeholders in terms of lessons learned, best practices, problem solving methods and creative processes (Yap et al., 2022). KM processes typically involve the continuous activities of knowledge creation, sharing, storage and application (Gunasekera, Chong, 2018).

KM is necessary to intensify activities related to the learning process of the organization, as well as in basic management areas such as planning, organization, control and management. For an organization to develop on the basis of knowledge, its creation, acquisition and use must not be ad hoc, but must take the form of a coherent process. This process should include activities for storage, measurement and transfer the knowledge, as well as creating the explicit knowledge and intellectual capital, supported by technologies through the stages of knowledge acquisition, internalization, exploitation, transfer and measurement (Su, Daspit, 2022).

The paper is structured as follows: Section 2 includes the theoretical background on knowledge-based resources in organization. Section 3 presents the methodological description of the study. Section 4 analyses the results of the research. Finally, the last section concludes the paper with limitations, and future research directions.

Literature review

To the organizational resources should be included all assets and inputs necessary to achieve business goals (Kaya, Patton, 2011). They can be in form both tangible or intangible elements used to business activities and processes. It is recognized that the concept of resources, in organizational terms, is a narrowing of the concept of capability. From this point of view, organizational capability is a broader construct because it is assumed that it includes the ability to carry out organizational tasks in a consistent and coordinated manner, based on the available resources of the enterprise, with the intention of achieving a specific end result. It should be noted, however, that in the literature on knowledge management, both concepts are very similar, because all processes are based on information and personal skills and are implemented on the basis of complex interactions between individual elements of business resources (Tsai, Jhang, 2010).

The development of the knowledge-based resources (KBRs) provides an opportunity to more fully identify and explore entrepreneurial opportunities (Basu et al., 2015). KBRs are a very special type of resource. They are highly unique and difficult to imitate by business rivals. From this perspective KBRs create opportunity to achieve a competitive advantage, strengthen the overall performance of the firm, as well as provide a chance of survival in long term (Hansen, 2002). According to Yin and Jahanshahi (2018), to be competitive, organization need to collect, accumulate, integrate, and use knowledge to develop new products, services and processes. The ability to the accumulation, combination and exploitation of KBRs is a precondition to being innovative and entrepreneurial in the organization as a whole (Kaya, Patton, 2011). Basing on knowledge resources increases the chance of proper perception of the economic environment. Efficient anticipation of market changes allows to build strategic attitudes that enable flexible adaptation to them (Caloghirou et al., 2004). In addition, treating knowledge as a key strategic resource refers not only to explicit knowledge, obtained through formal education and trainings, but also to tacit knowledge that can only be acquired through direct experience.

Knowledge in a firm aggregates opportunities, capabilities, structured information and technological solutions, to ensure more thanks to which the enterprise can more precisely predict the scope and character of market changes, and prepare the proper answer on the tactical and strategic level of management (Wiklund, Shepherd, 2003).

It is often emphasized that KBRs create barriers of knowledge as they are protected from imitation. KBRs are built on the basis of talents that are elusive but also unique (Nieves et al., 2014). However, it should not be forgotten that to talk about KBRs of organization, knowledge cannot be treated as a resource accumulated only in the minds of individuals. It should be implemented in structures, procedures, and business processes, and used with the relations of the firm with the business environment. In this way, knowledge becomes an asset of the firm, and thus the risk of its loss is reduced when individual employees leave their jobs (Nieves et al., 2014).

The value of a knowledge resources is visible in how it interacts with other resources (Martin-Rios et al., 2022), especially with human resources. It should be remembered that KBRs are always strongly related to human resources and refer to such attributes as individual knowledge, abilities, skills, experience and innovation (Krysińska et al., 2018; Nathan et al., 2019). Only this way of embedding knowledge, which applies to the entire organization and not to its individual members, leads to success and sustainable development.

When building KBRs to increase an organization's market share, the priority is the highest quality human resources, because employees are a specific strategic and organizational asset used to develop relationships with stakeholders (McDonnell et al., 2016). This is the reason why human resources should be prioritized as a mean to integration and transfer of knowledge within the organization (Singh et al., 2021). Hence, Fang et al. (2018) emphasize that KBRs should be treated as a complex intangible resource, constituting a collective resource at the organizational level, created on the basis of the exchange and integration of knowledge of many individuals.

Method

The main aim of the article is to identify the relationship between selected areas of KBRs and the change in the firm's market share.

The goal was achieved on the basis of own research on a group of 355 enterprises operating in southern Poland. The study was not representative; therefore, the conclusions of the study should be treated as preliminary conclusions, indicating the regularities and directions of further research.

The study was conducted in early 2022. The study used the proprietary questionnaire, which consisted of closed questions and had a 5-point Likert scale adopted on the basis of (Sheng et al. 2011; Peng, Luo 2000), in which the respondents assessed the studied phenomenon. The analyzed elements of KBR were selected based on literature (Wiklund, Shepherd, 2003; Bojica, Fuentes, 2012), and were the opinions of managers presented in a 5-point scale. Also the dependent variable - market share - is a subjective declaration of the managers of the surveyed companies, who rated it on a scale from 1 to 5, where 1 - a large decrease and 5 - a large increase.

The paper questionnaire was filled in directly by managers/owners of the surveyed firms. The participation to the survey was anonymous. After formal evaluation of the collected data, they were subjected to appropriate statistical analysis using the Statistica 13.3 program. To analyze the research results, the commonly methods in management studies were used, as descriptive statistics and Kendall Tau correlation analysis.

When analyzing the research group, it turns out that the smallest group among the surveyed companies are companies starting their activity (n=9), companies operating for more than 20 years (n=130) and operating for 11 to 20 years (n=81) dominate. Over 42% of the surveyed companies belong to the micro-enterprise sector, i.e. enterprises employing up to 9 employees, while over a quarter of the enterprises employed from 10 to 49 employees. In total, the SME sector accounted for 82.26% of the surveyed enterprises. Among the surveyed companies, 63 enterprises were included in the sector of large enterprises with employment exceeding 250 employees. The dominant group of the surveyed enterprises were companies providing services (n=183), then trade companies (n=92), which constituted 1/4 of the surveyed enterprises (Table 1).

Table 1. Characteristics of the surveyed companies (n=355)

<table>
<tr><td rowspan="2">The surveyed companies</td><td colspan="5">Company age</td></tr>
<tr><td>up to 1 year</td><td>1-5 years</td><td>6-10 years</td><td>11-20 years</td><td>over 20 years</td></tr>
<tr><td>n</td><td>9</td><td>66</td><td>69</td><td>81</td><td>130</td></tr>
<tr><td>%</td><td>2.53</td><td>18.59</td><td>19.44</td><td>22.82</td><td>36.62</td></tr>
<tr><td rowspan="2">The surveyed companies</td><td colspan="5">Size of the company (number of employees)</td></tr>
<tr><td>Micro (0-9)</td><td colspan="2">Small (10-49)</td><td>Medium-Sized (50-249)</td><td>Large (250 and more)</td></tr>
<tr><td>n</td><td>151</td><td colspan="2">90</td><td>51</td><td>63</td></tr>
<tr><td>%</td><td>42.54</td><td colspan="2">25.35</td><td>14.37</td><td>17.74</td></tr>
<tr><td rowspan="2">The surveyed companies</td><td colspan="5">Dominant profile of activity</td></tr>
<tr><td colspan="2">Trade</td><td colspan="2">Production</td><td>Services</td></tr>
<tr><td>n</td><td colspan="2">92</td><td colspan="2">80</td><td>183</td></tr>
<tr><td>%</td><td colspan="2">25.91</td><td colspan="2">22.53</td><td>51.56</td></tr>
</table>

Results

The literature review of the subject allowed to identify the areas of knowledge-based resources in enterprises. The research made it possible to identify six areas of knowledge-based resources in the surveyed companies, including:

- K-B_R_1: knowledge-based resources in the field of technical knowledge,
- K-B_R_2: knowledge-based resources in the field of IT knowledge,
- K-B_R_3: knowledge-based resources in the field of product / service development,
- K-B_R_4: knowledge-based resources in the field of marketing knowledge,
- K-B_R_5: knowledge-based resources in the field of customer service,
- K-B_R_6: knowledge-based resources in the field of business management.

The research has shown that the average level of knowledge-based resources in selected areas is different, however, they oscillate between the values of 3.68 and 4.14 on a 5-point scale. The highest level of knowledge-based resources is declared by the surveyed enterprises in the field of technical knowledge at the level of 4.14 and this value deviates from the average value by +/- 0.821 points on a 5-point scale. Interestingly, only in the case of the K-B_R_1 area the minimum value for the variable is 2.0. The lowest level of resources is declared by enterprises in the area of K-B_R_2 and K-B_R_4, at the level of 3.68 and this value deviates from the average value by approximately +/- 1.030 points on a 5-point scale. In all selected areas, the maximum value of the examined variable was at the level of 5.0 (Table 2).

Table 2. Descriptive statistics for knowledge-based resource areas (K-B_R)

	N	Mean	St. Dev.	Min.	Max.
K-B_R_1	355	4.14	0.821	2.0	5.0
K-B_R_2	355	3.68	1.030	1.0	5.0
K-B_R_3	355	4.12	0.828	1.0	5.0
K-B_R_4	355	3.68	1.027	1.0	5.0
K-B_R_5	355	4.03	0.975	1.0	5.0
K-B_R_6	355	3.83	1.017	1.0	5.0

Further research made it possible to distinguish four groups of the surveyed enterprises in terms of the size of employment and the identification of knowledge-based resources in selected areas of companies. It turned out that in micro-enterprises employing up to 9 employees, the highest level was declared for knowledge-based resources in the field of product / service development (K-B_R_3), at an average level of 4,165 on a 5-point scale, while the lowest level for resources in the field of IT knowledge (K-B_R_2), at an average level of 3.549 on a 5-point scale (Fig. 1).

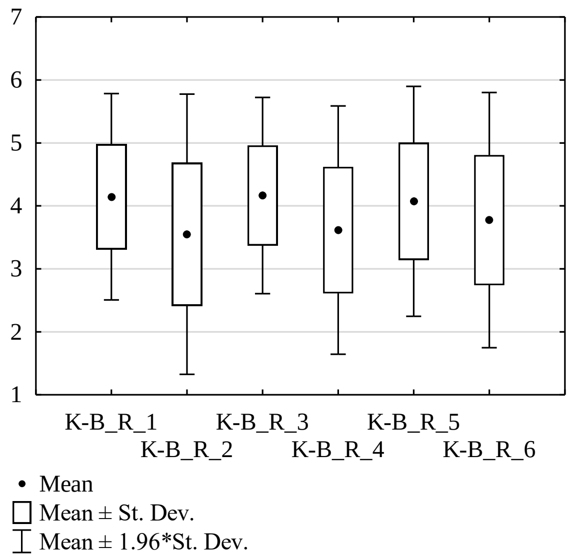

Fig. 1. Average level of knowledge-based resources in selected areas in micro-enterprises (n=151)

In small enterprises employing from 10 to 49 employees, the highest level was declared for resources in the field of technical knowledge (K-B_R_1), at the average level of 4,144 on a 5-point scale, and the lowest level for knowledge-based resources in the field of marketing knowledge (K-B_R_4), on the average level of 3,577 on a 5-point scale (Fig. 2).

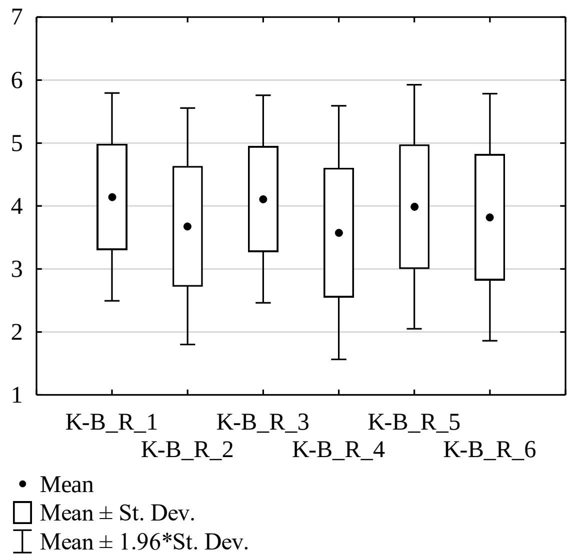

Fig. 2. Average level of knowledge-based resources in selected areas in small enterprises (n=90)

In medium-sized enterprises employing from 50 to 249 employees, the highest level was declared for knowledge resources in the field of technical knowledge (K-B_R_1), at the average level of 4,098 on a 5-point scale, and the lowest level for knowledge-based resources in the field of IT knowledge (K-B_R_2), at an average level of 3.843 on a 5-point scale (Fig. 3).

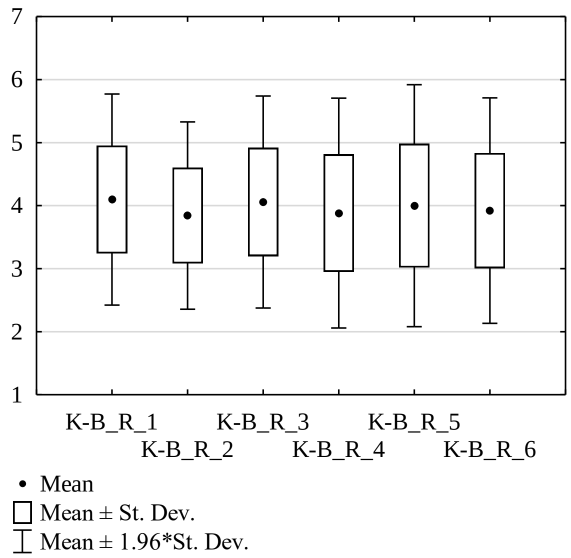

Fig. 3. Average level of knowledge-based resources in selected areas in medium-sized enterprises (n=51)

In large enterprises employing 250 or more employees, the highest level was also declared for knowledge-based resources in the field of technical knowledge (K-B_R_1), at the average level of 4,158 on a 5-point scale, and the lowest level, interestingly, for KBRs in the field of marketing knowledge (K-B_R_4), at an average level of 3,809 on a 5-point scale (Fig. 4).

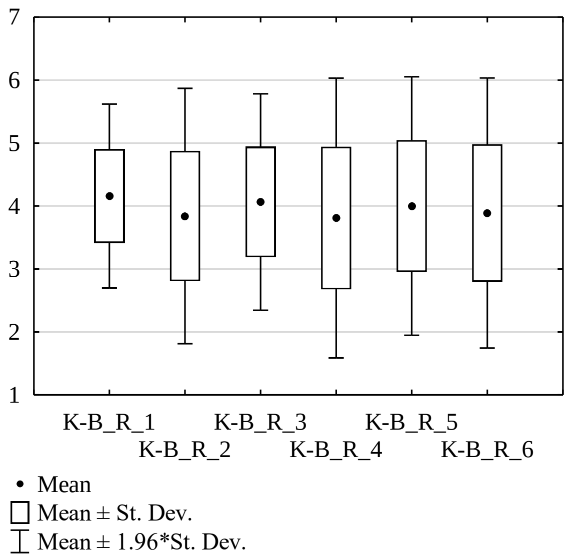

Fig. 4. Average level of knowledge-based resources in selected areas in large enterprises (n=63)

Based on the conducted research, it can be concluded that in all groups of enterprises, due to the size of the company, the highest level of knowledge-based resources occurs in the field of technical knowledge and product / service development. In micro and small enterprises, the level of knowledge-based resources is the lowest in the field of organization management, IT knowledge and marketing knowledge, which is certainly influenced by the scale of the enterprise, its financial capabilities and qualified personnel. In medium and large enterprises, the level of knowledge resources in selected areas does not differ significantly from each other. Figure 5 is a graphical comparison of the results for individual groups of enterprises covered by the study.

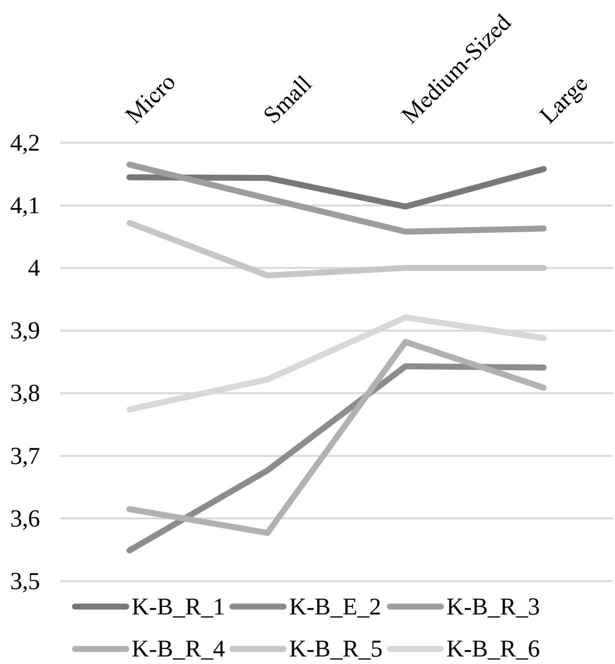

Fig. 5. Average level of individual knowledge-based resources in the surveyed enterprises (n=355)

The implication for managers of individual groups of enterprises is the observation that KBRs should be analyzed in great detail, because some elements of KBRs are at a similar level in all enterprises, regardless of their size, while the level of other KBRs is significantly lower in micro- and small.

The next step of the analysis was the identification and assessment of correlations between selected KBRs and market share. The Kendall Tau correlation indicator was used to find correlations between variables.

Table 2. Kendall Tau correlation between selected KBRs and firm's market share intensity (p=0.05)

	Market share
K-B_R_1	0.102
K-B_R_2	0.140
K-B_R_3	0.125
K-B_R_4	0.204
K-B_R_5	0.193
K-B_R_6	0.208

The correlation analysis showed statistically significant relationships between the studied variables, with a weak intensity, ranging from 0.102 to 0.208.

Confirmation of the presence of a statistically significant relationship, although to a small extent, should encourage the researchers of the subject to further in-depth verification of this relationship, taking into account also the moderating variables that may strengthen the relationship under study.

Conclusions

Considering environmental conditions characterized by intense competition, market dynamics and new management practices, companies must use various knowledge acquisition channels to keep their knowledge resources up-to-date (Agostini, Nosella, 2019; Baraldi, Ratajczak-Mrozek, 2019). The efficiency of using organizational knowledge is a crucial factor of firm's competitiveness and developing market share of organization (Omerzel, Gulev, 2011).

The conducted analysis confirms the relationship between the analyzed areas of KBRs and the market share of the organization. A weak relationship between the variables may indicate the influence of the moderating / mediating variables, which will be a research challenge in the future.

When indicating research limitations, attention should be paid in particular to the fact that the research concerns one national market, which may be highly specific. The use of a 5-point Likert scale can also be indicated as limitation, as well as the use of only a managerial approach when obtaining opinions. The current limitations are also the directions of potential research in the future.

It can be assumed that the presented results also have implications for business practice. The constant analysis of KBRs gives an opportunity to maintain their flexibility Managers should approach the analyzed quantities as dynamic abilities that require constant adaptation and a strategic management perspective.

Acknowledgements

This work was supported under the research project No. VEGA No. 1/0718/22 Human resources development in small and medium-sized enterprises in the context of the 21st century challenges.

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RECEIVED: 19 April 2022 **ACCEPTED: 28 November 2022**

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https://doi.org/10.38104/vadyba.2022.2.08

Vadyba
Journal of Management
2022, № 2 (38)
ISSN 1648-7974

THE FEATURES OF BUSINESS DIGITIZATION DEVELOPMENT INDICATORS IN SELECTED ECONOMIES

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Abstract
Digitization increases operations efficiency, innovative processes, value creation and delivery in business activity. Many developed countries use digital transformation as one of the strategies for improving their enterprises operations. Business digitization highly depends on country financial investments to network physical infrastructure, relevant skills, various regulations, use and adoption of technologies. However, there are still large differences in business digitization across countries. The aim of the study is to perform a comparative analysis of business digitization development indicators in Lithuania and Bulgaria. The aim was reached by performing a theoretical justification of the concept of business digitization and to identify the main conditions and development indicators of business digitization, and by conducting a comparative evaluation study of business digitization development indexes and indicators. The overview of literature of business digitalization was conducted and it was found that the difference between Industry 4.0 and Industry 3.0 is that the latter was based on the global transition of specimen data from analogue to digital signals, and the Industry 4.0 develops on Industry 3.0. Also, it was found that the development of business digitalization is closely related to the country's level of digitalization, which depends on several conditions, such as: digitalization-related government decisions, regulation, communication infrastructure and availability, skills, financial incentives, and the use of technology. The research was conducted by comparing five dimensions of Digital Economy and Society Index (DESI) 2022 that are: Connectivity, Digital skills, Use of Internet, Integration of Digital Technology, Digital Public Service, and three dimensions of ICT Development Index (IDI) 2017 that are: Access, Usage and Skills. The results of DESI 2022 and IDI 2017 showed that Lithuania in both indexes ranks higher than Bulgaria, and the weakest area in Lithuania is DESI 2022 dimension of Connectivity. Thus, more targeted investments for the development of 5G network development and accessibility is needed for better adoption and development of intelligent technologies that are the future of all businesses, and society.
KEYWORDS: Business digitization, digitization development indicators, DESI, IDI, Industry 4.0.

Introduction

Nowadays, digitization plays key role in businesses life. It increases operations efficiency, innovative processes, value creation and delivery (Akpan & Ibidunni, 2021). Many developed countries use digital transformation as one of the strategies for improving their enterprises operations. It is important to mention, that the level of business digitization depends not only on companies themselves, but also on country financial investments to network physical infrastructure, relevant skills, various regulations, use and adoption of technologies. However, there are still large differences in business digitization across countries and in order to better understand the prospects of business digitization in the country, it is important to distinguish the main evaluation indicators and compare them between countries of different economic strength.

The aim is to perform a comparative analysis of business digitization development indicators in Lithuania and Bulgaria.

The main objectives are:

1. To perform a theoretical justification of the concept of business digitization and to identify the main conditions and development indicators of business digitization.
2. Conduct a comparative evaluation study of business digitization development indexes and indicators.

Theoretical background

Industrial development processes nowadays are an extremely complex field, which requires multifaceted scientific knowledge, continuous complex researches that are focused on various new challenges caused by globalization processes (Tofan & Jakubavičius, 2018). Different interpretations of the concept of digitization can be found in the scientific literature. Buck and Eder (2018) digitization described as “the increasing penetration and adaptation of digital technologies in society and economy as well as the associated changes in behavior”. Slezák, Barotová, Červenková, and Svačková (2021) state, that the concept of digitization refers to the use of information and digital technologies, which allows to simplify and improve the processes of communication, information transfer, and data storage. Moreover, digitization means that not the processes are digitizing, but the information (Bloomberg, 2018).

The researchers argue that the different interpretations limit the development of the unification and standardization processes required for industrial digitization (Tofan & Jakubavičius, 2018). The concept of industrial digitization is directly related to the fourth industrial revolution, which is often referred to as "Industry 4.0" in the literature (Tofan & Jakubavičius, 2018).

According to Sepashvili, E. (2020), the realization of an innovation-based approach is the main key for creating a modern competitive economy and achieving irreversible economic growth, and for that it is necessary to form a national innovation system adapted to the specific country's economic, political, social, and cultural characteristics. The Fourth Industrial Revolution (Industry 4.0) was mainly driven by the emergence and mass-generalization of the Internet (Neamţu, Hapenciuc, & Bejinaru, 2019). Based on that the authors Tofan, T. and Jakubavičius, A. (2018) distinguish the following main characteristics of the Fourth Industrial Revolution:

- Ubiquitous mobile Internet;
- Smaller, cheaper and more powerful sensors;
- Artificial intelligence;
- Self-automatic learning of smart machines and devices.

However, the difference between Industry 4.0 and Industry 3.0 is that the latter was based on the global transition of specimen data from analogue to digital signals (Nelson & Ellis, 2018) began in the 1980s and the Industry 4.0 actually develops on Industry 3.0. This development is manifested in attempts to make production facilities communicate with each other with the help of information technology (Tofan & Jakubavičius, 2018). Because of the main characteristics of Industry 4.0 the latest technologies and innovations are spreading much faster and on a larger scale than during Industry 3.0, which still takes place in some parts of the world (Tofan & Jakubavičius, 2018).

The one of the main advantages of digitization for companies is instant access to information and the ability to exchange between people as well as plugged-in applications such as cloud, analytic and social tools, and other mobile devices (Buck & Eder, 2018). The authors Tofan and Jakubavičius (2018) claim that companies must commit to digitization changes at all levels from production planning to sales. Digitization also enables effective management of relationships with customers and suppliers.

The realization of innovation-based approach is the key principle for achieving economic growth and creating a competitive economy (Sepashvili, 2020). In order to increase the competitiveness of the economy through the digitization of the industry, adequate government sector solutions are necessary to reduce the risk and negative consequences of such processes, which are associated with a decrease in the need for labour in production and service processes (Tofan & Jakubavičius, 2018). Ranchordás (2022) finds that governments throughout the world have already made significant investments in the digitization of public services, information, administration, and integration of services. Various authors also claim that the main condition for technological development and transformation are innovative development and science-based growth.

Sepashvili (2020) has highlighted key conditions of business digitization that are:

1. The overall environment for the use and development of technology, including political, regulatory, business and innovation factors;
2. Network physical infrastructure for information and communication technologies (ICT) use, and relevant skills;
3. Adoption/use of technology by government, private sector/business and individuals/consumers;
4. Economic and social impact of modern technologies.

Neamţu and others (2019) finds two indexes that analyse the Information and Communications Technology (ICT) situation and their impact on the business sector – the State ICT Development Index (IDI) and Digital Economy and Society Index (DESI). IDI reflects a country's digitization level (Özsoy, Ergüzel, Ersoy, & Saygılı, 2022) or in other words, allow us to see the overview of countries attractiveness for current investments and for foreign investors, and DESI shows government investments size in digitizing the economic activities of market players.

IDI has three main dimensions: Access, Usage and Skills (Chand, 2020), while DESI has five main dimensions: Connectivity, Digital skills, Use of Internet, Integration of Digital Technology, and Digital Public Service (Jovanović, Dlačić, & Okanović, 2018). Thus, these are the main indexes for country's evaluation in the context of digitization. According to Statista Research Department (2021), internet and digital platforms are the key factors for both small and medium business, and consumer's purchase decision. Nowadays more and more consumers turn to digital platforms for researching various products and services, and businesses already recognize and use this opportunity in the digital environment.

Methodology

In order to compare the development of business digitalization in economies, it is necessary to distinguish the main indicators of the development of business digitalization. Analysing scientific articles and journals, four main conditions for business digitization were identified, and based on these categories it was chosen to divide indicators of business digitization into four groups:

1. Indicators of business environment;
2. Indicators of physical infrastructure and skills for ICT use;
3. Indicators of use of technologies by public institutions, private sector companies and individuals;
4. Indicators of economic and social impact of modern technologies.

These conditions are overviewed under DESI and IDI main dimensions and indicators, since DESI overviews government investments into digitizing economics, and IDI overview countries overall digitization level.

The study will analyse the DESI 2022 and IDI 2017 indicators of country and business digitization development in Lithuania and compare it with Bulgaria. Bulgaria was chosen for the comparative analysis, which has a market size similar to that of Lithuania, belongs to the same region - the EU, and is considered to be an economically weaker country than Lithuania. The comparative analysis of the countries will allow predicting new opportunities for the development of the Lithuanian economy through the digitalization of business.

Results

According to European Commission (2022) Digital Economy and Society Index (DESI) 2022 overview in Lithuania and Bulgaria, Lithuania has a score of 52,7 and the rank 14 out of 27 EU Member states (EU score is 52,3), while Bulgaria's score 37,7 and rank 26. While analysing DESI it is important to go through all its dimensions to better understand country's capacities and the weakest areas starting with the dimension of human capital.

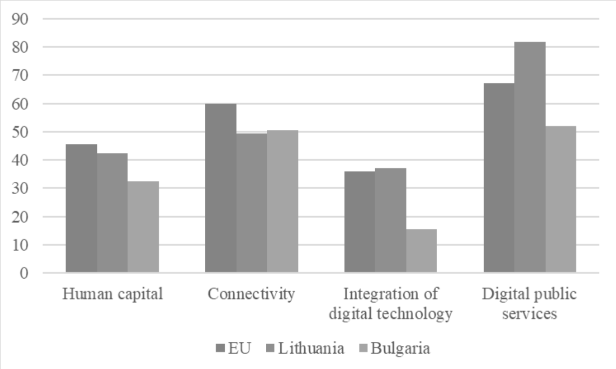

Fig. 1. DESI 2022 dimensions and ranking
Source: Eurostat – European Commission (2022)

According to European Commission (2022) DESI 2022 human capital results that are visible in the **Fig. 1**., Lithuania's score is 42,5 while the score in Bulgaria is 32,6 and EU 45,7.

Table 1. DESI 2022 of Human capital

	DESI 2022		
	EU	**Lithuania**	**Bulgaria**
At least basic digital skills	54%	49%	31%
Above basic digital skills	26%	23%	8%
At least basic digital content creation skills	66%	61%	44%
ICT specialists	4,5%	3,8%	3,5%
Female ICT specialists	19%	24%	28%
Enterptrises providing ICT training	20%	14%	7%
ICT graduates	3,9%	4%	4,6%

Source: Eurostat – European Commission (2022)

In human capital dimension Lithuania ranks 20th place of 27 EU Member states. The results in the **Table 1** shows that 49% of all population in Lithuania has basic digital skills, while in Bulgaria is 31% and 54% in EU. A significant difference between Lithuania and Bulgaria can be seen on data of digital skills that are above basics – 23% and 8% respectively (average in EU is 26%). However more than a half of population in Lithuania (61%) and almost half of population in Bulgaria (44%) have at least basic digital content creation skills (versus 66% in EU). Moreover, the percentage of female ICT specialists out of all ICT specialists in both Lithuania and Bulgaria is higher than the EU average, 24%, 28%, 19%, respectively, as well as the percentage of ICT graduates (4%, 4,6% and 3,9%). The final feature of human capital dimension is enterprises providing ICT training and the results show that only 7% of companies provided ICT trainings to their employees which is half less than Lithuanian companies investment in their employees ICT trainings, while EU average is 20%.

The next dimension of DESI is connectivity which scores in Lithuania and Bulgaria are quite similar 49,4 and 50,7 respectively, in comparison to the EU average of 59,9 (**Fig. 1**). In this dimension Bulgaria ranks 19th and Lithuania only 23rd, thus the deeper analysis of the main indicators of connectivity is needed to better understand the areas where Lithuania needs more investments.

Table 2. DESI 2022 of Connectivity

	DESI 2022		
	EU	**Lithuania**	**Bulgaria**
Overall fixed broadband take-up	78%	67%	63%
At least 100 Mbps fixed broadband take-up	41%	36%	22%
At least 1 Gbps take-up	7,58%	0,72%	0,42%
Fast broadband (NGA) coverage	90%	85%	93%
Fixed Very High Capacity Network (VHCN) coverage	70%	78%	85%
Fibre to the premises (FTTP) coverage	50%	78%	85%
5G spectrum	56%	5%	25%
5G coverage	66%	33%	40%
Mobile broadband take-up	87%	85%	73%
Broadband price index	73	89	86

Source: Eurostat – European Commission (2022)

Table 2 shows that VHCN, FTTP coverage indicators, and Broadband price index in both Lithuania (78%, 78%, 89) and Bulgaria (85%, 85%, 86) are higher than EU average accordingly of 70%, 50% and 73. VHCN is provided by FTTP technology and indicates, that VHCN covers higher percentage of households in Bulgaria than in Lithuania. The connectivity situation is better in Bulgaria than in Lithuania also because the NGA coverage, 5G spectrum and coverage are also higher in Bulgaria, accordingly 93%, 25%, 40%, while in Lithuania they cover 85%, 5% and 33% (versus EU average of 90%, 56%, 66%). According to Attaran (2021), 5G's really fast connection and low-latency are needed for intelligent automation such as AI, digital reality, blockchain, etc. In addition, overall fixed broadband, and mobile broadband take-ups in Lithuania (67%, 85%) and Bulgaria (85%, 73%) rank high, but still lower than EU average (78%, 87%). However, both Lithuania and Bulgaria rank very low in at least 1 Gbps take-up (0,72% and 0,42%), and at least 100 Mbps fixed broadband take-up (36% and 22%), compared to EU average of 7,58% and 41%. According to European Commission (2022) results, the main problem in Lithuania is than rural areas are still lagging behind urbanized areas despite that connectivity has increased over years.

Integration of digital technology sub-index is the lowest of all four sub-indexes. Lithuania ranks 13th with the score 37,2 compared with Bulgaria, which ranks 26th with the score 15,5 (versus EU average score of 36,1). All indicators of DESI 2022 Integration of digital technology are provided in **Table 3**.

Table 3. DESI 2022 of Integration of digital technology

	DESI 2022		
	EU	**Lithuania**	**Bulgaria**
SMEs with at least a basic level of digital intensity	55%	57%	25%
Electronic information sharing	38%	45%	22%
Social media	29%	22%	13%
Big data	14%	11%	6%
Cloud	34%	28%	10%
Arteficial Intelligence (AI)	8%	4%	3%
ICT for environmental sustainability	66%	74%	68%
e-Invoices	32%	27%	10%
SMEs selling online	18%	32%	10%
e-Commerce turnover	12%	18%	4%
Selling online cross-border	9%	12%	4%

Source: Eurostat – European Commission (2022)

Lithuania performs slightly above the EU average in most of the indicators of this sub-index (**Fig. 1**). In Lithuania there are even 57% SMEs with at least a basic level of digital intensity, 32% of SMEs selling online, of which 12% are selling online cross-border, while in Bulgaria indicators are 25%, 10% and 4% (versus EU average of 55%, 18%, 9%). Also, e-Commerce turnover, electronic information sharing and even ICT for environmental sustainability in Lithuania (18%, 45%, 74%) are noticeably higher than EU average (12%, 38%, 66%), while in Bulgaria e-Commerce turnover and electronic information sharing indicators are significantly lower (4%, 22%), and ICT for environmental sustainability percentage (68%) is a bit lower than in Lithuania, however a bit higher than EU average. Meanwhile, only 22% of enterprises in Lithuania use social media, 11% of them take up Big data, 28% Cloud solutions, only 4% is integrating AI technologies into their operations, and 32% use e-Invoices system. In Bulgaria these percentages are even lower – accordingly 13%, 6%, 10%, 3% and 10%, while the average in EU is 29%, 14%, 34%, 8% and 32%. It can be noted that those businesses who adopted digitization, generates massive data every nanosecond, thus without Big data analysis it becomes challenging to manage a combination of structured and unstructured data (Garg, Popli, & Sarao, 2021). Despite that Lithuania performs better than EU average there is still a bit of a gap while taking into consideration such modern technologies as Big data, Cloud, AI, however Lithuania is waiting for additional financial support for development of AI products and services, and for 5G connectivity.

The fourth sub-index of DESI 2022 is Digital public services and Lithuania's score (81,8) of this sub-index is significantly higher than Bulgaria's score (51,9) and EU average (67,3) (**Fig. 1**). Due to such scores Lithuania ranks 10th and Bulgaria ranks 25th of 27 EU countries.

Table 4. DESI 2022 of Digital public services

	DESI 2022		
	EU	**Lithuania**	**Bulgaria**
e-Government users	65%	70%	34%
Pre-filled forms	64	92	58
Digital public services for citizens	75	82	59
Digital public services for businesses	82	93	76
Open data	81%	89%	78%

Source: Eurostat – European Commission (2022)

Table 4 reflects five main indicators of Digital public services and shows that Lithuania performs significantly better than Bulgaria and EU average in terms of providing digital public services for both businesses (score 93 in Lithuania, 76 in Bulgaria, 82 in EU) and individuals (accordingly 82, 59, 75). The percentages of e-Government users and Open data in Lithuania are also pretty high – 70% and 89%, while in Bulgaria there are only 34% and 78% (versus EU average of 65% and 81%). Also, the score of Pre-filled forms in Lithuania is significantly higher than in Bulgaria and EU average, accordingly 92, 58 and 64. All these indicators show Lithuania's progress in this dimension, but greater improvements are necessary in order to increase the competitiveness of the country and businesses internationally.

Next, the digitization level of Lithuania and Bulgaria will be compared by comparing tree main dimensions of IDI 2017 (**Fig. 2**).

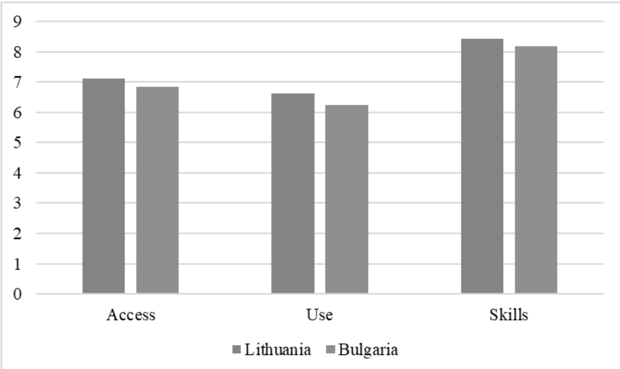

Fig. 2. IDI 2017 dimensions and values in Lithuania and Bulgaria
Source: ITU | 2017 Global ICT Development Index

Lithuania ranks 41st of 176 countries in the world with IDI 2017 total value 7,19 and Bulgaria ranks 50th with value 6,86. **Fig. 2** shows, that values in all three IDI 2017 dimensions are higher in Lithuania than in Bulgaria.

Table 5. IDI 2017 of Access

	IDI 2017	
	Lithuania	Bulgaria
Fixed-telephone subscriptions per 100 inhabitants	17,77	20,96
Mobile-cellular telephone subscriptions per 100 inhabitants	140,71	127,23
International internet bandwidth per Internet user (Bit/s)	198564,36	175869,19
Households with computer	70,46%	60,22%
Households with Internet access	71,75%	63,54%

Source: ITU | 2017 Global ICT Development Index

The value of IDI 2017 Access dimension in Lithuania is 7,11 while in Bulgaria – 6,83. According to **Table 5**, 17,77 inhabitants in Lithuania and 20,96 inhabitants in Bulgaria out of 100 have Fixed-telephone subscriptions. Also, even 140,71 inhabitants in Lithuania and 127,23 inhabitants in Bulgaria out of 100 have Mobile-cellular telephone subscriptions, which shows that the mobile access is good in both countries. However, in 2017 70,46% in Lithuania and 60,22% households in Bulgaria had computers and 71,75% in Lithuania and 63,54% of them had internet access, which suggest that not all business can reach their consumers online. According to Haefner and Sternberg (2020), the effect of the Internet is inseparably connected to digitization, thus the high level of Internet access is important for higher level of digitization, which also creates many opportunities for innovation. However, taking into consideration global COVID-19 pandemic and the lock-down in both Lithuania and Bulgaria, which led to communication online it is expected that the situation with the use of computers and internet access can be noticeably better in 2022.

The Use dimension of IDI 2017 summarizes ICT intensity and usage in countries (Chand, 2020).

Table 6. IDI 2017 of Use

	IDI 2017	
	Lithuania	Bulgaria
Individuals using the Internet	74,38%	59,83%
Fixed (wired)-broadband subscriptions per 100 inhabitants	28,70	23,25
Active mobile-broadband subscriptions per 100 inhabitants	76,80	88,38

Source: ITU | 2017 Global ICT Development Index

According to **Table 6**, 74,38% in Lithuania and in Bulgaria only 59,83% of individuals use the Internet via fixed or mobile network. Also, in Lithuania 76,80 and in Bulgaria even more – 88,38 out of 100 inhabitants have Active mobile-broadband subscriptions, while only 28,70 in Lithuania and 23,25 inhabitants in Bulgaria out of 100 have fixed-broadband subscriptions.

Skills dimension consists of three indicators that are Mean years of schooling, secondary and tertiary gross enrolment (**Table 7**).

Table 7. IDI 2017 of Skills

	IDI 2017	
	Lithuania	Bulgaria
Mean years of schooling	12,70	10,80
Secondary gross enrolment ratio	106,82	99,02
Tertiary gross enrolment ratio	68,53	73,93

Source: ITU | 2017 Global ICT Development Index

The average number of completed years of education in Lithuania is 12,70 years, while in Bulgaria the average is only 10,70 years. The ratio of secondary gross enrolment in both countries is higher (accordingly 106,82 and 99,02) than the ratio of tertiary gross enrolment (68,53 and 73,93). The data indicates that more individuals in Lithuania and in Bulgaria enrolled in the secondary education, however more individuals enrolled in tertiary education in Bulgaria than in Lithuania.

Summarizing DESI 2022 and IDI 2017 it can be stated that Lithuania is advancing well in the provision of digital services compared to Bulgaria, which allows to improve business digitization even more. It is known that COVID-19 global pandemic forced countries and businesses to invest and move to a higher level of digitization even faster. However, in both Lithuania and Bulgaria even greater improvements and investments are needed to make those digital services more user friendly and accessible for both individuals and businesses.

Conclusions

The overview of theoretical aspects of business digitalization shows that the development of business digitalization is closely related to the country's level of digitalization. It was found out that country's digitization depends on a number of conditions, such as digitalization-related government decisions, regulation, communication infrastructure and availability, capabilities, financial incentives, and the use of technology.

Based on these conditions, a comparative analysis of Lithuania and Bulgaria was performed in order to predict new opportunities for the development of the Lithuanian economy in the context of business digitization. The study results of DESI 2022 and IDI 2017 in Lithuania and Bulgaria showed that Lithuania in both indexes ranks higher than Bulgaria which also belongs to EU. Lithuania's scores in DESI 2022 dimensions of Integration of digital technology and Digital public services are even higher than EU average while Bulgaria's scores in all four dimensions are lower than EU average. It was also noticed, that in Connectivity Lithuania ranks lower than Bulgaria mainly because of the higher percentages of households of NGA, VHCN, FTTP and 5G coverages in Bulgaria, that allow to adopt intelligent automation faster.

Summary of IDI 2017 in Lithuania and Bulgaria shows that Lithuania ranks better position in terms of attractiveness to foreign investors than Bulgaria which is really important considering that foreign investors come in with modern technologies, and countries with the better ranking of Internet access, use and relevant skills can adopt these technologies faster. Thus, the overall results show Lithuania's growing progress in terms of business digitization that also plays the key role in economic growth, however more input in the dimension of Connectivity is needed, such as targeted investments for the development of 5G network development which is considered as the one of the most important conditions for better adoption and development of intelligent technologies that are the future of all businesses, and society.

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RECEIVED: 27 April 2022 **ACCEPTED: 28 November 2022**

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https://doi.org/10.38104/vadyba.2022.2.09

Vadyba
Journal of Management
2022, № 2 (38)
ISSN 1648-7974

THE INFLUENCE OF GENDER ON WORK ENGAGEMENT

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Abstract
An increased interest in work engagement has emerged in recent years. Within this field, a number of crucial questions remain unanswered. Relatively little is known about the influence of gender on work engagement. Results obtained from different studies show inconsistent outcomes therefore it is still needed to examine them. In many organizations last different stereotypes about men and women. For instance, women are more sensitive and empathic, and men are more competitive and goal-oriented. There is still inconsistency among studies and no clear answer to the question "Does gender influence work engagement?". Most studies have focused on work engagement in general, but few studies have investigated the impact of demographic factors such as gender, age, education, or years of employment. There were found various results in different sectors and countries, therefore it is important to pay attention also to these factors. Talking about gender, especially the role of women in different cultures may significantly influence work engagement which should be taken into consideration. This research explores the link between work engagement and gender in retail. The survey was distributed to 3467 participants, of whom 73,1 % (N=2535) participants completed a questionnaire and the data were used in this research. The data collected were quantitative. The questionnaire consisted of 20 questions that respondents answered on a five-point Likert scale (1 strongly disagree – 5 strongly agree). The questions in the questionnaire are based on a literature review and well-known surveys: Utrecht Work Engagement Scale (UWES-9) and Gallup Q12 and other questions that focus on engagement in the team, the role of the manager, work itself and the last one focused on the company vision. The result yielded no statistically significant relationships between gender and work engagement. Our findings can be compared to the results of earlier studies that there is no statistically significant difference in work engagement between men and women. On the other hand, some studies argue that there is a difference in work engagement based on gender, either little or in some cases significant. This research has several implications for theory and practice. At the theoretical level, it complements research about demographic factors, in this case, gender, and its influence on work engagement in retail. HRD needs to create a strategy to increase their employees' engagement, but in retail not necessary based on gender differences. This research required addressing several limitations. Firstly, the findings are not generalizable beyond retail. The research was conducted only in one country. Future research will have to confirm whether there are any differences between other sectors and other countries. Among side findings, this research revealed the highest and lowest-rated questions, which need to be further examined in future research.
KEY WORDS: work engagement, gender, demographic factors, employees, retail.

Introduction

Work engagement has received a lot of research attention. Numerous studies have investigated different factors influencing work engagement, but the role of gender has been slightly overshadowed. Therefore, it deserves more research attention. Despite that few studies have investigated the impact of gender on work engagement, there is scant evidence from retail. Organizations, especially human resources, are challenged to improve the understanding of work engagement and different strategies to handle it (Baran and Sypniewska, 2020).

It is crucial to explore deeper gender neutrality in work engagement. Many stereotypes and characteristics about men are women are still present in organizations. Gender roles that stress gender stereotypes point to different behaviors in daily interactions. It is important to understand how individuals embody gender identity (Bohuslava et al., 2018). The literature does not exactly explain the issue of gender inequality in the workplace along with the individual's identification with an organization and their work engagement and awareness of organizational support (Mascarenhas, Galvão and Marques, 2022). The interpretation of gender differences needs to be done in connection with engagement since women and men have other ways of thinking and behaving in the workplace (Woudstra, 2016).

This research's main goal is to better understand the relationship between work engagement and gender in retail. This paper provides an overview of issues relating to gender and work engagement. It is divided into these parts: The first part reviews the existing literature on work engagement and the influence of gender on work engagement. The next part presents the methodology of the research, followed by the results and the last part is dedicated to the limitations of the research and conclusion.

Literature Review

Many scholars focused on work engagement, its implications, advantages, and some also on disadvantages, and factors, which influence work engagement. However, there is less research focusing on demographic factors, such as age, gender or years of experience. On the other hand, gender has been recognized as a moderator in various studies. Some studies confirmed that women pay more attention to interpersonal relationships than men, moreover, women tend to be more emotionally and socially oriented, while men tend to be more task-oriented, competitive and assertive (Tian, Pu and Ren, 2021; Ling and Nasurdin, 2016). It is assumed that work engagement is gender-neutral (Banihani and Syed, 2017), what indicates that the differences in work engagement are assignable to individual characteristics and therefore the women and men can be equivalently engaged (Tshilongamulenzhe and Takawira, 2015). Bahini et al.

(2013) also stated that it is easier to increase the engagement level of men than women. Thome (2013) supported this notion.

The social role theory pointed out how gender identities can influence cognition and behavior, individuals have the tendency to regulate their behavior based on their gender identity (Tian, Pu and Ren, 2021). Research focusing on gender differences in work engagement provides inconsistent and inconclusive findings. Numerous studies found no significant difference in the level of engagement based on gender (Sharma and Rajput, 2021). Schaufeli et al. (2006) also found no significant difference in relations between gender and work engagement in their study conducted in 10 countries. However, it was found that women from South Africa and Spain are more engaged than men. Chaudhary and Rangnekar (2017) also did not find any significant differences in work engagement in relation to gender among business-level executives in India. Other studies also confirmed that there is no significant difference between men and women in the context of work engagement (eg. Reissova et al., 2017; George and Joseph, 2014, Sharma, Goel and Sengupta, 2017) or according to Mastenbroek et al. (2014) there appear to be small gender differences.

On the other hand, there are some studies showing that the level of engagement of women is higher in contrast to men (Avery et al., 2007; Rodriguez-Modroño, 2022). Contrary to these findings, Tartari and Salter (2015) found that men are more engaged than women. The same finding confirmed the study conducted by Ling and Nasurdin (2016) and another study by Topchyan and Woehler (2021). As well as Hanggarawati and Kismono (2022) argued in their study, conducted in government organization, a significantly higher work engagement by men.

Furthermore, the level of engagement also depends on the individuals' perception of the benefits received from engagement. These differences in the level of engagement can be caused by disparities in roles, in the family as well as in the workplace (Liu et al., 2017). It is expected that women are more responsible for the family, some studies appear to support the notion that women are more concerned with the emotional aspects of their jobs and draw attention to intrinsic motivators (Mascarenhas, Galvão and Marques, 2022). The work of Fiksenbaum (2014) demonstrates that female managers tend to prefer their family rather than their career which can cause a conflict between work and family and have a negative effect on the work engagement of the employees. However, according to Adkins and Miller (2016), female managers are better than male managers at engaging the workers thanks to their capability to build relationships, set expectations, boost a positive environment in a team or provide opportunities for their career development.

Methodology

This research examines the relationship between work engagement and gender in retail. This paper was conducted as a part of larger organizational research. The survey's subject is identifying the influence of gender on work engagement in the workplace and provides the answer to the research question "Does gender influence work engagement?" The survey was conducted in April – May 2021 among retail workers in Austria. It was based on Utrecht Work Engagement Scale (UWES-9), Gallup Q12 and other questions that focus on engagement in the team, the role of the manager, work itself and the last one focused on company vision. The first seven questions are from the Gallup Q12 work engagement survey, that cover different areas such as work performance/feedback, own perception of appreciation development, tools/equipment and opportunities to do what they do best. The next four questions are chosen from UWES, highlighting dedication to examine the state of commitment and vigor to examine the level of energy. The survey included a variety of questions, all based on the literature review. The questionnaire consisted of 20 questions that respondents answered on a five-point Likert scale (1 strongly disagree – 5 strongly agree).

The survey was distributed to 3467 participants, of whom 73,1 % (N=2535) participants completed a questionnaire and the data were used in this research. The data collected were quantitative.

Results

Our findings can be compared to the results of earlier studies that there is no statistically significant difference in work engagement between men and women. The percentages in Table 1 represent the responses obtained from men and women from the questionnaire.

Table 1 Results in %

Source of question		Survey question	Gender	
Gallup Q12	UWES-9		Male	Female
At work, I have the opportunity to do what I do best every day		At company, I have the opportunity to do what I do best	66,6	67,3
I have the materials and equipment I need to do my work right.		I have the right tools and equipment to do my job	78,5	77,5
There is someone at work who encourages my development.		My manager supports my development	78,3	76,3
I know what is expected of me at work.		I know what my manager expects of me	88,5	88,8
In the last six months, somenone at work has talked to me about my progress.		I am regularly given useful performance feedback by my manager	68,8	66,9
The mission or purpose of my company makes me feel my job is important.		I feel my work is appreciated at company	79,2	78,9
The last year, I have had opportunities at work to learn and grow.		At company, I have good opportunities to develop my competences	75,5	76,3
	I am enthusiastic about my job	I enjoy my work	86,0	87,3
	I find my work that I do full of meaning	I feel I contribute meaningfully through my work	90,5	90,4
	I am proud on the work what I do	I am proud of the work I do	87,1	87,5
	At my work, I feel bursting with energy	My work energises me	73,7	71,8
		I have the freedom to make decisions at work	74,8	73,5
		I enjoy taking on new responsibilities	88,4	87,4
		My colleagues and I collaborate well	93,8	92,4
		My team's goals are clear	87,7	83,6
		My manager makes time for me	84,4	84,4
		My manager behaves in line with our values	82,9	83,2
		My manager holds me accountable for my performance	89,3	88,9
		My manager shares important information with me	81,3	80,7
		I am inspired by the vision of company	84,2	88,2

Source: own

A number of studies confirm these findings. Specifically, Tshilongamulenzhe and Takawira (2015) examined the influence of gender on work engagement among 154 university employees in South Africa and found no significant relationship between gender and work engagement. Similarly, the study among colleges teachers in India confirmed no significant difference in gender

(Sharma and Rajput, 2021). The study carried out by Hartman and Barber (2019) supported the same finding in their study completed by 153 respondents, which confirmed no significant difference based on gender. Moreover, according to them, it remains unclear what role has an organization role on work engagement. Banihani and Syed (2017) provided a suggestion about gender inequality and indicate that there are some limits to women's experience of work engagement, such as family responsibilities. Drawing on their study, work engagement may be gendered. For instance, in a division of labor and opportunities to get a more meaningful job, cultural expectations of women, women seen as less valuable or competent. This finding is congruent with the work of Mascarenhas, Galvão and Marques (2022), who found a large effect of identification with the organization on work engagement among women, it means that women need to be closely connected to their organization to be more engaged. Furthermore, they claimed that women's engagement is more influenced by organizational support than men's. Taken altogether, the data presented in their study provide evidence that employees' behavior differs according to their intellectual and psychic capacities, other demographic factors such as age, gender, and other factors identified with their personal experience. Another interesting finding obtained from research conducted by Tian, Pu and Ren (2021) argue that workplace loneliness can decrease work engagement for both genders, however stronger for women.

Fig. 1 shows the similarity in responses between men and women, which confirms the result of the research conducted and reveals no significant difference in work engagement based on gender.

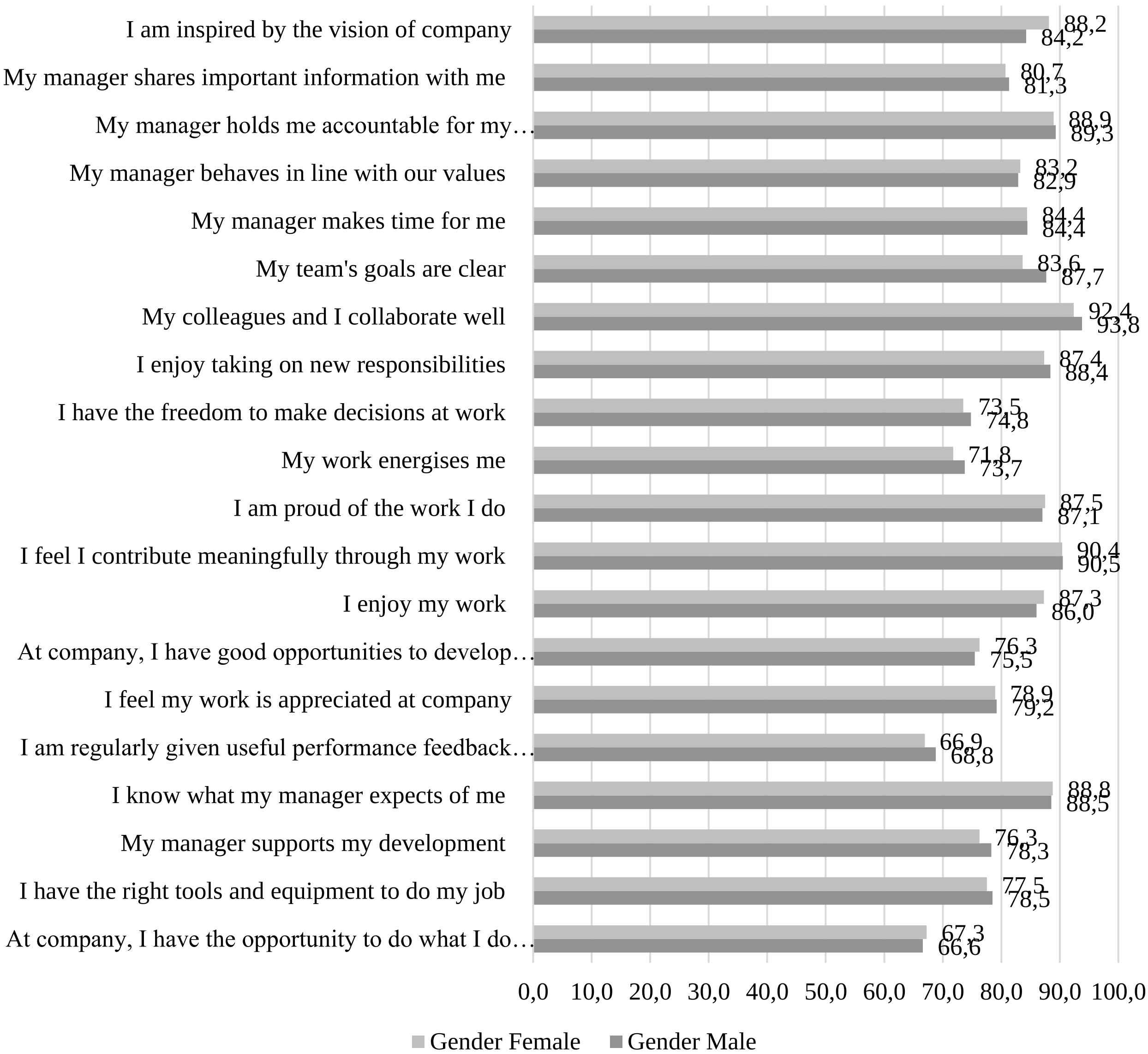

Fig. 1. Graphic illustration of the results

From the graphic illustration, it is visible that the responses among women and men are very similar. The average result by men is 82 % and by women 81.6 %, which means both genders are almost equally engaged.

On the other hand, several findings of this research warrant further discussion, an interesting side finding was the lowest and highest-rated questions. Among men and women, the lowest-rated question was "At company, I have the opportunity to do what I do best". A possible interpretation of this finding is that the potential of employees is not fully used in the workplace. Overall, it can have various reasons such as poor leadership not being interested in the ability of individuals in their team, or there are not such tasks in their role, so they can do their best. The second lowest-rated question was "I am regularly given useful performance feedback by my manager". Again, a possible reason is obviously the manager of the individual, but it remains questionable why is it so, here we can also interpret that one of the reasons may be time or lack of time, other priorities, or another reason that would need to be examined.

On the other hand, there were the same highest-rated questions among men and women. The first one is "My colleagues and I collaborate well" which may be explained as a positive atmosphere in the team. And the second highest-rated question was "I feel I contribute meaningfully through my work". It would be interesting to explore what is behind this question, but obviously, the employees see their contribution which may increase their level of work engagement.

Conclusion

The research aimed to assess the influence of gender on work engagement. Some previous studies have supported the results of this research that there is no significant difference in gender in relation to work engagement. As mentioned before, the average answer by both genders is about 82 % and both genders are equally engaged based on the survey questions. Therefore, this research does not reveal any new conclusions and confirms that there is not a significant difference in work engagement based on gender. On the other hand, there is still inconsistency on whether gender has an impact on work engagement based on other studies.

Among side findings were found the highest and lowest-rated questions (same for both genders) about the opportunity to do the best at the company, receiving performance feedback (as the lowest-rated) and own contribution at work and collaboration with colleagues (as the highest-rated), which may need more attention and could be examined deeper in future research.

This research has also implications for theory and practice. At the theoretical level, it complements research about demographic factors, in this case, gender, and its influence on work engagement in retail. The present research advances our knowledge in understanding the influence of gender on work engagement. HRD needs to create a strategy how to increase the engagement of their employees, but in retail not necessary based on gender differences. It is important to include the management team of the company in creating this kind of strategy to invite them to be "on board" and thus easier communicate to their teams, and their employees, if they participate and may co-create a strategy on work engagement.

This research required addressing several limitations. The findings are not generalizable beyond retail. The research was conducted only in one country. Also, the Covid-19 pandemic could influence the results of this research compared to prior studies. In addition, this research used its own developed questionnaire based on UWES-9, Gallup Q12, and other questions, further research should retest the validity of this questionnaire for another sector and/or country. Future research will have to confirm whether there are any differences if this kind of research with similar instruments is used in other sectors, for instance, gastronomy, hotel or bank industry. It would be also interesting to compare other countries in a future study.

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RECEIVED: 27 April 2022 **ACCEPTED: 28 November 2022**

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https://doi.org/10.38104/vadyba.2022.2.10

Vadyba
Journal of Management
2022, № 2 (38)
ISSN 1648-7974

IMPORTANCE OF SUSTAINABLE LEADERSHIP AND SUSTAINABLE LEADERSHIP PRACTICES AMONG MIDDLE-LEVEL HUNGARIAN MANAGERS

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Abstract
Corporations, managers, and employees are still having difficulties comprehending the idea of sustainable leadership and identifying this concept itself is a challenge for modern businesses. A new and expanded definition of leadership that is founded on sustainability principles, sustainable leadership practices, and developing an inclusive, collaborative, and responsive leadership approach is known as sustainable leadership. A better understanding of the idea of sustainable leadership and sustainable leadership practices we conducted research among Hungarian middle level managers. Main purpose of this study is to examine the level of sustainable leadership skills of middle-level Hungarian managers in a variety of industrial sectors and which sustainable leadership practices with its subcomponents can be preferred to implement in organizations by Hungarian managers. Questionnaire method was used among 201 middle-level Hungarian managers. Findings show that there is a slight difference between non sustainable leadership skills and sustainable leadership skills among managers, general results showed that sustainable leadership scores of the Hungarian managers (3.20) stayed below non- sustainable leadership scores (3.75) that indicates Hungarian managers need to improve themselves relate to sustainable leadership skills based on applying sustainable leadership practices in organizations. Among sustainable leadership practices key performance drivers (3.69) are the most applicable sustainable leadership practices among the middle level Hungarian managers comparing to foundation practices (3.35) and higher-level practices (3.56) based on scores. Among subcomponents of the sustainable leadership practices score of managers centered leadership (3.4), employee centered leadership is the highest score (3.9), organizational profit (3.2), employee's engagement (3.4) and lowest score is the knowledge sharing culture (2.7) among the middle level Hungarian managers.
KEY WORDS: Sustainability, Sustainable Leadership, Sustainable Leadership Practices.
JEL classification: M1, Q56

Introduction

Globalization brings significant difficulties not just business groups and governments throughout the world for all of humanity. On a worldwide scale, fresh mindsets and novel approaches are required to address environmental protection, social, and economic issues. Natural resource depletion, environmental degradation, and persistent social inequality in most countries imply that activities should be aimed at fulfilling social expectations. Organizations should aim sustainable activities and devote more attention to their long-term growth that contributes to environmental preservation not only within the company but also outside its walls (Tripathi et al., 2020). Sustainable development is inescapable, and it is highlighted as a leadership duty for modern organizations (Šimanskienė & Župerkienė, 2014).Sustainability is the long-term or institutionalization of an innovation or activity (Basiago, 1998).Sustainability is discussed in the literature in terms of economic, social, ethical, and political aspects .Sustainable leaders use the organization's resources to tackle environmental and social problems while increasing shareholder profit (Tideman, 2013).

Sustainability requires leaders who can promote sustainable practices in their communities and organizations while also generating economic growth (Metcalf & Benn, 2013). In this context, sustainable leadership has arisen as an effective (Shriberg & Macdonald, 2013). Organizations can benefit from sustainable leadership and among the many advantages mentioned in the literature : Long-term organizational performance is seen to be improved by sustainable leadership practices to varying degrees. (Suriyankietkaew & Avery, 2016).

Management development, long-term employment, information exchange, and innovation processes are all examples of sustainable leadership practices (Kim & Park, 2019). Long-term company performance may be considerably boosted by sustainable leadership practices such as employee value, shared vision, social responsibility, and friendly labor relations (Suriyankietkaew & Avery, 2016).Moreover, sustainable leadership indirectly impacts sustainable performance (Iqbal et al., 2020). Sustainable leadership aims at improving talented, loyal, and highly engaged employees, providing high-quality goods and services, in order to ethical principles and standards all over the organization. Many organizations that willing to develop their performance and business resistivity based on sustainable leadership practices. Some firms have successfully applied sustainable leadership practices for sustainable growth, such as Wal-Mart creates a sustainable business strategy for minimizing the organization's impact on the global environment that businesses become more socially conscious of showing the sustainability concept to their vendors, consumers, and public (Scott, 2007). Combination of sustainable leadership approaches has been widely and effectively applied in numerous organizations worldwide. This is a better sign of indviduals who choose to live their lives and manage their enterprises in ways that consider their influence on the environment, society, and worldwide economic success (Ferdig, 2007).

The structure of this paper starts by describing sustainability, sustainable development, sustainability in organizations, and sustainable leadership practices among the middle-level managers in Hungary. This paper presents the results from a target group who reviewed the definition of leadership, sustainable leadership, and sustainable leadership practices from their perspective of concepts. The outcome allows further research in the same area.

Literature Review

Sustainability and Sustainable Development

There are over 300 definitions of sustainability in the literature, which differ by subject, such as biology, economics, sociology, and ecology. In the leadership area, sustainability has been discussed among management researchers. According to some perspectives, leadership is essential for ensuring organizational efficiency, durability, and sustainability (Dobson, 1996).The term "sustainable" which comes from the Latin "sub-tenere," refers to anything that can be sustained and preserved, as well as something that is bearable and can be declared with assurance. The term "sustainable" has been used to describe the capacity to attain present goals without compromising future ones in sense of politics, technology, economics, and the environment (Faber et al., 2010). Sustainability is defined as the capability to sustain an entity, outcome, or process throughout time (Basiago, 1998).Sustainable development is the duration of improving cities, lands, and communities, as well as companies in such a way that they fulfill current demands without harming future generations' pleasure (Sills, 1968). The United Nations Brundtland Commission describes sustainable development as ``development that meets the present generation's economic, environmental, and social requirements without harming future generations' progress`` (World Commission on Environment and Development, 1987). It is visible in previous definitions of sustainable development that various dimensions coincide with each other, focusing on the treatment of steady improvements in reaching development objectives, and can relate to the three main dimensions and engaging are all aspects of economic, human, and environmental. The greatest alternatives are those that fulfill societal demands while also being ecologically and economically feasible, economically and socially fair, and socially and environmentally tolerable (Van Marrewijk & Werre, 2003). As shown in Figure 1, there are three interconnected dimensions of sustainability that highlighted the connections between environmental, economic, and societal factors of sustainable development.

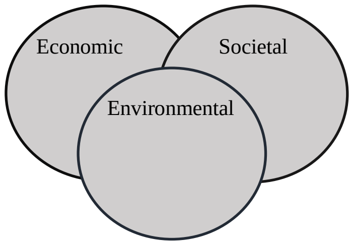

Fig.1. Three pillars of Sustainability

Source:Dyllick & Hockerts, 2002

``Economic sustainability`` entails a production system that meets the current level of consumption while not threatening the necessities of humans (Lobo et al., 2015). The term "social sustainability" refers to the relationship between social circumstances such as poverty and environmental degradation (Sing & Ali, 2018). Environmental sustainability refers to how the natural environment continues to be fruitful and resistant to supporting human life. The entirety of ecosystems and the carrying capacity of the natural habitat are important factors in environmental sustainability (Brodhag & Talière, 2006). The three mutually reinforcing pillars of social development, economic growth, and environmental protection, as well as a dynamic interaction among many stakeholders, demonstrate the complex nature of sustainable development (Halisçelik & Soytas, 2019). When it comes to businesses, the concept of sustainable development suggests that once certain actions are taken, both corporation and its stakeholder relationships are considered in terms of social and environmental issues (Jabłoński et al., 2020).In this framework, an organization aims long-term progress and expansion, balancing economic, social, and environmental objectives while managing its activities. As a result, it may be stated that development benefits economic stability, environmental quality, and social capital (Ciasullo & Troisi, 2013).

Sustainable Leadership and Sustainability in Organizations

Leadership is a process by which leaders influence followers and followers influence leaders (either positively or negatively). In general, leadership is the skill of imagining reality, attempting to achieve a specified objective by recruiting as many people/followers as possible and persuading them to work independently to achieve shared goals (Northouse, 2014). Leaders must retain their abilities to grow both employees and the business as a whole inability to answer and adjust to complex problems created by changing circumstances (Davies, 2007). Leadership has a significant impact on an organization's long-term success because it shapes employee behavior and mindset (Hallinger & Suriyankietkaew, 2018).

The term "sustainability leadership`` indicates the achievement of many goals which relate to (a) raising awareness of sustainability issues, (b) the ability to contribute to the resolution of societal and environmental challenges (c) the cultivation of sustainable characteristics and behaviors, and (d) a faith in one's power to change things (Savage et al., 2015). Sustainability leadership reflects an increasing understanding among individuals who are deciding to live their lives and run their companies in ways that reflect their influence on the environment, society, and the health of local and global economies (Ferdig, 2007). Sustainable leadership assists leaders in improving their wisdom and abilities in human resource management and organizational resources, as well as offers possibilities to leaders in the educational field to network and sustain each other in achieving not only current but also future organizational goals (Fullan, 2001 ; Hargreaves & Fink, 2006). Therefore, such leadership must improve efficiency and bring positive changes. Leaders who can create ideas, policies, and programs to encourage sustainable habits at the social and organizational level and generate economic success are necessary for sustainability (Metcalf & Benn, 2013).Terms of sustainability, sustainable leadership, eco-sensitive leadership, and green leadership are used consistently to connect sustainable practices with leadership and/or management (Cosby, 2014). Sustainable leadership also emphasizes several outcomes for organizational efficiencies that go far beyond classic measures of achievement, such as worker performance, loyalty, and financial gains to include the "triple bottom line" of wider economic, social, and environmental results. Sustainable leadership affects an organization's reputation, satisfaction, and success (Burawat, 2019) and it emphasizes improving the lives of all stakeholders while creating present and future profits for an organization (McCann & Sweet, 2014). Leaders that practice sustainability leadership adopt a long-term approach in decision-making, supporting systematic innovation targeted at boosting customer value, creating talented, loyal, and highly engaged employees, and providing quality goods, services, options, and durability (Avery & Bergsteiner, 2011).Many logistics studies hypothesize the relationship between sustainable resources and performance (Jiang et al., 2020). Companies are increasingly integrating sustainability into their performance management process by evaluating individual success against sustainability objects (Arnott et al., 2009). Integrating sustainability into a company's core principles helps workers connect with the company's sustainability (Hargett & Williams, 2009). Similarly, company's values are important factors in shaping each employee's overall sustainability drive(Rok, 2009) .The implementation of sustainability principles within a business context is known as corporate sustainability (Dyllick & Hockerts, 2002). Therefore, it is advised that sustainability must be integrated into business , which links environmental and social goals into corporate plans (Searcy, 2012).Latest research contributes empirical support to the literature on corporate sustainability drivers. Combination of internal and external sustainability drivers emerged from his examination of the literature. Internal factors contain ‘leadership,' 'ethics,' 'culture,' and 'business case,' along with external drivers containing 'government,' 'competitors,' and stakeholder demands (Lozano et al., 2015). The concept of business sustainability was also linked to a layered structure that included economic, social, and ecological components. The economy is a part of society, which is also a key aspect of the broader ecological system, and these pillars are interrelated. Corporate sustainability depends on six criteria: eco-efficiency, socio-efficiency, eco-effectiveness, socio-effectiveness, sufficiency, and ecological equity (Dyllick & Hockerts, 2002). These corporate sustainability principles may be grouped into value systems that boost financial performance (Van Marrewijk & Werre, 2003).

In the past, organizations measured their success based on market position, assets, and liabilities (Iqbal et al., 2020). At present, Corporations are concentrating on social and environmental success in addition to financial success. While financial success is concerned with criteria like profitability, market share, and sales, social performance is concerned with stakeholders like workers, consumers, and civil society. Environmental performance is concerned with environmental productivity and Environmental Management System set of quantitative variables. High-sustainability organizations have better-developed stakeholder engagement systems, and a long-term orientation, utilize both financial and non-financial indicators, and in the long run considerably outperform sustainability businesses from the point of accounting and stock market performance (Eccles et al., 2014). Organizations measure sustainable performance through monitoring performance concerning the economy, society, and environment in parallel. Sustainable performance evaluates and examines a company's performance from all aspects and for all partners (Charter & Tischner, 2017).

Sustainable Leadership Practices

Businesses are encouraged to use sustainable practices as a business strategy to achieve long-term benefits (Chabowski et al., 2011). According to (Ghassim & Foss, 2020), if a firm’s sustainability efforts are to provide long-term value to both the organization and society, sustainability must be integrated into the firm’s strategies. In the context of environmental challenges, sustainable leadership is known as highly effective leadership. Sustainable leadership practices emphasize sustained learning, long-lasting success, ethical, social, and responsible behavior, development of resources, environmental diversity, efficient stakeholder management, and an amicable relationship with employee. (Hargreaves & Fink, 2012).Sustainable leadership practices reflect strong management, often lower costs, and enhance reputation and brand image (Mays, 2003). They can also lead to better management of business risks and opportunities that also benefit investors and may make the organization less vulnerable to the effects of adverse events. Designing products and operations to be more sustainable can also increase profits and generate savings through improved processes (Dunphy, 2004).

Rhineland business model, which emphasizes a company's long-term sustainability and advocates all stakeholders, not just shareholders and supports corporate sustainability. According to the Rhineland model, a company's success derives from a long-term perspective in decision making, building trained and committed personnel, and providing innovative goods, services, and high-quality alternatives. Avery undertook a study in 14 organizations based in Germany and Switzerland to establish Rhineland and Anglo leadership practices and determined that these two models' practices are contrary to one another. Thereafter, Avery acquired sustainable leadership practices by researching companies that have adopted the Rhineland model, namely Scandinavia, South Africa, the United States, Australia, and the United Kingdom (Albert, 1992). Avery created the Sustainable Leadership Framework, which includes 19 different sustainable leadership practices that set it apart from Rhineland and Anglo-US approaches and discovered 19 leadership techniques and classified them as Rhineland and Anglo/US techniques. Scholar discovered that these two techniques are separated into two opposite sets of actions that work hand in hand and then put the 19 factors to the test on a group of enterprises from all around the world that have used Rhineland sustainability practices to varying degrees. The Rhineland method emergeeconomic model of society in Germany and surrounding nations. The term "Anglo-US method" leads to the idea of corporate culture in the United States and the United Kingdom (Kantabutra & Avery, 2013).Avery and Bergsteiner raised the number of practices to 23 by including four new components, as shown in Table 1 Sustainable Leadership Practices. There are alternatives for the long-term "honeybee" leadership style and the “shareholder-first” or "locust" leadership approach or non-sustainable leadership approach (Avery & Bergsteiner, 2010). The 23 Honeybee leadership components from all three levels collaborate to create a company's image and reputation, customer satisfaction, operational finances, long-term shareholder value, and, ultimately, long-term value for a variety of stakeholders. Although the parts in Table 1 are referred to as practices, some of them represent fundamental principles or views that may all be carried out in company-specific ways (Kantabutra & Avery, 2013).

Table1. Sustainable Leadership Practices

Leadership elements	Sustainable leadership honeybee philosophy	Shareholder-first locust philosophy
Foundation Practices		
1. Developing people	Develops everyone continuously	Develops people selectively
2. Labor relations	Seeks cooperation	Acts antagonistically
3. Retaining staff	Values long tenure at all levels	Accepts high staff turnover
4. Succession planning	Promotes from within wherever possible	Appoints from outside wherever possible
5. Valuing staff	Is concerned about employees’ welfare	Treats people as interchangeable and a cost
6. CEO and top team	CEO works as a top team member or speaker	CEO is a decision-maker, a hero
7. Ethical behavior	Doing-the-right thing as an explicit core value	Ambivalent, negotiable, an assessable risk
8. Long-or short-term perspective	Prefers the long-term over the short-term	Short-term profits and growth prevail
9. Organizational change	Change is an evolving and considered process	Change is a fast adjustment, volatile, and can be ad hoc
10. Financial markets orientation	Seeks maximum independence from others	Follows its masters’ will, often slavishly
11. Responsibility for environment	Protects the environment	Is prepared to exploit the environment
12. Social responsibility (CSR)	Values people and the community	Exploits people and the community
13. Stakeholders	Everyone matters	Only shareholders matter
14. Vision’s role in the business	A shared view of the future is an essential strategic tool	The future does not necessarily drive the business
Higher-level practices		
15. Decision Making	Is consensual and devolved	Is primarily manager-centered
16. Self-management	Staff are mostly self-managing	Managers manage
17. Team orientation	Teams are extensive and empowered	Teams are limited and manager-centered
18. Culture	Fosters an enabling, widely shared culture	Culture is weak except for a focus on short-term-results that may or may not be shared
19. Trust	Spreads throughout the organization	Limits knowledge to a few “gatekeepers”
20. Knowledge sharing and retention	High trust through relationships and goodwill	Control and monitoring compensate for low trust
Key performance drivers		
21. Innovation	Strong, systemic, strategic innovation is evident at all levels	Innovation is limited and selective; buys in expertise
22. Staff engagement	Values of emotionally committed staff and the resulting commitment	Financial rewards suffice as motivators, no emotional commitment is expected
23. Quality	Is embedded in the culture	Is a matter of control

Source: Avery & Bergsteiner, 2010

Foundation Practices are referred as management decisions for the organization's benefits. Management decides which practices will be applied from the outset of the organization's presence. Such as personnel improvement and training programs, strategies to dstaff turnover, plan for progression, and valuing employees (Avery & Bergsteiner, 2011). **Higher-level practices** are six practices which indicated by creating self-managing personnel, decision-making, developing a trustable environment, and establishing an organizational attitude that helps leaders to be sustainable and disseminate organizational-related information (Avery & Bergsteiner, 2011) **Key performance drivers** are a third and most important level of the model in order to innovation, employee participation, and quality that drives organizational performance Quality is improved via teamwork, an educated and productive workforce, and culture that supports information sharing and develops trust in the organization (Avery & Bergsteiner, 2011).

Research Methodology

Data and Data collection method

Data were collected online via a google form. The questionnaire was made according to G.Avery and Bergsteiner's criteria (Avery & Bergsteiner, 2011), based on sustainable leadership framework. Furthermore, this type of questionnaire has already been used in previous research developed by Kalkavan (Kalkavan, 2015). We have taken Avery and Bergsteiner's framework as a model for our research and adapted it to our research context. The used framework and related factors can be seen below

Table 2. Statements for Questionnaire

	STATEMENTS	SUSTAINABLE LEADERSHIP PRACTICES
1	In terms of training and development, my goal is to improve everyone constantly.	FOUNDATION PRACTICES
2	In terms of training and development my goal is to improve people selectively	
3	In my interactions with my co-workers, I seek collaboration.	
4	In my interactions with my co-workers, I tend to be aggressive	
5	Long tenure at all levels is quite essential to me	
6	I can accept excessive employee turnover on some levels	
7	I mostly make promotions from within an organization from my employees	
8	Wherever feasible, I like to appoint people from outside the company.	
9	I'm quite concerned about the prosperity of my co-workers	
10	Employees are replaceable for me, and employee cost is a substantial cost pen in accounting.	
11	In my perspective, the CEO works as a top key member of the team or speaker	
12	In my perspective, the CEO is a decision-maker and the idol of his/her employees	
13	In business, "doing the right thing" is more essential than profit.	
14	The assessable risk might be accepted in every scenario to improve profits.	
16	I would rather short-term profits and expansion prevail.	
18	I believe that change is a gradual and intentional process.	
19	I believe individuals should perform as independently as possible to boost profits.	
20	I believe employees should pursue and abide by(obey) managers.	
21	In my business goals, I make a conscious effort to protect the environment	
22	In my perspective, the environment exists to be exploited in order to increase profit.	
24	I believe people and the community are exploited since they are both available to increase the profit of the corporation.	
25	In my opinion, everyone matters, whether they connect to the business world.	
26	In my opinion, only shareholders are important since we do business.	
27	In my opinion, vision statements provide a common perspective of the future, which is an important strategic instrument.	
28	In my opinion, the business does not have to be driven by the future.	
29	Decision-making should be decentralized and cooperative.	HIGHER LEVEL PRACTICES
30	Decision-making should be predominantly manager driven.	
31	In my opinion, employees are capable of self-management.	
32	In my opinion, managers should manage the employees.	
33	Teamwork should be comprehensive and encouraged.	
34	Teamwork should be restricted, and manager centered.	
35	I believe that a widely shared culture encourages and facilitates the achievement of company objectives	
36	I believe that culture may not be shared in order to fulfill short-term business goals.	
37	In my perspective, knowledge sharing is critical and should be spread throughout the business.	
38	In my perspective, information sharing is unnecessary; in fact, I believe that having certain people with expertise within an organization will suffice to fulfill the goal.	
39	In business, I must have a high level of trust established via relationships and goodwill.	
40	In business, control and monitoring must be essential in order to compensate for low trust	
41	Strategic innovation is essential and should be supported at all levels of the organization.	KEY PERFORMANCE DRIVERS
42	Innovation is a high-risk endeavor that should be managed only by managers.	
43	I place great importance on employees who are emotionally committed.	
44	Financial rewards are sufficient motivators; thus, I do not require emotional commitment from my employees	
45	Quality is entrenched in the culture.	
46	Controlling is the only way to create quality.	

Source: Kalkavan, 2015

This framework consists of 46 different statements as odd numbered ones indicate non sustainable leadership statements; even numbered ones indicate sustainable leadership statements. Framework divided into three categories based on sustainable leadership practices first 28 questions foundation practices, following 12 statements are higher level practices, and last 6 six key performance drivers by Avery and Bergsteiner(2010). Furthermore, we decided to further detail this categorization by grouping the three above-mentioned criteria with the following subcomponents:1. manager centered leadership, 2. employee centered leadership, 3. organizational profit, 4. employee`s engagement, 5. knowledge sharing culture.

Manager centered leadership: Organizational success is achieved under leader's authority with strict rules. Employee centered leadership: Well-being and feelings of employee are the essential for managers. Organizational profit: it is essential to drive a business for success. Employee's engagement: it is associated with how strong commitment employee have for organization. Knowledge sharing culture: it implies organizational culture that supports free exchange knowledge, information between employees and it is essential to drive a business based on sustainable leadership criteria.Main purpose of this study is to examine the level of sustainable leadership skills of middle-level Hungarian managers in a variety of industrial sectors and which sustainable leadership practices with its subcomponents can be preferred to implement in organizations by Hungarian managers. Research questions are:

1.Do Hungarian middle level managers perceive leadership related to more non-sustainable leadership approach or sustainable leadership approach?

2.What is the application level of sustainable leadership practices of middle level Hungarian managers?

The survey was conducted among Hungarian middle-level managers in different industrial sectors through emails, linklden, facebook social platforms from November until April in 2021-2022. A total of 201 managers participated in the survey. Considering this paradigm, questions were developed, and answers were determined using a five-point likert scale.

Theoretical Framework and Analytical Method

Descriptive statistics, Exploratory Factor Analysis (EFA) were carried out and mean scores of components were computed in the SPSS 27. Program. The aim of using EFA in this study was to reduce items of questionnaire (Çuhadar & Çakmakçı, 2021). Moreover, purpose of bringing meaningful research result and accomplish the aim of study some questions has been removed from survey, for this reason EFA analysis was applied to 43 questions We deleted 15, 17, and 23 questions in order to bring more meaningful items. Purpose of using descriptive statistics in this study was examined most and least considered questions among managers. Aim of computing mean scores of components were to examine level of sustainable and non-sustainable leadership approaches, application level of sustainable leadership practices and subcomponents of sustainable leadership practices comparison one another among managers.

The validity of the scale was evaluated using the Cronbach's Alpha value. References Criteria for the Scale's Reliability 0are $0 < x < 0.40$ "not reliable", $0.40 < x < 0.60$ "low confidence", $0.60 < x < 0.80$ "reliable", $0.80 < x < 1,00$ is "highly reliable" (Allen, 2006) The Cronbach Alpha of the formed framework is .81 This shows that the framework provides very trustworthy outcomes.

The survey was divided into two sections. The first section is a demographic section that included gender, age, education level, and industry sector in which managers work. The second section is designed for statistical analysis as it is mentioned above.

Results and Discussion

Descriptive Statistics

Survey questions were divided into following way. Firstly, according to Avery and Bergsteiner's criteria (Avery & Bergsteiner, 2011) such as higher-level practices, key performance drivers, foundational practices). Secondly, according to authors` classification (i.e., sub-components mentioned .Thirdly, according to whether they were related to sustainable (i.e., honeybee sustainable leadership philosophy) or non-sustainable leadership approach (i.e.,share-holder first locust philosophy)

Table 3: Social-Demografics and Economics Features of Participants

Gender	**N**	**%**	**Education**	**N**	**%**
Female	101	50.2	Bachelor's degree	92	45.8
Male	100	49.8	Master's degree	71	35.3
Total	201	100.0	Ph.D. Degree	38	18.9
			Total	201	100
Age			**Sectors**		
25 and 30	59	29.4	Automotive	3	1,5
31-36	43	21.4	Oil and Gas	48	23.9
37-42	49	24.4	Energy	19	9.5
42 and above	50	24.9	Fashion	6	3.0
Total	201	100	Finance	31	15.4
			Healthcare	8	4.0
			IT	25	12.4
			Logistics and Transport	31	15.4
			Material	7	3.5
			Pharmaceutical Industry	1	0.5

			Real Estate	12	6.0
			Technology	10	5.0
			Total	201	100

Source: developed by authors using SPSS software tools.

The table presents the age of the participants which divided into four groups: 25 -30 age group is 29.4%, 31-36 age group is 21.4%, 37-42 age group is 24.4%, 42 and above 24.9%. The results shows that the highest number of participants between the age of group is 25-30. The pecentage of particapants was 50.2% of male and 49.8% were female .Educational part of the survey shows 35,3% of participants is master's degree Ph.D. Degree participants included 18,9%, among participants are bachelor's degree is 45,8%. Managers were from different industry sectors, the highest percentage is Oil& Gas sector 23,9%, the lowest percentage is pharmaceutical sector 0.5%

Table 4. Descriptive Analysis

N	Questions	Mean	Std. Deviation
1	In terms of training and development, my goal is to improve everyone constantly.	3,66	1,19
2	In terms of training and development my goal is to improve people selectively	2,78	1,26
3	In my interactions with my co-workers, I seek collaboration.	**4,17**	1,19
4	In my interactions with my co-workers, I tend to be aggressive	1,96	1,32
5	Long tenure at all levels is quite essential to me	3,41	1,14
6	I can accept excessive employee turnover on some levels	2,81	1,18
7	I mostly make promotions from within an organization from my employees	3,53	1,07
8	Wherever feasible, I like to appoint people from outside the company.	3,21	1,10
9	I'm quite concerned about the prosperity of my co-workers	3,47	1,15
10	Employees are replaceable for me, and employee cost is a substantial cost pen in accounting.	3,39	1,10
11	In my perspective, the CEO works as a top key member of the team or speaker	2,13	1,27
12	In my perspective, the CEO is a decision-maker and the idol of his/her employees	3,52	1,04
13	In business, "doing the right thing" is more essential than profit.	1,99	1,27
14	The assessable risk might be accepted in every scenario to improve profits.	3,28	1,10
16	I would rather short-term profits and expansion prevail.	2,65	1,19
18	I believe that change is a gradual and intentional process.	3,50	1,12
19	I believe individuals should perform as independently as possible to boost profits.	2,25	1,29
20	I believe employees should pursue and abide by(obey) managers.	3,49	1,10
21	In my business goals, I make a conscious effort to protect the environment	**1,85**	1,28
22	In my perspective, the environment exists to be exploited in order to increase profit.	2,31	1,48
24	I believe people and the community are exploited since they are both available to increase the profit of the corporation.	2,80	1,36
25	In my opinion, everyone matters, whether they connect to the business world.	3,35	1,50
26	In my opinion, only shareholders are important since we do business.	3,43	1,30
27	In my opinion, vision statements provide a common perspective of the future, which is an important strategic instrument.	1,93	1,15
28	In my opinion, the business does not have to be driven by the future.	3,19	1,13
29	Decision-making should be decentralized and cooperative.	3,95	1,04
30	Decision-making should be predominantly manager driven.	3,24	1,09
31	In my opinion, employees are capable of self-management.	3,48	1,12
32	In my opinion, managers should manage the employees.	3,80	1,15
33	Teamwork should be comprehensive and encouraged.	4,38	1,17
34	Teamwork should be restricted, and manager centered.	3,00	1,27
35	I believe that a widely shared culture encourages and facilitates the achievement of company objectives	3,89	1,00
36	I believe that culture may not be shared in order to fulfill short-term business goals.	2,78	1,18
37	In my perspective, knowledge sharing is critical and should be spread throughout the business.	3,79	1,14
38	In my perspective, information sharing is unnecessary; in fact, I believe that having certain people with expertise within an organization will suffice to fulfill the goal.	2,68	1,30
39	In business, I must have a high level of trust established via relationships and goodwill.	4,03	1,26
40	In business, control and monitoring must be essential in order to compensate for low trust	3,79	1,28
41	Strategic innovation is essential and should be supported at all levels of the organization.	4,28	1,10
42	Innovation is a high-risk endeavor that should be managed only by managers.	3,61	1,27
43	I place great importance on employees who are emotionally committed.	3,04	1,17
44	Financial rewards are sufficient motivators; thus, I do not require emotional commitment from my employees	3,79	1,35
45	Quality is entrenched in the culture.	3,60	1,05
46	Controlling is the only way to create quality.	3,95	1,37

Source: developed by authors using SPSS software tools.

We used a 5-point Likert range (1 =strongly disagree, 2 =disagree) 3 =neutral, 4 =agree} and 5 = strongly agree) for questions. Higher scores reflected more positive perceptions. According to the descriptive analysis participants interested in 3rd question more than other questions with 4.17 score and less interesting question was 23rd with 1.85 lowest score.

Exploratory Factor Analysis

As a result of the analysis, it was determined that 43 variables could be grouped under the first 6 factors with an eigenvalue greater than 1. It has been determined that these three factors can explain 68.78% of the total variance (Eigenvalue), and it is considered sufficient that the explained variance ratio is greater than 0.50 (Turanli et al., 2012). The result of factor analysis is given in Table 5. The KMO (0,912, P<0.05) and Bartlett's test of sphericity (Chi square [X2(861)] = 6644,055, P<0.01) suggest that the dataset was suitable for Factor Analysis. The Cronbach-Alpha values of the five components obtained were 0,729 that indicating that these components were highly reliable (Hu & Bentler, 1999).

Table 5. Exploratory Factor Analysis

		Component						
Factor names	Statements	1	2	3	4	5	6	Cronbach's alpha
Manager centered leadership	44	0,894						0,925
	46	0,829						
	42	0,826						
	26	0,805						
	32	0,790						
	40	0,784						
	34	0,704						
	18	0,682						
	20	0,678						
	43	0,601						
	10	0,573						
	30	0,544						
	25	0,544						
Employee centered leadership	39		0,825					0,927
	33		0,815					
	29		0,810					
	41		0,789					
	35		0,788					
	45		0,764					
	37		0,698					
	31		0,641					
	3		0,560					
Orrganizational profit	16			0,833				0,927
	22			0,809				
	24			0,771				
	4			0,700				
	21			0,669				
	8			0,667				
	14			0,662				
	27			0,599				
	28			0,596				
	13			0,586				
	11			0,537				
	19			0,535				
Employee`s engagement	5				0,769			0,779
	9				0,732			
	1				0,610			
	7				0,536			
	6				0,446			
Knowledge sharing culture	38					0,709		0,810
	36					0,545		
	12						0,494	
	KMO and Bartlett's Test							
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.							0,912
	Bartlett's Test of Sphericity					Approx. Chi-Square		6644,055
						df		861
						Sig.		0

Source: developed by authors using SPSS software tools

According to EFA, the author has named six components: First one is manager centered leadership behavior, second one is employee centered leadership behavior, third one is organizational profit, fourth one is employee`s engagement last one is knowledge sharing culture. However, sixth component result came out 0,494 which is below 0.5 has been removed from factor analysis (Tuan et al., 2005)

Comparison Between Level of Non-Sustainable Leadership Approaches and Sustainable Leadership Approaches Among Hungarian Managers

Table 6: Level of Sustainable Leadership Approaches (Min-1 / Max-5)

	Average
Non-Sustainable Leadership	3.75
Sustainable Leadership	3.20

Source: developed by authors using SPSS software tools.

The analysis indicated that the managers' non sustainable leadership skills are not significantly higher than sustainable leadership skills. As a result, it is possible to conclude that there is room for improvement among the participating managers in terms of sustainable leadership abilities.

Comparison of Sustainable Leadership Practices Among Hungarian Managers

Table 7: The Level of Sustainable Leadership Practices Among Managers (Min-1 / Max-5)

	Average
Foundation Practices	3.35
Higher-Level Practices	3.56
Key Performance Drivers	3.69

Source: developed by authors using SPSS software tools.

When considering the sustainable leadership practices, it was discovered that key performance drivers are most applicable sustainable leadership practices by the managers who participated to survey. Therefore, the skills that support performance needed to be improved.

Table 8: The Level of Subcomponents of Sustainable Leadership Practices Among Managers (Min-1 / Max-5)

	Average
1. Manager centered leadership	3.4
2. Employee centered leadership	3.9
3. Organizational profit	3.2
4.Employee`s engagement	3.4
5. Knowledge sharing culture	2.7

Source: developed by authors using SPSS software tools.

Hungarian managers consider more employee centered leadership for organizational success. Knowledge sharing culture is least considered by participants.

Conclusion

Sustainable leadership is trending topic within the fields of leadership, sustainable development and sustainability. Today`s organizations require sustainable leaders to accomplish long term growth and continuous improvement in order to organization performance. Sustainable leadership practices are applied to business structure in order to aiming high organizational performance. Sustainable leadership and sustainable leadership practices significantly become applicable by the managers and organizations day by day not only for organizations as well as for sustainable world which we must to preserve for our children, grandchildren and future generations.

Sustainability and sustainable leadership practices seen as a crucial strategy in order to organization`s success for long term.Organizations that implemement sustainable leadership practices are able to reduce organizational costs therefore sustainability is not only help to imrove business in order to societal and environmental,also help business improve economically that lead to sustainability of organizations.As we mentioned earlier lower costs is one of the advantage of implemention of sustainable leadership practices besides that better management is other advantage of sustainable leadership practices in order to handle challenges and opportunities in the market that cause organizations are more stable in terms of economically and less vulnerable than organizations that do not apply sustainable leadership practices.

Managers who willing to apply sustainable leadership and sustainable leadership practices in a business must start to examine her or his own both successful and unsuccesful leadership skills in order to reduce unsufficient qualities to keep suffcient qualities of leadership for long term. Once manager begin to examine one`s qualities and then examination process must be taken further step. Team qualities and organizational needs must be identified in order to create organizational sustainability.

The main purpose of this study is to examine the level of sustainable leadership skills of middle-level Hungarian managers in a variety of industrial sectors and which sustainable leadership practices with its subcomponents can be preferred to implement in organizations by Hungarian managers. Questionnaire method was used among 201 middle-level Hungarian managers in various sectors. General findings showed that sustainable leadership scores of the Hungarian managers (3.20) stayed below non- sustainable leadership scores (3.75) that indicates that there is a slight difference between level of non sustainable leadership and sustainable leadership skills of Hungarian managers. They need to improve themselves relate to sustainable leadership skills based on applying sustainable leadership practices in organizations. Among sustainable leadership practices key performance drivers (3.69) are the most applicable sustainable leadership practices among the middle level Hungarian managers comparing to foundation practices (3.35) and score of higher-level practices (3.56). According to subcomponents of sustainable leadership practices, employee centered leadership is the highest score (3.9) and lowest score is the knowledge sharing culture (2.7). Other scores of subcomponent of sustainable leadership practices are managers centered leadership (3.4), organizational profit (3.2), employee’s engagement (3.4) among the middle level Hungarian managers.

In a nutshell, despite the presence of strong leadership skills of middle level of Hungarian managers,their sustainable leadership skills are not far below their aspirations. According to sustainable leadership practices ``key performance drivers`` are most applicable practices by middle level of Hungarian managers and other practices must be implemented as much as ``key performance drivers.`` Studies on sustainable leadership have focused more on drawing its conceptual framework. In this context, future studies should be supported by applied research

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RECEIVED: 02 May 2022 **ACCEPTED: 28 November 2022**

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Vadyba 2022/2(38). Mokslo tiriamieji darbai

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