

ACTA PROSPERITATIS

Journal of Turiba University

No.14



Turiba University

ISSN 1691-6077

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IDENTIFICATION AND EVALUATION OF HUMAN FACTORS AFFECTING THE OPERATIONAL PERFORMANCE OF INNOVATION HUBS

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Abstract: The research has been carried out to identify and evaluate the human factors affecting the operational performance of innovation hubs. The authors conduct a systematic review of relevant literatures and identify certain factors that found to affect the operating performance of Innovation hubs. Through a quantitative research methodology, such as a structured questionnaire, the authors gathered responses from HR experts in the form of an online survey. The survey responses were analyzed with the help of factor analysis, which helped the authors gather 2 components out of 14 survey variables. With the help of factor analysis, the authors developed a model for enhancing the operational performance of innovation hubs. The model can act as a template for further research in the field. Companies can utilize this model for enhancing the operational performances of their innovation hubs.

Keywords: Employee factors, Human factors, Innovation Hubs, HR Management Strategies, Operational Performance, Organizational performance.

DOI: 10.37804/1691-6077-2023-14-1-15

Introduction

As a key driver of long-term success in today's cutthroat business climate, innovation hubs have risen to prominence as a critical topic of discussion. Academics are trying to identify the factors that shape its dynamics. The human factors are often cited as the driving force for innovation hubs. Some countries are much ahead of the pack when it comes to their capacity to innovate. (Atkinson et al., 2015). Thus, fostering human aspects at all echelons and in all sectors of society might be essential for laying the groundwork for creativity (Averina et al., 2018).

The company's accumulated knowledge is most firmly embedded in its human resources but also obvious in its processes, procedures, and other features. Innovation and technical abilities come through intentional, deliberate, time-consuming, expensive, non-linear, path-dependent, and cumulative learning (Atkinson et al., 2015). Human resources, habitual activities, and interpersonal interactions are necessary for fresh ideas. The human component affects innovation beyond the supply side. This encompasses concept reception, acceptability, and spread.

These innovation centre' performance may depend on human variables, which were identified and mitigated. Determining what drives and directs the hub's architecture, optimising the information acquired there, capturing new ideas developed there, coordinating and managing the hub's network, encouraging innovative behaviour, and incorporating human aspects are some of the challenges.

Human factors theory considers human limits and strengths to optimise equipment and processes. Human resource policies and practises support a company's goals, finances, and long-term vision. Human resource management is essential to any business, but smaller companies typically handle it poorly. People's personality affects innovation centres' efficacy. Innovation centres may perform better if these human variables are recognised and handled.

Human factors drive innovation creation, development, and dissemination throughout organisations, nations, and continents. This study examines how human variables affect the innovation hub's operations. Innovation Hubs indirectly boost organisational performance by providing a suitable

environment for quality improvement. So, this study examines human factors that may inhibit innovation centres. Accordingly, this research may aid enterprises and boost the industrial sector by enhancing the deployment of Innovation Hubs. The significance of human factors to organisational success is, therefore, the focus of the study topics. Therefore, the research questions are: What all are the Human Factors that affect the operational performance of the innovation hubs? How to enhance the operational performance of the innovation hubs by efficiently managing these human factors with the help of a model?

1. Literature Review

Human capital may directly and indirectly boost economic growth. Technology may also benefit from human capital investment and education. Technical advancement may benefit from a diversified workforce's human resources and talents. (Jimenez et al., 2017). The human factors affecting the operational performance of innovation hubs can be classified as follows:

- Organizational factors
- Individual Attributes
- Workplace Environment
- Task Related Aspects

1.1. Organizational factors

A happy workplace enhances production, involvement, and morale. A hostile work atmosphere reduces productivity, increases employee turnover, and disengages workers from their jobs and the organisation (Mulas et al., 2017). Culture and employee involvement are intertwined (Kelly et al., (2016). This would provide the foundation for employees' professional growth within the organisation (Sambuli et al., 2017). The difference between inventing and innovativeness is highlighted in the context of organisational innovation (Loorbach et al., 2020). Organizational innovation is placed within the context of innovation concepts (Mwantimwa, 2019); the difference between innovating and innovativeness is clarified; and the key typologies, primary sets of antecedents, and performance consequences of generating and adopting innovations are uncovered (Jimenez et al., 2018).

Top-level compensation schemes should reflect strategic objectives. Extrinsic job motives include money and material benefits (Mwantimwa, 2017). Good labour has its advantages, (Radulescu, (2019) such as job satisfaction and knowing one's efforts benefitted others (Pancholi, 2018). Companies seek hard employees who can adjust to shifting priorities (Riedler et al., 2020). Employee devotion and production determine an organization's success (Rowe et al., 2019); thus, HR management support and rapport are important (Mtunga et al., 2018).

1.2. Individual Attributes

In the workplace, stress is nothing new (Rundel et al., 2020). Human resources professionals are aware that many workers suffer from stress due to their jobs at some time (Yeung, 2020). Stress has serious biological impacts and may cause both mental and physical health problems if not managed (Kanthar et al., 2017), the goal of performance management training is to help workers develop the knowledge, abilities, and attitudes necessary to be successful in their jobs (Lagakos et al, 2018).

Traditional methods of performance management training like one-on-one meetings and yearly evaluations are giving way to more tech-driven alternatives (Lee et al., 2020). Every person craves acknowledgement and praise for their efforts. Managers utilise a number of factors to determine a worker's value to the organisation (Glauber, 2022). The team itself determines the criteria for success, which may include such factors as output, flexibility, teamwork, and quality (Philipson et al., 2019). Employees are praised and compensated depending on their performance ratings (Lee et al., 2020). Employees get a chance to air their grievances about their jobs at performance reviews. It is crucial

for firms to recruit competent workers, yet employees' carelessness may undermine their efforts. (Rundel et al., 2020).

1.3. Task Related Aspects

Ergonomics is a method that takes a systemic view of the relationship between workers and their tasks, as well as the methods by which those tasks are carried out (Greenberg et al., 2018). Ergonomic programmes are often implemented by businesses to lessen the financial burden of injuries, cut down on waste, and curb absenteeism (Mura et al., 2018). Employees may be unable to meet rising expectations owing to a lack of personal resources as the complexity of work grows exploitative (Visagie et al., 2021). Due to the burdensome process, employees' valuable human resources are drained as they try to do difficult tasks. Good equipment and technology help employees work better. (Rundel et al., 2020).

Opportunities for growth and wealth accumulation motivate individuals to pool their resources in order to accomplish formidable goals (Zavratnik et al., 2019), When one resource motivates another to acquire, a growth spiral might be triggered. When given the chance to take on more difficult jobs, employees are more likely to develop their skills and amass more resources (Tiwasing et al., 2022). This idea proposes that "job crafting" and other forms of worker self-management are encouraged and even justified by increasing job complexity. Employees become more engaged and creative when given more challenging jobs. Employees will be encouraged to learn new skills to complete tasks. (Musik et al., 2019)

1.4. Workplace Environment

The "work environment" includes the workplace, its employees, and their resources. (Atease et al., 2020). Any of these factors may adversely affect employees' well-being, relationships with coworkers, collaboration, production, and health. (Chirchietti, 2017). The following table 1 outlines the factors identified from the literature review.

Organizations may maintain a competitive edge by valuing the physical workplace. This scholarly study shows that workplace layout modifications might affect productivity and morale (Cherunya et al., 2020). Office design may affect productivity, cooperation, creativity, HR management, and bottom-line performance, according to research. Improved workplace involvement, output, pleasure, and satisfaction (Mtunga et al., (2018).

Support from supervisors and coworkers affects workplace morale. This covers how well they handle managerial issues, how much they like their work, and how much professional growth they are provided. (Petersen, 2020) Workplace quality determines organisational success. Loyalty increases when employees like their jobs and bosses (Radulescu, 2019).

Individuals who pursue excellence and perfection are sometimes accused of ignoring their personal life (Riedler et al., 2020). Overworked persons often work longer hours and are disappointed with the results. Health, personality, resilience, professional position, age, stage of life, and gender all affect work-life balance Rowe et al., (2019). Two organisational characteristics that may affect workers' work-life balance are the length of hours worked and the job's complexity or stress. (Radulescu, 2019).

Table 1 Factors Identified from Literature Review (Created by authors)

Main Factors	Sub Factors	Citations
Organizational Factors	Culture	Kelly et al., (2016), Loorbach et al., (2020), Mtunga et al., (2018),

	Rewards and Recognition System	Mulas et al., (2017), Mwantimwa, (2019), Mwantimwa, (2017)
	Human Resource Management Strategies	Pancholi, (2018), Radulescu, (2019), Riedler et al., (2020), Rowe et al., (2019), Sambuli et al., (2017).
Individual Attributes	Stress	Rundel et al., (2020), Yeung, (2020).
	Training	Kanthar et al., (2017), Lagakos et al, 2018)
	Skills and Abilities	Lee et al., (2020), Glauber, (2022)
	Performance	Philipson et al., (2019), Lee et al., (2020),
Task Related Aspects	Ergonomics	Greenberg et al., (2018), Mura et al., (2018),
	Equipment and Technology	Visagie et al., (2021), Rundel et al., (2020),
	Complexity of the Work	Zavratnik et al., (2019), Tiwasing et al., (2022), Musik et al., (2019)
Workplace Environment	Physical Environment	Ataise et al., (2020), Cherunya et al., (2020), Chirchietti, (2017).
	Support and Encouragement from Top Management	Mtunga et al., (2018), Petersen, (2020),
	Work Life Balance	Radulescu, (2019), Riedler et al., (2020), Rowe et al., (2019).
	Workplace Safety	Sambuli et al., (2017), Glauber, (2019).

Improved safety is good for both quality and productivity. Actions that put employees in danger may point to incompetent management (Sambuli et al., 2017). Turnover will rise as managers and workers coast. Staff dissatisfaction and anxiety lower quality and production. Employees can focus on their job when they feel comfortable at work. When a corporation prioritises security, disruptions will decrease (Glauber, 2019)

Management also shapes workplace culture. Long commutes, unproductive coworkers, demanding supervisors, and unsociable hours add to this issue. (Mtunga et al., 2018), Remote workers are expected to be accessible at all times, even outside of regular office hours and during personal time (Petersen, 2020).

2. Methodology

One way a researcher could approach a study subject is by the methodical collection of data, analysis of the data, and the development of findings. A study's methodology describes the way it went about gathering data. In the realm of academia, "methods" and "methodology" are often used interchangeably.

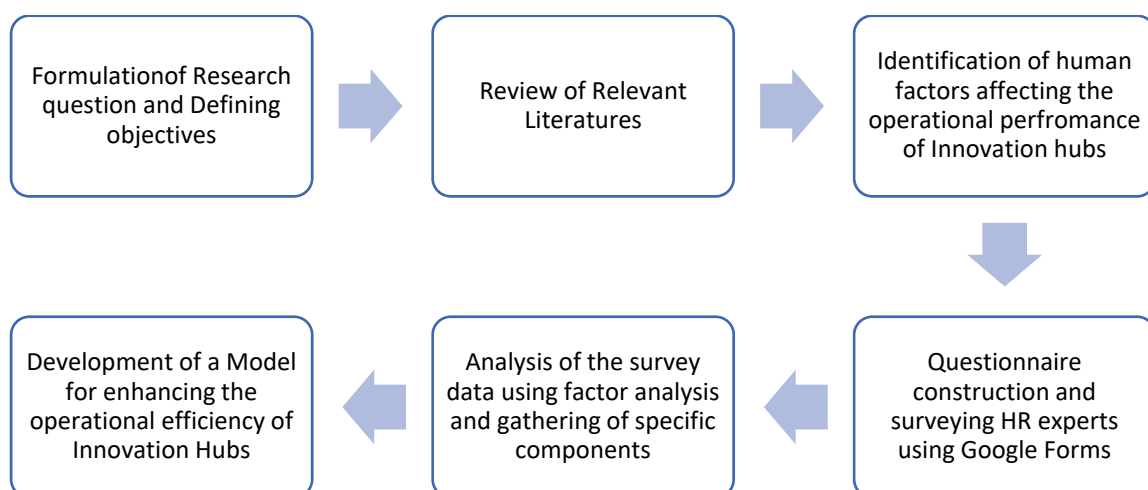


Figure 1 Overall Methodology of the Research (Created by authors)

2.1. Primary Data Collection Methods

This report's core data came from a comprehensive online survey of HR experts. Since it directly collects data from the population of interest, the questionnaire is a main research tool. Interviews are

less structured than the questionnaire, which may make it more successful. Based on the literature research, a Google Forms questionnaire was built. Figure 1 provides a concise summary of the survey questions.

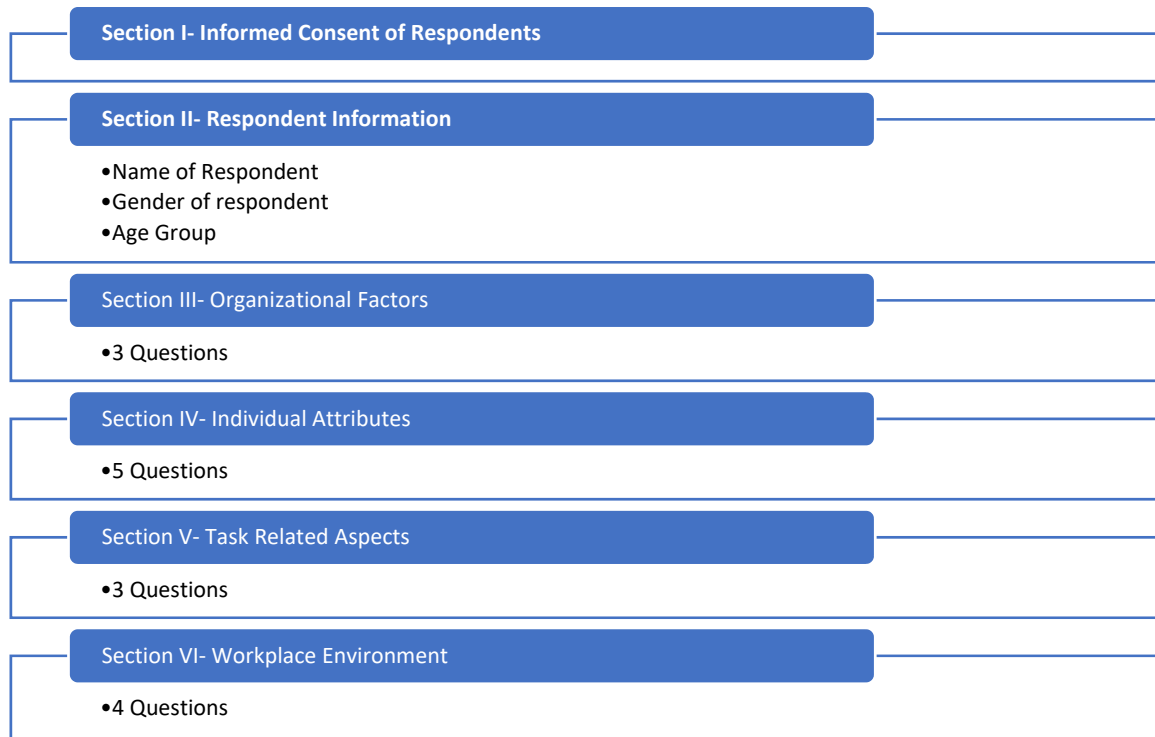


Figure 1. Concise Summary of Survey (Created by authors).

The questionnaire is divided into 6 parts, with a total of 18 questions. The language used for this survey is English. The poll was conducted online using Google Forms. The following are the primary factors that were taken into account while deciding to include this survey:

- Organizational Factors
- Individual Attributes
- Task Related Aspects
- Workplace Environment

2.2. Sample Characteristics

Calculating the response rate involves dividing the total number of survey questions by the number of questions that were answered in full (Fincham, 2008).

Table 2. Sampling details (created by authors)

Research Type	Exploratory research
Data Gathering Approach	Quantitative approach and Descriptive research
Type of Sampling	Non-Probabilistic Convenience Sampling
Sampling unit	Experts in HR management
Sampling size	219
Data Analysis- Methods	Factor Analysis
Confidence level	95%
Margin of error	5%

The authors of this thesis sent 230 invites, of which 219 were accepted. The results of an empirical analysis of this project are summarised in Table 2. A substantial (or acceptable) research return rate is essential for ensuring that the results are representative of the target population and that the

questionnaire is functioning well. The sample is selected using convenience sampling, which is not a statistically valid approach. The response rate can be calculated by using the following equation (1).

$$Response\ Rate\ (RR) = \frac{Total\ attributed\ Conversions}{Total\ Unique\ Users} \times 100 \quad (1)$$

$$RR = \frac{219}{230} \times 100 \quad (2)$$

Therefore, the response rate of this survey is 95%.

In the survey there were 123 male participants 94 Female participants and 2 participants of other gender. The majority of the participants were from the age group of 25-34 (91). There were 61 participants from 18-24 age group, 42 from 35-44, 13 from 45-54 and 6 from 55+.

2.3. Descriptive Statistics

It is possible to better explain, display, or summarise data using descriptive analysis, which makes use of the patterns revealed within the data. The gathering of data is the starting point for every statistical analysis. The researcher may learn about the characteristics of a group via the examination of both quantitative and qualitative data. Surveys allow researchers to investigate more individuals than descriptive methods. Only if the surveys are accurate can a full and comprehensive examination of the unit be performed (Yellapu, 2018).

To address the factors identified from the literature review, a survey was constructed using Google Forms. This survey is divided into two parts. Obtaining informed consent from participants is a key aspect of every research project. It was completely up to the individual whether or not they wanted to participate in the survey. The next sections included questions based on the factors uncovered by the review of relevant literature.

2.4. Factor Analysis

The basic idea of Factor Analysis is to reduce the number of variables needed to express the whole set. Variables and factors are terms used to describe conditions that may alter an outcome. The researchers are employing factor analysis because, Factor analysis (FA) is a statistical method for reducing a large number of variables or items down to a smaller number by focusing on the underlying dimensions that help to explain the connections between the original set of variables or items. (Yong, 2013).

2.4.1. Development of a Model Using Factor Analysis

The factor analysis might be used to provide a framework for enhancing the operating efficiency of Innovation hubs.

According to Yong (2013), the factor analysis model may be written in algebraic form as follows: Given a sample of n subjects and p measured variables (X_1, X_2, \dots, X_p), variable I may be written as the linear combination of m factors (F_1, F_2, \dots, F_m), where $m < p$.

Thus,

$$X_I = a_{i1}F_1 + a_{i2}F_2 + \dots + a_{im}F_m + e_i \quad (1)$$

where:

a_i s the factor loadings (or scores).

The values of α_s will vary as per the values of factor analysis.

The percentage of variance discovered by factor analysis is transformed into a ratio, which is then used to the model-proposal equation for refinement.

3. Results and Discussions

Results from a review of the relevant literature point to four primary criteria and fourteen secondary ones. These questions were included in a survey for HR professionals. The survey is broken down into sections, and questions relevant to each one has been labelled and numbered. Thanks to this survey, the authors now has enough information to do a factor analysis. The following table 7 outlines the factors identified from the theoretical framework.

The table 8 below presents summary of descriptive data from the survey.

Table 3. Descriptive Statistics of the Survey Data (Created by authors)

	Mean	Std. Deviation	Analysis N
Culture	4.164	1.2745	219
Rewards and Recognition System	3.918	1.1424	219
Human Resource Management Strategies	4.032	1.3077	219
Stress	2.365	1.2829	219
Training	3.804	1.2753	219
Skills and Abilities	4.073	1.3560	219
Performance	3.9041	1.25433	219
Ergonomics	3.584	1.4258	219
Equipment and Technology	4.110	1.2875	219
Complexity of the Work	3.758	1.1337	219
Physical Environment	3.744	1.3267	219
Support and Encouragement from Top Management	4.018	1.4141	219
Work Life Balance	4.256	1.1164	219
Work Place Safety	4.315	1.0563	219

The descriptive results of the survey data are shown in the table above. As the standard deviations for all the variables were more than 0.5, a wide range of respondents was likely sampled. Multiple viable explanations were shown (less than the mean value). Authors conducted extensive literature analysis, narrowed focus to 14 critical variables, and surveyed HR professionals to get their input. After that is complete, factor analysis may be performed on the data. The purpose of factor analysis (FA), a kind of multivariate statistical analysis, is to identify the driving forces underlying correlations among a large number of variables.

Table 4 Results of KMO Test (SPSS Software).

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.905
Bartlett's Test of Sphericity	Approx. Chi-Square	1838.187
	df	91
	Sig.	.000

The KMO MSA value for this study was 0.905, (Table 4), which is much higher than the threshold of 0.5, indicating that the variables were credible. Variables from the research questions having a significance-value of 0.000 may undergo further processing in order to be ready for component analysis. The results of the PCA are shown in the table that follows. Using the criterion of selecting components with Eigenvalues greater than one, the authors ultimately settled on maintaining just two independent variables. The results of a principal components analysis of the total variance are shown in Table 5.

Table 5. Principal Component Analysis Results (SPSS Software)

Component	Initial Eigenvalues	Extraction Sums of Squared Loadings	Rotation Sums of Squared Loadings
-----------	---------------------	-------------------------------------	-----------------------------------

	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.791	41.363	41.363	5.791	41.363	41.363	5.730	40.927	40.927
2	3.142	22.444	63.807	3.142	22.444	63.807	3.203	22.879	63.807
3	.819	5.849	69.655						
4	.708	5.060	74.715						
5	.534	3.812	78.528						
6	.507	3.623	82.151						
7	.471	3.363	85.514						
8	.425	3.033	88.547						
9	.368	2.629	91.176						
10	.336	2.402	93.578						
11	.260	1.857	95.436						
12	.234	1.669	97.105						
13	.221	1.577	98.682						
14	.185	1.318	100.000						

Extraction Method: Principal Component Analysis.

An SPSS principal component analysis is shown in the table above. A matrix known as the Component Matrix stores information on the component's linkages between its constituent factors. The amount of variation that may be attributed to the eigenvalue squares is provided in the Total Variance Explanation. Using the rotated component matrix, one can examine the Pearson correlations between the components and the items. Possible features of a component are identified by its factor loadings. In Table 6, the rotated component matrix can be seen. Matrices revolve around the origin due to the fact that zero vector remains unchanged after multiplication (origins coordinates).

Table 6. Rotated Component Matrix (SPSS Software)

	Component	
	1	2
Culture	.885	
Rewards and Recognition System	.837	
Human Resource Management Strategies	.854	
Stress	-.720	
Training		.798
Skills and Abilities	.887	
Performance	.816	
Ergonomics		.785
Equipment and Technology	.798	
Complexity of the Work		.676
Physical Environment		.624
Support and Encouragement from Top Management	.854	
Work Life Balance		.708
Work Place Safety		.690

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Every element in the table is given a positive or a negative value in the rotated component matrix if the value is greater than 0.4. The authors may use the rotated component matrix to examine the relationships between many components. The following components were derived by the authors from the factor analysis:

Component 1- Managerial Aspects

A correlation coefficient of 0.6 or greater was required for inclusion in the analysis of any variable. After rotation, the components matrix takes on only positive values for all variables except for one. Because of this, the authors is going to focus on these eight factors for the further study: Culture (0.885), Rewards and Recognition System (0.837), Human Resource Management Strategies (0.854), Stress (-0.720), Skills and Abilities (0.887), Performance (0.816), Equipment and Technology (0.798), Support and Encouragement from Top Management (0.854). The following figure 2 outlines the factor loadings of Component 1.

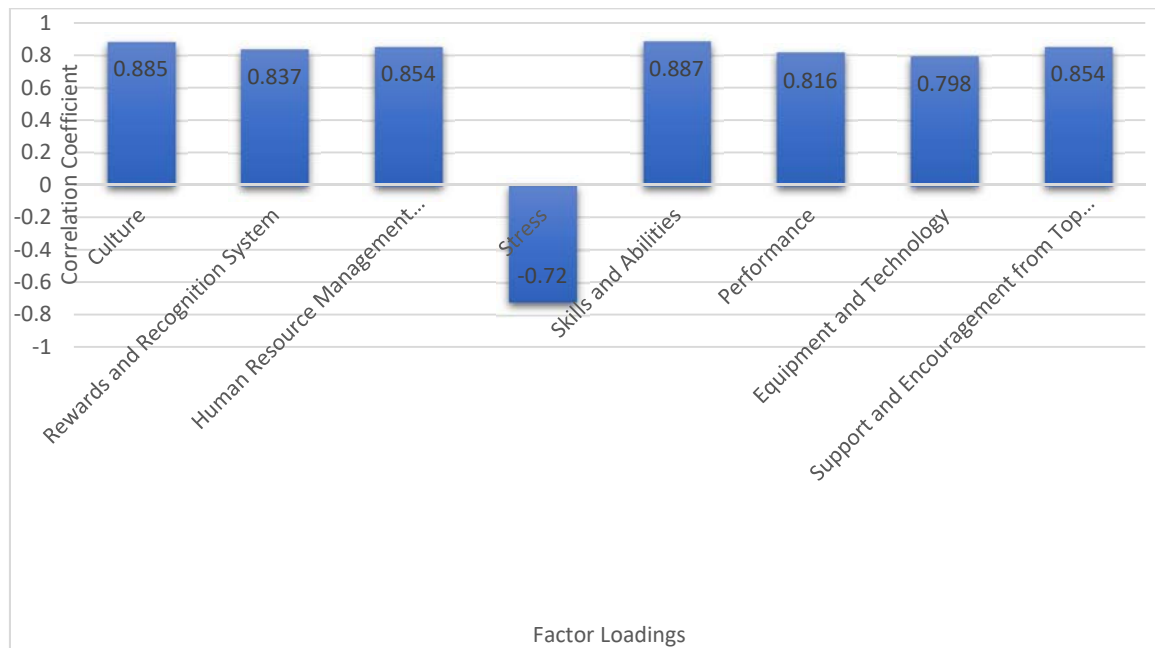


Figure 2. Factor Loadings of Component 1 (Created by authors)

- "Culture" relates to a company's guiding principles and innovative management. It considers cooperation, debate, and risk. Culture often influences a company's operations and values. It's also the focus when discussing how successfully a company manages innovation. A happy workplace enhances production, involvement, and morale. A hostile work atmosphere reduces productivity, increases employee turnover, and disengages employees from their job and the firm.
- Extrinsic and intrinsic motives may be part of workers' pay. Extrinsic employment motivations include money and material perks. Job satisfaction and knowing one's efforts helped others are benefits of good work. Many charity workers are underpaid. Helping a good cause costs money.
- Strategic planning that promotes the HR manager's corporate vision is key. Their support and interaction with employees are vital, as employee devotion and production determine an organization's success. The HR department's role is to encourage goal-setting, motivation, communication, and empowerment via personal responsibility.
- Occupational stress is frequent. Many workers endure job-related stress, according to HR professionals. Expectations and lifestyle changes have raised worker stress. Unmanaged stress may harm mental and physical health. Employee morale, productivity, and organisational objectives suffer from stress. Errors, poor performance, mental health difficulties, burnout, and workplace unrest result from job stress.
- Ability combines sensory and cognitive capacities, reaction knowledge, and physical implementation. Possessing the requisite information, abilities, and skills. Effectiveness in work determines productivity. A group's success depends on its members' talents. Workload is the sum of a worker's duties in a certain time period.
- Managers assess employees using many characteristics. The team determines productivity, flexibility, collaboration, and work quality. Performance evaluations determine employee rewards. Performance assessments let workers communicate concerns. Successful companies hire productive workers. Poor work might hurt the firm.
- Excellent equipment and technology may aid employees. New tool users may work faster. Modern technology like instant messaging may improve company communication and problem-solving. They solve issues promptly. Enquiries, comments, and complaints handled quickly may improve worker-supplier or customer relationships.

- Superiors and peers' support affect the working culture. Whether they can report difficulties to their superiors and have them addressed, whether they feel valued, and whether they receive adequate training and growth to execute their tasks successfully are all factors. Workplace quality affects corporate success. Happy employees who get along with management are more involved in the company's success.

Component 2- Employee Level Factors

Every potential variable has to have a correlation coefficient of 0.6 or higher to be included for the study. After rotation, the components matrix now has only positive values for all but one of its variables. As a result, the authors have narrowed the emphasis to these six aspects for the remainder of the research: Training (0.798), Ergonomics (0.785), Complexity of the Work (0.676), Physical Environment (0.624), Work Life Balance (0.708), Workplace safety (0.690). (Figure 3).

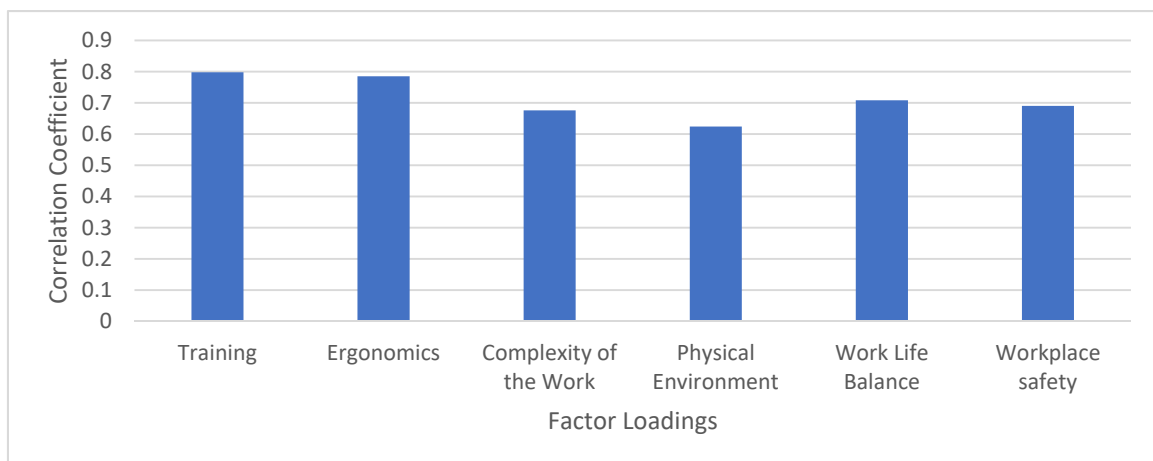


Figure 3. Factor Loadings of Component 2 (Created by authors)

- Performance management training improves workers' knowledge, skills, and attitudes in collaboration with the organisation and their manager. Performance management training improves productivity and careers. Tech-driven performance management training is replacing one-on-one and yearly evaluations.
- New technologies, business restructuring, and creative workplace activities have resulted from intense global competition. Ergonomics programmes at some firms avoid human error-related workplace injuries. Ergonomics analyses workers' tasks. Ergonomic programmes cut injury, waste, and absenteeism.
- The complexity of stream activity depends on the difficulty and challenge of the essential talents. Given the emotional, psychological, or physical nature of work and its consequences on performance, core motivation is crucial to any organisation and its employees.
- Valuing the workplace may help companies stay competitive. This study shows that office layout influences productivity and morale. Office layout may affect performance, cooperation, creativity, HR management, and profitability. Engagement, productivity, enjoyment, and satisfaction may enhance.
- Work-life balance became difficult when individuals began working from home without control over their hours or responsibilities. Work-life balance may appear contradictory in the midst of the coronavirus 2019 (COVID-19) outbreak, which has led to high unemployment rates worldwide. Regardless of the requirement for work, it's important to maximise personal fulfilment at work and in life.
- Quality and output increase with safety. Poor management may cause risky behaviour. Supervisors and workers will be unbalanced and turnover will rise. When individuals are

irritated, unsatisfied, or unable to work, quality and productivity drop. Workplace security may improve concentration. As a company's security improves, disruptions decrease.

Model for the Enhancement of Operational Performance of Innovation Hubs

Factor analysis may help narrow down an investigation's variables to the most important. Factorial analysis helped the authors identify two main components and get statistically significant findings. The section that follows gives an example, detailing a practical approach to enhancing the operational performance of Innovation Hubs:

$$Y = 0.41C1 + \dots + 0.36C0, \tag{2}$$

Where,

Y= Enhancement of Operational performance of Innovation Hubs

C1= Managerial Aspects

C0= Factors that do not have a lot of variation

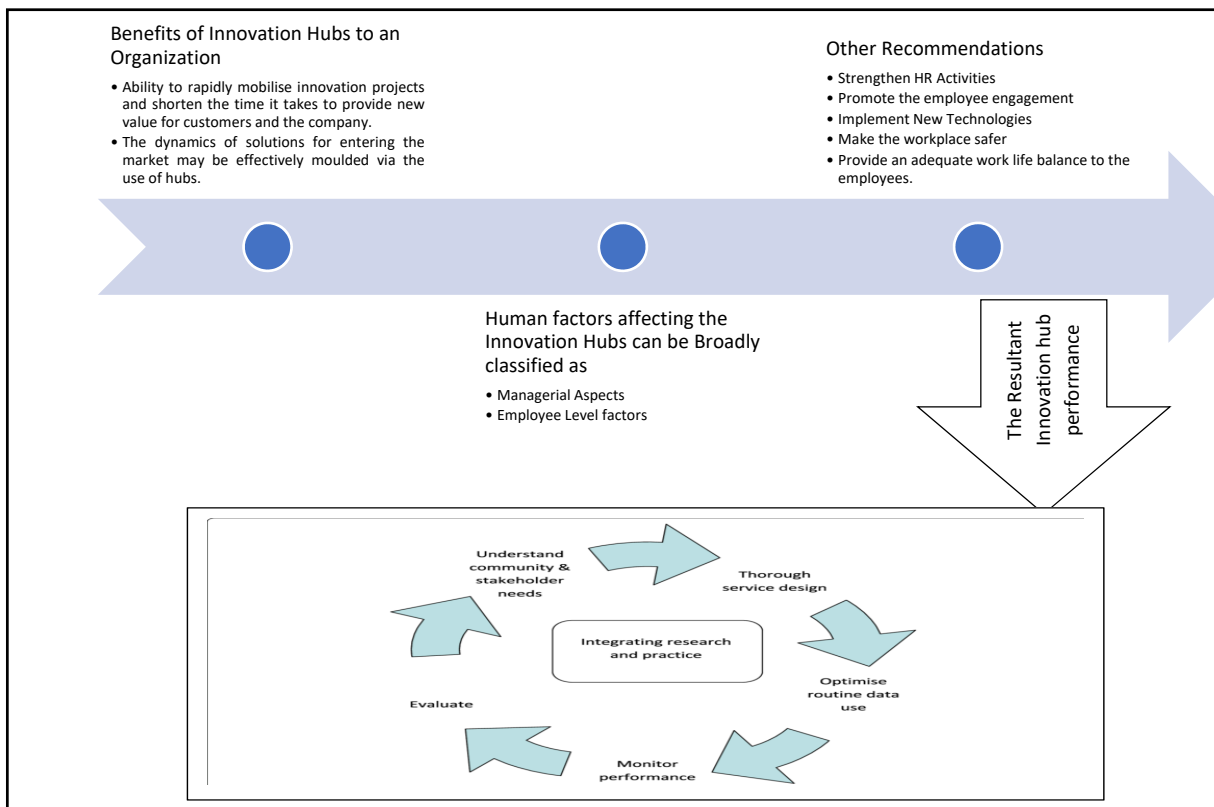


Figure 4. Model for Enhancing the Operational Performance of Innovation Hubs (Created by authors)

The aforementioned figure 4 outlines the conceptual model proposed by the authors for enhancing the operational performance of Innovation Hubs. The model can be implemented in the current systems for enhancing their efficiency. The model contains the following:

- Benefits of Innovation Hubs to an Organisation- Ability to rapidly mobilise innovation projects and shorten the time it takes to provide new value for customers and the company. The dynamics of solutions for entering the market may be effectively moulded via the use of hubs.
- Human factors affecting the innovation hubs can be broadly classified as- Managerial Aspects, Employee level Factors.

- Other Recommendations For enhancing the Operational performance of innovation hubs- Strengthen HR Activities, Promote the employee engagement, Implement New Technologies, Make the workplace safer, Provide an adequate work life balance to the employees.

Conclusion

This section wraps up the paper by providing a brief overview of the findings. The paucity of literature on human variables in innovation hubs prompted this investigation. The study's overall objective is to develop a model for the enhancing the operational performance of innovation hubs.

By answering the research question 1: What all are the Human Factors that affect the operational performance of the innovation hubs?

- After reviewing the literature, the authors concluded that innovation hubs are essential to a successful economy, but that their performance is highly reliant on human factors.
- In order to boost the efficiency of Innovation hub operations, it is necessary to address the aforementioned human elements.
- The authors constructed a questionnaire using Google forms for the purpose of eliciting responses from HR specialists of various companies.

By answering the research question 1: How to enhance the operational performance of the innovation hubs by efficiently managing these human factors with the help of a model?

- This research employed a quantitative strategy, based on a custom-made questionnaire, for its methodology.
- A total of 219 professionals, all HR specialists from various companies, participated in the survey.
- The survey data in this research was analysed using descriptive statistics and factor analysis.
- Two subcomponents were extracted from the total of fourteen survey variables with the use of factor analysis.
- The results of the factor analysis were used to inform the creation of a mathematical equation model, which in turn formed the basis of a model for enhancing the operational performance of Innovation Hubs. The mathematical model is as follows:

$$Y = 0.41C1 + \dots + 0.36C0,$$

Where, Y= Enhancement of Operational performance of Innovation Hubs, C1= Managerial Aspects, C0= Factors that do not have a lot of variation

The limitations of this research are as follows:

- To begin, the instrument might be considered somewhat weak since company-to-company perspective differs on how much of impact human variable have on Innovation hubs.
- Second, this poll in India is using a rather small sample size.
- In this investigation, the authors only use one kind of data analysis, known as Factor Analysis. This further narrows the scope of the study's findings.
- Other human aspects affecting innovation hubs may be addressed as well. This, however, may be the subject of further study.
- The financial performance of the company after the implementation of the model is not discussed in the research work.

The implications for Future Research are:

- Even though the Innovation Hubs in India are the major focus of this investigation, researchers may also examine related subjects in other parts of the globe.
- Other methods, such as AHP, may be included into future research to go more deeply and cover more ground.
- Companies can implement the model developed in this research for enhancing the performance of their innovation hubs.
- The model developed in this research has potential, and it might be tweaked and used by businesses to make their own Innovation Centres even more effective.
- It is possible that in the future we may discover new facets, and that state-of-the-art techniques will be created to further improve the efficiency of Innovation Hubs.

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STRUCTURING OF SPECIAL PURPOSE VEHICLE (SPV) WITHIN THE SCOPE OF PUBLIC-PRIVATE PARTNERSHIPS (PPPs) UNDER LATVIAN AND TURKISH LAW

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Abstract. The establishment of a specific project company most commonly known as a Special Purpose/Project Vehicle (SPV) is a key feature of most Public private partnership (PPP) transactions in Turkey.

According to the competent authority, the SPV is considered to fall under the definition of a Securitisation Special Purpose Vehicle (SSPE) then it should not be considered a financial sector entity. In order to meet the increasing infrastructure needs of Turkey, it is generally accepted necessary to utilise alternative financing models to be provided with the participation of the private sector in addition to the use of public resources. In this framework, PPPs model, which has been widely used in realisation of infrastructure investments in developed and developing countries in recent years, is also applied in Turkey. SPV PPP risks, income and losses usually are shared in proportion to the shares of a public partner and a private partner that they have in a joint venture. However capital companies also bid for the tender opened by the contracting public authority according to the relevant laws. If the tender is awarded to a business partnership or a capital company according to the relevant law, the documents regarding the establishment of the special purpose vehicle shall be requested. Generally, the SPV structured as a joint stock company. SPV is a feasible and an effective option for the lenders and financiers, who take into account the cash flow of the project and security over its assets for the repayments of the debts.

Keywords: private sector, tender process, investments, cash flow.

DOI: 10.37804/1691-6077-2023-14-16-30

Introduction

PPPs model, which has been widely used in realisation of infrastructure investments in European Union (EU) and developing countries in recent years, is also applied in Turkey. PPPs model takes its legal root from art.47 of Turkish Constitution no.2709 and various legal regulations for PPPs have been adopted since 1980s. The private sector, which is one of the contracting parties of the PPP model and entitled to participate as a tenderer in the tender in Turkey, is usually a business partnership which is legally evaluated as ordinary partnership. In Latvia an institutional PPP can be chosen in a case if the public partner wishes to have a stronger control over the execution of the PPP contract and participate in the administration of the established capital company, since both a public partner and a private partner jointly participate in the administration of an established joint venture. PPP risks, income and losses usually are shared in proportion to the shares of a public partner and a private partner that they have in a joint venture.

The goal of this research is to create effective Special Purpose/Project Vehicle (SPV) model legal regulation for PPP infrastructure projects. It was reached by examine the advantages and challenges of Turkey, Latvia and EU law. Methodology of research is based in analyse of national legal acts and EU law. The area of research undertaken for this impact assessment support study includes experts' and stakeholders' surveys, data base and document research, as well as deep research interviews. Authors try to use comparative law research, use legal design and innovative design model thinking for SPV "People first".

A. Legal Development of PPPs under Turkish Law

Public-private partnerships, which aim to provide certain public services, particularly infrastructure services that require advanced technology and high capital, jointly by both sectors through the joint use of the facilities and resources of the public administrations and the private sector, involves the joint undertaking by the public sector and private sector organisations of functions such as construction, renovation, operation, management, financing, supervision and control needed for the provision of a specific public service under a long term contract.(Emek,2009; Gözler&Kaplan,2012; Parlak et al.,2020; Yılmaz,2021) With governments bringing the private sector expertise and profit-oriented approach to public service delivery projects through PPPs, collaborative models between the public and private sectors have attracted a great

deal of attention in the last four decades and have been widely used in infrastructure and also other public services such as transportation, water and sewerage, energy, environmental protection, public health.(Ayanoglu,2021) From this perspective we may easily assume that PPPs are based on two main needs: private financing to overcome budgetary constraints in the organization of public services, and leveraging the operational capacity and techniques of the private sector.(Yalcin,2014)

In order to meet the increasing infrastructure needs of Turkey, it is thought necessary to utilise alternative financing models to be provided with the participation of the private sector in addition to the use of public resources. In this framework, PPPs model, which has been widely used in realisation of infrastructure investments in developed and developing countries in recent years, is also applied in Turkey. In many areas of public services in Turkey, such as health, transportation, energy and education, it has been stated by the administration authorities that the use of public-private partnerships will have positive effects on public borrowing and taxes, that projects will be completed through public-private partnerships, and that policies to support PPPs are among the priority agenda items of governments. (Yalcin,2016)

PPPs model takes its legal root from art.47 of Turkish Constitution no.2709. This article of Constitution indicates that Turkish law and legal regulations shall determine which of the investments and services carried out by the Turkish State and state economic enterprises and other public legal entities may be outsourced or transferred to real persons or legal entities under private law contracts. While the preliminary studies of PPP investments projected in Turkey were first carried out by the State Planning Organisation and then by the institutions reorganised under the name of the Ministry of Development, as of 2018, these duties and responsibilities are carried out by the Presidency of the Republic of Turkey Strategy and Budget Directorate (CSBB). According to the “Public-Private Partnership Report 2019” prepared by CSBB, a total of 243 projects with an investment amount of 63.8 billion dollars were implemented under the public-private partnership model in Turkey between 1986 and 2019, and the total contract value of the projects was determined as approximately 140 billion dollars (Bayansar&Özer, 2021).

Effective identification and contractualisation of risks and mutual obligations are critical for the success of PPP projects. Another factor that will increase success and motivation is the setting of performance targets, ensuring that the private sector organisation bears the consequences of failures and is rewarded for high performance. Various methods are used in the realisation of public-private partnerships. The most common of these methods are Concession Right Transfer (CRT), Build-Transfer (BTR), Build-Operate-Operate (BOO), Build-Operate-Transfer (BOT), Build-Improve-Operate-Transfer (BID), Build-Lease-Operate-Transfer (BOT), Build-Lease-Transfer (BTL), Build-Own-Operate-Operate (BOT) and Build-Own-Transfer (BOT). Unlike privatisation, in this model, the state does not completely transfer the production of public goods and services to the private sector, but as the owner and main actor in the process, it determines the definition, content and scope of public service and assumes the responsibility of supervision and control. (Köse, 2018)

In Turkey various legal regulations for PPPs have been adopted since 1980s. These are can be summarised as follows:

Law No. 3096 dated 4.12.1984 on the Assignment of Entities other than the Turkish Electricity Authority with Electricity Generation, Transmission, Distribution and Trade was the first legal arrangement regarding the Build-Operate-Transfer model and the Transfer of Operating Rights Model in the energy sector. (Şirin, 2017)

Following the Law No. 3096, the Law No. 3465 dated 28.5.1988 on the Assignment of Entities other than the General Directorate of Highways with the Construction, Maintenance and Operation of Access Controlled Highways (Motorways), which regulates the assignment of capital companies subject to the provisions of private law for the construction, maintenance and operation of motorways and the service facilities there on according to the BOT model, entered into force upon publication in the Turkish Official Gazette dated 2.6.1988 and numbered 19830.

In order to provide a legal basis for the BOT model, Law No. 3996 on BOT of Certain Investments and Services The Law on the Realisation of Electricity Generation Facilities within the framework of the Build-Operate model was published in the Turkish Official Gazette dated 13.6.1994 and numbered 21959 and put into force.

In the energy sector, the BO model was regulated by the Council of Ministers Decree No. 96/8269 on the Establishment of Electricity Generation Facilities published in the Official Gazette dated 8.6.1996 and numbered 22660.

Law No. 4283 on the Establishment and Operation of Electric Energy Generation Facilities with Build-Operate Model and Regulation of Energy Sales was published in the Turkish Official Gazette dated 19.7.1997 and numbered 23054. Law No. 4283 excludes hydroelectric, geothermal, nuclear power plants and power plants to be operated with other renewable energy resources, and regulates the principles and procedures regarding the granting of permission to establish and operate facilities and the sale of energy to the production companies under the Build-Operate Model for only thermal power plants.

Within the framework of Telegraph and Telephone Law No. 406 and Wireless Law No. 2813, the contract between the ministry and the operator for the execution of telecommunication services and/or operation of the infrastructure is considered as a concession. Law No. 3974 dated 2.2.1994, which entered into force upon its publication in the Turkish Official Gazette dated 1.3.1994 and numbered 21864, and which added 5 additional articles to the Privatisation Law No. 3291, regulated the privatisation of the Turkish Electricity Corporation by selling its shares and assets (additional articles 1-4) and that the contracts to be concluded on the basis of this Law or for the private sector to establish and operate new energy generation, transmission and distribution facilities or to take over the operating rights of the existing ones shall be subject to “private law provisions” and shall not be considered as “concession contracts”.

Article 18 of the Law on Privatisation Practices dated 24.11.1994 and numbered 4046, which lists the privatisation methods, regulates the granting of operating rights. By Law No. 4446 dated 13.8.1999 amending the 1982

Turkish Constitution, two paragraphs added to Article 47 of the Constitution stipulate that, on the one hand, the principles and procedures regarding the privatisation of enterprises and assets owned by public legal entities shall be determined by law, and on the other hand, the law shall determine which of the investments and services carried out by public legal entities may be made or transferred to real or legal entities through private law contracts. On the other hand, with the provision added to the first paragraph of Article 125 of the Constitution, it has been determined that disputes arising from public service concession agreements and contracts may be resolved through national and international arbitration. With the amendment made to the second paragraph of Article 155 of the Constitution, the power of the Council of State to review concession agreements and contracts has been transformed into the power to express an opinion. After the Constitutional Amendment in 1999 with this Law, it has been made possible for the administrative authorities to delegate the public services via contracts which actually have private law nature under Turkish law. (Bayazit&Alper,2017)

Figure 1. PPP model and sectors Turkey 2021

PPP Model	Volume (by number)	Volume (by ratio)
BOT	115	46,18 %
ToR	109	43,78 %
BLT	20	8,03 %
BO	5	2,01 %
BLT	Build – Lease – Transfer	
BO	Build – Operate	
BOT	Build – Operate – Transfer	
TOR	Transfer of Operating Rights	

Data from <https://koi.sbb.gov.tr> as of 01.03.2021.

PUBLIC PRIVATE PARTNERSHIPS Q&A and LEGISLATION in TURKEY

Build-operate-transfer (“BOT”) was the first PPP model used in Turkey in the early 1980s in the energy sector. It was followed by build- operate (“BO”) and transfer of operational rights (“TOR”) projects. The build-lease- transfer (“BLT”) model also started to be used in the late 2000s, mainly in the healthcare sector. All of these models have been used for a significant number of projects in various sectors. (ÇAKMAK AVUKATLIK ORTAKLIĞI, Ankara 2019)

The most well-known BOT projects can be listed as the Marmaray Bosphorus Tunnel, the Zafer Airport in Kütahya, Istanbul - Izmir Motorway Project, the Göcek Tunnel Motorway Service Stations the Çeşme Marina in İzmir, the Yuvacık power plant in Kocaeli, the Birecik power plant in Şanlıurfa, the Suçatı power plant in Kahramanmaraş, and the Yamula power plant in Kayseri. (PPP Turkey 2022)

Within the framework of the laws harmonising with the Turkish Constitution, the Law No. 4501 dated 21.1.2001 on the Principles to be Observed in the Event of Arbitration in Disputes Arising from Concession Agreements and Contracts Related to Public Services entered into force. On the other hand, necessary amendments were made to the Law No. 2575 on Council of State and the Law No. 2577 on Administrative Procedure regarding public service concessions.

Article 33 of the Law No. 5335 dated 21.4.2005 on Amendments to Certain Laws and Decree Laws stipulates that the General Directorate of State Airports Authority may transfer the airports it operates and the terminals and other necessary facilities built and operated by it within the framework of the BOT model to the private sector to private law legal entities through tenders for a period not exceeding 49 years by using the leasing and/or granting of operating rights methods specified in the Law No. 4046 on the Regulation of Privatisation Practices.

Law No. 5396 of 2005 on the Addition of an Additional Article to the Basic Law on Health Services stipulates that health facilities, which are deemed necessary by the High Planning Council, may be constructed by the Ministry of Health within the framework of the preliminary project and basic standards to be determined, on immovable properties owned by the Ministry of Health or the Treasury, in return for lease to real or private legal entities to be determined by tender, for a certain period of time and at a price not exceeding 49 years.

Two amendments were made to the Regulation on the Construction of Health Facilities in Return for Lease and the Renovation of Health Facilities in Return for the Operation of Services and Areas other than Medical Service Areas in the Facilities. With the first amendment, 13 articles of the first Regulation published in 2006 were amended and a provisional article was added. Accordingly, it is seen that some amendments and additions have been made on various issues such as the purpose of the Regulation, contract and right of override agreement, financial criteria for tenderers, joint venture and special purpose company, rent and rent increases. The second amendment was made by the Council of Ministers Decree No. 2011/2011 published in the Turkish Official Gazette No. 27981 in 2011.

Finally, Law No. 6428 dated 21.02.2013 on the Construction, Renovation and Procurement of Facilities and Services by the Ministry of Health through the Public Private Partnership Model and Amendments to Certain Laws and Decrees with the Force of Law is put into force. The purpose of this law is to determine the procedures and principles regarding the construction of the facilities needed to be constructed by the Turkish Ministry of Health and its affiliated institutions within the framework of the public-private partnership model according to the provisions of private law by tender and private law, within the framework of the preliminary project, pre-feasibility report and basic standards to be determined, by establishing an independent and permanent right of superficies on the immovable properties owned privately by the Turkish Treasury for a period not exceeding thirty years, excluding the fixed investment period specified

in the contract, to ensure the renovation of existing facilities, and to provide consultancy, research and development services to be received for these projects and some services requiring advanced technology or high financial resources.

The legal regulations that they have been prepared for certain sectors and projects, the distribution of PPPs across sectors have been limited to large-scale projects concentrated in the energy, transportation and health sectors (Uysal, 2018; Bayansar&Özer,2021) and there is no general framework and law for PPPs. (Kalender İlhan,2011; Bayazıt,2020) It is of great importance that the legal infrastructure for the public private partnership model is formed in the best way. Considering the world practices, it is considered that a single framework law would be appropriate. (Şirin, 2017) The PPP process has a structure that may impose a high financial burden on the public sector for many years and needs to be properly designed and managed. Therefore, it is important to improve the institutional capacities of public institutions based on expertise in project planning and management processes in the field of PPPs. Some of the problems encountered in PPP implementations are based on the lack of an adequate and appropriate legal framework and the disorganisation of the existing legislation. The fact that the regulations in various laws are under some conditions not compatible with each other and this makes it difficult to design and execute the implementation in a standardised structure to a certain extent. Besides the scattered regulations in different laws carry the risk of causing non-standard practices and legal disputes, especially in cases of overlap and contradiction. In order to solve such problems, there is a need for a framework law and standardised regulations for PPP applications. With the implementation of the relevant regulations, the effectiveness of both implementation processes and control and audit activities will increase. (Köse, 2018; Keçelgil, 2018) However Şirin argues that it would be a much more practical solution to overhaul the Law No. 3996 in this sense instead of making a completely new law. Although Law No. 3996 regulates only the build-operate-transfer-operate model and determines that only “some” investments and services can be made within the framework of this model, it is successful in terms of its basic operational fiction and systematics. Therefore, it would be an appropriate solution to make this Law more comprehensive to cover other models and all investment areas. While doing this, of course, the order of priority among the projects where these models can be implemented should be determined, and it should also be taken into consideration which ones may be attractive for the private sector and under which conditions. On the other hand, the lack of political, economic and to a certain extent legal infrastructure, as well as mistakes made in contract design and the lack of a balanced risk distribution between the public and private sectors may cause some negative effects in terms of public and private sector co-operation and may prevent the design and implementation of the models from being sufficiently successful. (Şirin, 2017)

B. Legal Development of PPPs under Latvian Law

Latvian government also is interested in implementing PPP projects. Overall PPP projects worldwide have been both positive and negative results, which makes us cautious in assessing risks and value for money. As PPPs PPP projects involve large investments and long it is imprudent to rely solely on luck.

PPP projects involve increased risk, are legally complex, have a long execution period, are subject to many different factors to calculate and take into account when choosing PPP investments. Taking into account global trends and available information in Latvia, there are the demand for PPPs as a solution to finance significant public sector investments, will increase, and therefore a key issue is the appropriate assessment, quantification and transparency of risks ensuring. (Brezaucka I 2018)

By Latvian PPP law section 7 Selection of Institutional Partnership A joint venture may be established for the performance of a public-private partnership contract if the public partner wishes to exercise reinforced control of the performance of the public-private partnership contract and to take part in the management of the capital company, and conforms to the following provisions: a) according to the State Administration Structure Law the commercial activity which will be performed by the joint venture according to the public-private partnership contract may be performed by the public partner as well; b) the joint venture will carry out some administration task assigned to the public partner according to the laws and regulations or the procedures laid down in the State Administration Structure Law if it conforms to the delegation provisions.

The public partner which wishes to establish a joint venture for the performance of a public-private partnership contract shall specify it in the decision on initiation of the public-private procedure (Section 16, Paragraph six PPP law Latvia). If a joint venture is established, the private partner in co-operation with the public partner as the shareholder of the joint venture shall manage the joint venture so that the joint venture as a private partner would ensure the performance of the public-private partnership contract.

In general, directors' liability is limited to cases where a managing director can be made a sufficiently serious personal reprimand. Recent case law shows that directors' liability can also occur in transactions where “empty” special purpose vehicles (“SPVs”) are used. (van Amersfoort Ch.,2017)

Statistical (Eurostat) accounting and management of fiscal risks of PPPs are also very important. It is often argued that the statistical accounting rules for PPP projects (often used as "Eurostat laws") are a barrier to PPP projects because they make it difficult to classify them outside the government balance sheet according to the Maastricht criteria. An excessive focus on off-balance-sheet accounting may adversely affect the preparation of a sound project and may encourage procurement authorities to create PPPs where they are not needed. (EIB 2016)

PPP create an "illusion of affordability" (due to deferral and splitting of public sector payments over a period of time), which is amplified/exacerbated by being off-balance sheet. When a project is off-balance sheet, there is a risk that the resulting fiscal liabilities are not properly managed.

C. Structuring of SPV within the Scope of PPPs under Turkish Law

The private sector, which is one of the contracting parties of the PPP model and entitled to participate as a tenderer in the tender, is usually a business partnership which is legally evaluated as ordinary partnership. However capital companies also bid for the tender opened by the contracting public authority according to the relevant laws.

Ordinary partnerships are regulated under Turkish Code of Obligations between art.620-644. Article 620 of TCO defines the ordinary partnership as a contract in which two or more real or legal persons undertake to bring their labor and property to achieve a common purpose. The real or legal persons forming the business partnership are jointly and severally responsible for the fulfilment of the commitment of the ordinary partnership. For the PPPs these private sector business partnerships mostly consist of many parties such as design engineers, construction companies, lawyers, bankers, insurance companies, expert managers, consultancy companies, companies providing production inputs, marketers, organisations purchasing the product, etc. (Bayansar&Özer, 2021)

At the tender stage, a Declaration of Business Partnership shall be requested from the business partnerships regarding their partnership. If the tender is awarded to a business partnership the documents regarding the establishment of the special purpose vehicle shall be requested.

Generally, the SPV is formed as a joint stock company. According to Law No. 5396 establishment of the SPV as a joint stock company is a compulsory condition. Special purpose company is defined in art.1/2(o) of this Law and it defines special purpose company as a joint stock company established by the contractor who is a party to the contract to be signed with the contracting authority as a result of the tender, whose field of activity is limited to the subject of the contract. Besides due to the art.12 of Implementation Regulation on The Construction, Renovation and Service Procurement of Facilities by The Ministry of Health Through Public-Private Partnership Model, after the tender for construction works is finalised, a separate and new special purpose joint stock company must be established by the contractors before the contract is signed. In the articles of association of this company, the facility project to be realised and the works to be performed within this scope shall be specified as the field of activity. Before signing the contract after the tender decision, the notarised articles of association of the special purpose company, the copy of the Turkish Trade Registry Gazette in which the articles of association is published, the necessary documents regarding the establishment of tax and social security liabilities, notarised signature circulars showing the person or persons authorised to sign the contract on behalf of the special purpose company must be submitted. The rights and responsibilities belong to the tenderer on whom the tender is made until the special purpose company is established, and to the special purpose company after the special purpose company is established. Law no.3096,3996 and 4283 regulates that the tenderer shall be capital companies.

Joint stock companies are commercial and also capital companies that are regulated under Turkish Commercial Code no.6102. According to the art.329 of this Code, a joint stock company is a company whose capital is fixed and divided into shares, and which is liable for its debts only with its assets. The shareholders are liable only for the capital shares they have subscribed and against the company. Besides according to the articles 330 and 330 of the Code, joint stock companies may be established for any economic purpose and subject not prohibited by law. The articles of association must include the subject of the company's business, with its essential points specified and defined. In PPP agreements the subject and field of activity are limited to the subject of the contract.

The SPV structure is finalised after the tender is concluded. After SPV obtains legal capacity to act, it starts its operations by signing the contract with the contracting authority. Here the contract shall be subject to the provisions of private law and its duration shall be determined by the administration, depending on the relevant law and the characteristics of the facility. The contract and its annexes concluded between the contractor and the administration in accordance with the provisions of private law for public services between the special purpose vehicle and the administration within the framework of the related law and for the performance of some services requiring advanced technology or high financial resources and the contractor is tenderer and the SPV on whom the tender is made and the contract is signed. The responsibility, legal rights and obligations of the SPVs are determined by and derived from the PPP agreement.

D. Legal design for SPV and risk management

Legal design is the application of human-centered design to the world of law, to make legal systems and services more human-centered, usable, and satisfying. According to PPP Law, PPP agreement may provide that in certain cases of private partner's material default, the public partner or creditors(s) may exercise their step-in rights. The public partner or creditor(s) may temporarily take over the operation of public infrastructure to ensure the effective delivery of public services concerned. The cost of such intervention shall be borne by the party specified in the PPP agreement.

Latvian The Public and Private Partnership Law provides that, the information exchange agreement can be concluded between the public partner and the funder. The information exchange agreement provides for procedure how the information is exchanged between the public partner and the funder, inter alia, on violations of the PPP agreement and loan agreement, how the lender exercises step-in rights, and other issues. (Brizgo 2019)

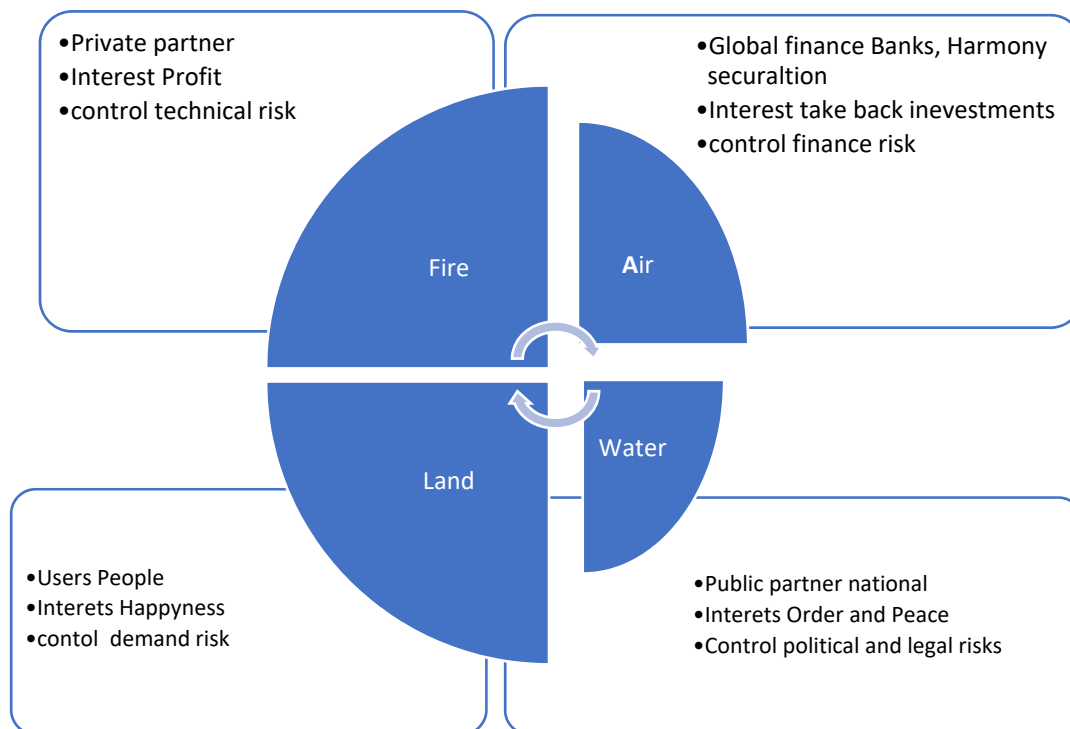
Figure 2. Legal design for SPV for Users centred (<https://lawbydesign.co/legal-design/>)



Legal capacity is water, legal traditions of company law in each state. Interest for profit is fire elements or innovation new products high standards new hot trends for management efficacy. Allocating risks in PPPs, however, is inherently challenging. Risk transfer to the private sector comes at a price and transferring risks that the public agency is better able to manage is likely to erode value for money VFM. (Hovy P 2015).

Design of SPV, or new version design thinking through design of company law. Psychologically, it is quite unreasonable to postulate that matter is composed of more than a hundred elements of SPV. The easiest way to speculate about the composition of matter is to begin with four elements. Our perception is not prepared to deal with hundreds of elements at once – therefore, we need mathematics. The concept of the chemical element has evolved from the simplest (one, four...) to the more complex (more than a hundred) by combining new experiments with new theories. Even considering the epistemological rupture of the four elements with the modern chemical element, we might say that the theory of four elements was important to ancient chemistry and gave us fundamental concepts like combination, proportion and balance.

Figure 3
Four elements of SPV for monitoring risks and interests



The approach of economic theory to risk management of property is similar to the Common law legal system, admitting the possibility of splitting property rights into separate powers.

But EU state and Turkey have roman-german legal tradition, and it should mostly use normative acts and standards for SPV models. The approach of economic theory to property rights is close to that of the legal system.

The most complete approach of the economic theory is similar to the Anglo-American legal system. The most complete list of property rights is presented by the English economist (Honore A. M, 1961):

1. The right of possession (the protected possibility of exercising physical control over the thing). If this right is absent, the meaning of property is lost. The meaning of the notion of ownership disappears.
2. The right of use. Everything has some kind of utility, and extraction of that utility is the essence of the concept of property and the extraction of this usefulness, the receipt of this benefit this right.
3. The right of administration, as the possibility of determining the method and the purpose of the right of management as a method and purpose of using a thing, the circle of persons who are allowed to do so, and the manner in which their action.

Figure 3. Aristotle



Aristotle classified the elements on whether they were hot or cold and whether they were wet or dry.

- Fire and earth were dry. (Technical risks)
- Air and water were wet. (Political and legal risks)
- Fire and air were hot. (Financial risks)
- Earth and water were cold. (Demand risk).

For SPV risk management model, public law principle play fundamental role for creating public administration. Administrative legislation should take into account social realities, recognize the usefulness of social order (when assessing the need for legislative changes or their stability) and transfer them to the level of justice (in terms of the adequacy of legal regulation). After the restoration of independence, administrative law in Latvia and Lithuania had to undergo a transformation of values, abandon the imposed Soviet ideological standards and master new standards of democracies. Načisčionis J. Urmonas A. (2021)

PPP Contracts usually require the SPV to contract insurance concerning the potential risks to which the projects may be exposed. Uninsurable risks arising from events of force majeure are usually borne by the Public administration. The Law is silent on allocation of political risks however as the public body acts as a partner of PPP Project, it is in the best interests of the public partner to minimize political risks associated with the project. Give more power through NGO supporting good practice, new goods and services from PPP project. In case studies PPP “For people”. Legal design method became more effective and innovative for new public needs after covid-19 pandemic times and new reality of economic sanction. People-first Public-Private Partnerships (PPPs) ensure that out of all stakeholders, ‘people’ are on the top. (UNECEPPP, 2023).

In accordance with the Turkish legal regulations; after the determination of the public services which may be carried out by private persons by law, the administration shall be able to enter into private law contracts with private law companies. Likewise, the foreign investor shall be able to execute concession contracts without being subject to the Supreme Administrative Court’s review of every step of the contract. In both cases, the application of international

arbitration shall not carry the danger of being subject to constitutional challenges, and the project shall not face the danger of being invalidated. (DEVRES / DURUKAN 2001)

Its focus is on improving the quality of life of the communities, particularly those that are fighting poverty, by creating local and sustainable jobs, those that fight hunger and promote well-being, promote gender equality, access to water, energy, transport, and education for all, and that promote social cohesion, justice and disavow all forms of discrimination based on race, ethnicity, creed and culture. People-first PPPs must expand in scale, speed, and spread with more people having access to better services at affordable prices. (UNECEPPP, 2023). United Nations Economic Commission for Europe Public-Private Partnerships Evaluation Methodology for the Sustainable Development Goals should be used for SPV also in national level.

E. Latvian Law in Context of EU Framework

Implications for EU Grant Co-Financing European Union grant funding is, in principle, available for DBO projects in sectors eligible for infrastructure financing. The European Union encourages contracting authorities to consider the relative benefits of structuring projects as DBOs using EU grant financing when they undertake an options study of all of the different potential contracting structures open to them. EU grant financing is a straightforward and transparent form of funding, which can help to make projects feasible. It is eminently suitable for DBO projects. While section 4 highlighted issues to be taken into consideration by contracting authorities in the structuring of a DBO, this section looks at key issues authorities need to bear in mind when considering applying for EU grant funding. The section does not purport to give detailed instructions on the application process - we recommend that contracting authorities refer to EU and national guidelines in order to understand in detail how to apply for grants. Key consideration Contracting authorities should be aware of the following considerations and take them into account in their planning:

1. Preparation of grant application: The contracting authority will be responsible for preparing the grant application and will therefore need to plan for the time required in its resourcing of its tender procedures.

2. Combining of EU grants with other forms of public financing: EU grants can be combined with other forms of public financing, e.g. national or local funds which might be available to finance infrastructure or public service projects. Financial modelling and options appraisal will be required to evaluate the different options available and to help the contracting authority to make a decision as to the best route. (Jaspers 2010)

F. Monitoring and Evaluation of PPP SPV in EU

The joint undertakings are continuously monitored to ensure the greatest impact, their scientific excellence and the most effective and efficient use of resources. Results will be fed back to the Horizon Europe project. Positive example is an agreement to construct the Ķekava bypass in Latvia gave the start to the first major industrial public-private partnership project in the Baltics. This bypass will improve the connectivity between the Baltic countries and the rest of Europe while diverting transit traffic away from densely populated areas. According to the Chairman of the Latvian State Roads (LSR) Mārtiņš Lazdovskis, the project is a breakthrough not only for the road network, but also for boosting other large infrastructure developments in the region.

A public-private partnership (PPP) involves the public sector contracting private partners to deliver a public sector project or service. The key contrast between PPPs and public procurement is that in the former returns are linked to service outcomes and performance of the asset over the lifespan of the contract. The private service provider is not only responsible for financing and building the infrastructure, but also for the quality and efficiency of the operation for several years thereafter. In the case of the Ķekava bypass, the construction and maintenance will be implemented by an international consortium, AS "Ķekava ABT". The project is co-financed by a long-term EUR 61.1 million loan from NIB, and an equivalent amount from the European Investment Bank. (Lazdovskis M. 2021)

It is important to set procedures for the cooperation and exchange of information between supervisory authorities, where the special purpose vehicle is established in a Member State which is not the Member State where the insurance or reinsurance undertaking, from which it assumes risk, is established. The cooperation and exchange of information between those supervisory authorities is particularly important during the process of the supervisory approval of the special purpose vehicle. Also, if there are material changes that potentially affect the special purpose vehicle's compliance with the requirements of Article 211 of Directive 2009/138/EC and when the authorisation is withdrawn or lapses, the cooperation and exchange of information between those supervisory authorities is necessary to ensure effective and efficient supervision. (Regulations 2015/462)

Demand risk of end users for SPV PPP Problems of production, access, and control of information will be at the heart of moral challenges surrounding the use of smart contracts. Scientific sources are of the opinion that, of course, moral values are more important. However, in life, everything happens the other way around. We strive to possess material values, often sacrificing non-material ones. The aim of article is to prepare guidelines for smart contracts and moral values in public private partnership. In 2021 we live in a consumer society in which material values are paramount. We live in a world whose values are determined by fashion and advertising. And no matter what arguments you give, you will have to come to terms with the fact that this is so. Smart technologies for public private partnerships are being increasingly applied to all types of service delivery, but they are becoming particularly relevant to urban development and moral values (Ozolins Kisnica 2021)

The main responsibilities of the SPV are as follows:

1. Construction works

Construction works are the design, construction, renovation and other forms of works necessary for the provision of the service subject to the project. In contracts where there is a construction element, the design and construction of this construction may be a contractual obligation, as well as the maintenance, repair and renovation of this structure in a way to ensure that the service subject to the contract is provided in accordance with the contract, and if necessary, all of the expansion activities are among the obligations of the SPV within this scope. SPV fulfils its contractual commitments by concluding contracts with goods and service providers. Essentially, the PPP system consists of a chain of contracts. In the execution of investments and services realised through PPP models, there are many parties and multiple contracts regulating the legal relations between these parties. In practice, the issues regarding the design, financing, establishment and operation of the investment and/or service can be determined with the "Implementation Contract" signed between the contracting authority and the SPV established by the tenderer to be specific to the project, and the construction works within the scope of this contract can be carried out by the sub-contractors specialised in construction works or by another construction contractor within the scope of the "Construction Contract" concluded with the SPV. The construction works within the scope of the Regulation on Construction Works Tenders are carried out within the scope of the contract concluded between the administration and the contractor as a result of the tenders held within the scope of Law No. 4734. On the other hand, it is understood that there is no regulation in the Regulation on Construction Works Tenders regarding the definitions and legal relations within the scope of the works carried out within the scope of PPP models.

The fulfilment of the contractual obligations of the sponsors and other shareholders of the SPV, who take risks in the project and work for the completion of the project, means the performance of the performances that are the subject of the PPP contract, which is the reason for the establishment of the SPV. It shall be specified in the tender document whether or not subcontractors will be allowed to be employed in the work subject to tender, and whether the works to be subcontracted due to the nature of the work and the contract to be made with the subcontractors will be submitted to the approval of the administration. The works delegated by the SPV to the subcontractors are construction, procurement of equipment and maintenance and operation activities. Although the responsibilities of the SPV towards the administration are fulfilled by subcontractors specialised in their field, subcontracting the works to subcontractors does not remove the legal responsibility of the SPV for this work. (Keşli,2012) The SPV shall also be liable for any damages to third parties during the contract period. In case the SPV fails to fulfil its obligations stipulated in the contract, provisions regarding the compensation of the damages incurred by the administration and penal conditions shall be included in the contract.

The contractor shall also transfer all its rights and obligations arising from the contract under the same conditions and in the tender document to another real or private law legal entity that meets the qualification requirements determined by the Administration with the approval of the Administration. In construction works requiring the establishment of a special purpose company, the transfer can only be made to the special purpose company established. In this case, the contract for the overriding right shall also be transferred on behalf of the transferee. In the event that the contract is transferred in this manner, other contracts shall be deemed to have been transferred to the transferee real person or private law legal entities. The transferor and transferee contractors are jointly and severally liable for the obligations arising before the transfer of the contract.

One of the most important features of PPPs is the termination of the contract in the event that the construction works cannot be completed within the time specified in the contract and therefore the contractor cannot claim any compensation from the administration in the event of failure to start the performance of the commitment to produce and deliver the service on time or the contract is terminated under the obligation to compensate the demolition costs if it has not built in accordance with the project. (Keşli, 2012) In case of termination of the contract, the account of the works subject to the contract shall be made according to the contract and general provisions and the contractor's relationship with the administration shall be severed.

In the event that the contractor damages the structures and facilities the cost of the damage is also taken from the contractor. On the date of termination of the contract, the current status of the works shall be determined by the administration together with the contractor or its representative, and a status report shall be issued. If the contractor or its representative is not present on the previously notified day, the due diligence report shall be drawn up in the absence of the contractor and the situation shall be stated in the report. In case of termination of the contract, the compensation and penal conditions to be paid by the faulty party shall be included in the contract.

2. To produce and deliver the service

Since the subject matter of the PPP contract mainly focuses on issues of public service nature, it is the primary performance obligation expected by the public party in the contract to produce this service in accordance with the standards stipulated in the contract and to provide it to the public in the same standards. Keşli argues that it should be emphasised that in PPP contracts, although the service is provided to the public by the private sector, the service provided is a public service. Therefore, a lawsuit can be filed against the administration based on service defect due to this service. This is one of the most important differences between outsourcing or privatisation of a service and PPP. Unconditional termination of the contract is possible if the service is not provided within a certain period of time. Moreover, according to Keşli, if equity requires, it should be possible to continue the work in case the remaining portion is less, without prejudice to the obligation to pay compensation for the delay. The service subject to the contract is provided to the public by the SPV. Both the production of the service and its provision to the public are carried out by the SPV. It is also possible that there is a public entity in the SPV and certain parts of the

work are provided by the public entity. The production and provision of the service is predominantly related to the element of the transfer of operating rights in the case where the enterprise is in the private sector. (Keşli, 2012)

By Latvian PPP law section 117. Division of the Remainder of the Property of a Joint Venture. Upon termination of the activity of a joint venture, the property of the company shall be divided within the framework of the liquidation quota so that the public partner resources which the public partner has invested in the equity capital of the joint venture would be returned to the public partner together with the permanent investments.

If the value of the liquidation quota pertaining to the public partner is smaller than the value of the public partner resources and the permanent investments referred to in first part of 117.section, the procedures for compensating the decrease of the liquidation quota to the private shareholder of the joint venture shall be provided for in the public-private partnership contract. Shareholders of a joint venture may take the decision to continue the activity of the joint venture only if the institution referred to in Section 16, Paragraph one or two of this Law has previously taken a decision thereon and all shareholders of the joint venture agree thereto. (Latvia PPP law Section 118).

3. Conformity of the service to the prescribed standards

In the PPP contract, it is agreed that the service will be produced to a certain standard, often at a higher quality than the quality offered or can be offered by the public sector. In the contract, a technical specification is also issued as an annex to the contract and technical details are determined in detail in this specification. For example: Law No.3996 (the realization of certain infrastructure and public services with the BOT model. “BOT Law”). Law No.4283 The Establishment and Operation of Electricity Generation Plants and Energy Sales under the Build-Operate (“BO Law”).

It should also be analysed how to deal with matters not specified in the specifications. In this context, according to Keşli, in cases where it is possible to interpret that the SPV does not have a commitment, although it is possible to interpret it in this way, it would be appropriate to capture the standards required by the work and to extend the standard perception that dominates the overall contract to that part as well. (Keşli, 2012)

In the event that the contractor fails to fulfil its commitments under the contract during the fixed investment period after the signing of the contract, except for the cases of immediate termination specified in the contract, the contractor shall be given a period of time appropriate to the nature of the work in order to fulfil the requirements by clearly stating the arbitrariness with a written notice to be made by the administration through a notary public. In addition, the contractor shall also be notified to the finance providers that provide funding for the financing of the project. This period shall not affect the duration of the contract, nor shall it prevent the application of the penal clause arising from the delay. In the event that the commitment is not fulfilled at the end of the period specified by the notice, the finance providers may ensure that the work is carried out by making a change in the partnership structure of the contractor in agreement with the administration. If this cannot be achieved, the contract shall be terminated by the administration.

4. Obtaining the necessary financing for the project

The investment amount foreseen in the implementation contract concluded within the scope of PPP models is generally the estimated fixed investment amount proposed by the tenderer within the scope of its proposal. This amount is mostly not used as an evaluation criterion in the finalisation of the tender for the relevant work, but is taken as basis in applications such as financing, guarantee, penalty, etc. Within the scope of the contract, and items outside the scope of the construction work such as project design, consultancy services, financing, expropriation, furnishing may also be included in the investment amount. In the implementation of the model, risks or responsibilities that may arise from conditions that may affect the profitability of the private sector (natural disasters, war, legal infrastructure, etc.) are undertaken by the public sector, while the private sector is more responsible for financing, know-how and technological equipment.

In PPP projects, the financing of the project must be provided by the SPV. One of the main obligations of the contractor is to provide project financing. At the point of financing, it is possible to provide financing as a capital investor partner within the SPV, as well as in the form of financing from banks or other funds and in the form of a contract with the SPV. Establishing and maintaining the cash flow of the project is one of the most important element and risk in PPP projects. The most important actors of PPP are financiers. When international projects are analysed, it is seen that the projects in which financing is provided either through the capital investor partner or through banks, financial institutions and funds participating in the project as financiers are predominant. In recent years, it is observed that the projects are directed by financiers. Contracts with financiers are in the form of loan agreements or partnership agreements. Since the project asset amount is the only asset to be owned by the SPV, the recourse right of the financier in case of default is limited only to the amount of the capital investment made in the SPV. Nevertheless, the lender often requires collateral from the project sponsors, their parent companies and/or the parent companies of the project companies. PPP structure involves the establishment of an SPV in which one or more of the banks, contractors and operators will be shareholders. The contracts necessary to provide finance to the SPV are concluded at the same time as the contracts of the main contractor and subcontractors are concluded. A prerequisite for this is the provision of sufficient revenue streams to provide financial institutions with the necessary collateral and incentives to become shareholders. The legal and factual structure of the company must be such that the financing risk is acceptable. All financial obligations must be fulfilled until the end of the contract. When structuring the SPV, the establishment of a “financially viable” structure is a condition for project success. In addition, the legal structure should be established as a workable partnership structure, and the organs of the company and the powers of these organs should be clarified in the articles of association. Once these

conditions are met, the company becomes self-financing. Following the financing of the project and the recycling of the financing provided, the SPV achieves its purpose. Since the cost of construction of the facilities is covered by a loan against a pledge, the private sector organisations providing the financing must make significant prepayments. PPP structures seem to be suitable for capital-intensive infrastructure contracts as they spread the project risk across multiple participants. This is because everyone will suffer losses in the event of project failure. As a result, the financiers are assured that the other participants will work in partnership to resolve potential problems. A successful PPP financial structure can be established in two ways, financing from internal and external sources. If the contractor is to finance from equity, it is possible for it to set up the structure as it wishes and to enter into contracts with any person or persons it wishes. However, in the case of a multi-participant SPV, and especially in the case of a corporate PPP model, it is beneficial to spread the project risk to all parties with an interest in the project through contracts. In many PPP projects, the project undertaker and borrower will be an SPV created specifically for that project. From the financiers' point of view, the SPV is a serious risk factor due to its limited liability. The project assets in the assets of the SPV are the only guarantee of the creditors. (Keşli, 2012)

When projects are financed through the issuance of debt securities, credit rating agencies are approached to provide credit ratings for the debt in question. These organisations are usually consulted early in the project preparation process. In this way, concerns about financing can be identified at an early stage and a new structure can be developed accordingly. For example, changing the scope of equity capital within the SPV. Insurance organisations can also be used to increase the amount of financing. (Keşli, 2012)

The public administration as a contracting authority shall audit or have audited the SPV's activities within the scope of the contract at all stages. The SPV to be authorised for audit shall be asked for the necessary information and documents to determine their economic and financial competence and professional and technical competence. For this purpose, the SPV shall be required to provide necessary information and documents: documents related to its financial status to be obtained from banks, its balance sheet or the required parts of its balance sheet that must be published in accordance with the relevant legislation, or equivalent documents, its total turnover showing its business volume or the amount of work undertaken and completed in relation to the work subject to the tender, and documents to be used in the qualification assessment according to the nature of the work subject to the tender, in the tender document and in the announcement or invitation regarding the tender or pre-qualification.

In the event that the contractor authorised by the audit does not fulfil its commitment in accordance with the tender document and the provisions of the contract or does not complete the work in due time, the performance bond and additional performance bonds, if any, shall be recorded as revenue and the contract shall be terminated and the account shall be liquidated in accordance with the general provisions, without the need to make a protest, if the same situation continues despite the notice of the administration and clearly stating the reasons, with a delay penalty at the rate determined in the tender document. The contractor authorised for audit shall be liable for the damages that may arise due to incorrect and misleading information and opinions in the reports they prepare and for the damages they may cause to the administration and third parties due to their activities within the scope of the contract, and for the accuracy and compliance of the information and documents, financial and technical tables and reports to be submitted to the administration regarding the audit with the contract and the relevant legislation, and for the audit according to generally accepted auditing principles and principles.

5. Revising the contract in case of fundamental changes

The main mission of the SPV is to focus on the objectives set by the contracting authority for the realisation of the project. However, it is the SPV's duty to take initiatives to make the necessary changes together with the public administration in case of major changes concerning the project. (Keşli, 2012) In cases of force majeure, extraordinary circumstances or the emergence of a situation affecting the implementation of the contract and its annexes, or in cases where the provisions in the contract and its annexes contain conflicts, in order to ensure the applicability or comprehensibility of the contract, the contract and its annexes may be amended by the parties with the approval of the higher administrative authorities. At this point, what is being negotiated is the revision of a commitment made in the tender offer. Therefore, the parameters that are the basis for the award of the tender are changed outside the tender. This is an important point that may be encountered in PPP projects. On the one hand, it is a matter of selecting the most advantageous bid among the bidders by eliminating the competitors, and on the other hand, it is a matter of preventing situations that would cause economic insolvency of a structure that cooperates with the public, and in some cases even partners with the public, and as a result, preventing the disruption of public service. Especially in contracts denominated in foreign currencies, a possible crisis creates economic difficulties in the performance of mutual obligations in the contracts. In this case, the collection of receivables becomes difficult due to the filing of adaptation lawsuits and taking precautionary injunctions by the contractors related to the economic crises experienced.

When the reason for the request for revision is examined, *Keşli* argues that requests and decisions that would prevent those who participate in the tender and make commitments against the administration from fulfilling their commitments for whatever reason, if they are merchants, are incompatible with Turkish law. In Turkish law, the inability of the merchant, who has entered into a contractual commitment with the tender, to fulfil its commitments due to economic fluctuations is not a reason for adaptation alone. However, the existence of an explicit provision in the tender specifications and the contract is an exception to this. At this point, in view of the fact that the structure of the PPP involves the co-operation of the public and private sectors, it is necessary to include provisions in the tender specifications

and contracts to prevent the insolvency of the special purpose company in extraordinary circumstances and to be flexible in this regard, provided that it remains within the framework of the rule of good faith. However, as a rule, if it is not included in the tender specification and contract, inflation and excessive increases in exchange rates are included in the obligation to act as a prudent trader and are accepted as the expected situation to be foreseen at the contract execution stage. (Keşli, 2012)

Since the PPP contract is a long fixed-term contract, in some cases, at the end of the term, there will be a public service operating facility. In some contracts, this facility must also be abandoned to the administration. However, in some cases, it may be obligatory to leave all or part of this facility to the administration. However, it is also possible to have a PPP where the contract may be terminated without abandonment to the contracting authority. At this point, while applying the provision on the transfer of the operating facilities, it should be considered whether these “facilities are separable from the service”. In cases where the said facility and the service are combined, and the concession for the provision of the service and the operating facility cannot be separated, the transfer of the facility is mandatory. This obligation stems from Article 168 of the Turkish Constitution.³ The decisions of the Turkish Constitutional Court⁴ and the Council of State⁵ have evaluated the issue in terms of the way in which the resource used in energy production is obtained, and based on the criterion of whether the facility and the natural resource can be separated from each other.

Conclusions

In analyse of European Union, Latvian and Turkish legal acts for goal of research: to create effective Special Purpose/Project Vehicle (SPV) model legal regulation for PPP infrastructure projects. In general Turkey create modern model for SPV through adopted legal acts increasing infrastructure needs of Turkey, it is generally accepted necessary to utilise alternative financing models to be provided with the participation of the private sector in addition to the use of public resources. In this framework, PPPs model, which has been widely used in realisation of infrastructure investments in developed and developing countries in recent years, is also applied in Turkey and Latvia.

1. Fundamental basic for PPPs model takes its legal root from art.47 of Turkish Constitution no.2709 and various legal regulations for PPPs have been adopted since 1980s. Huge political and legal support from government, gives stable ground for decreasing political and legal risk level for legislation changes. The legal regulations that they have been prepared for certain sectors and projects, the distribution of PPPs across sectors have been limited to large-scale projects concentrated in the energy, transportation and health sectors and there is no general framework and law for PPPs.

1.1 The private sector, which is one of the contracting parties of the PPP model and entitled to participate as a tenderer in the tender in Turkey, is usually a business partnership which is legally evaluated as ordinary partnership.

1.2. Capital companies also bid for the tender opened by the contracting public authority according to the relevant laws. If the tender is awarded to a business partnership or a capital company according to the relevant law, the documents regarding the establishment of the special purpose vehicle shall be requested.

Suggestions is to make common framework for SPV using model form for amendments to government regulation base on risk allocation model also for Latvian legal system.

2. The private sector, which is one of the contracting party of the PPP model and entitled to participate as a tenderer in the tender, is usually a business partnership which is legally evaluated as ordinary partnership. However capital companies also bid for the tender opened by the contracting public authority according to the relevant laws.

2.1. Generally the SPV is formed as a joint stock company and finalised after the tender is concluded. After SPV obtains legal capacity to act, it starts its operations by signing the contract with the contracting authority. The contract shall be subject to the provisions of private law and its duration shall be determined by the administration, depending on the relevant law and the characteristics of the facility. 2.2. The contract and its annexes concluded between the contractor and the administration in accordance with the provisions of private law for public services between the special purpose vehicle and the administration within the framework of the

³ Turkish Constitution art.168 “Natural wealth and resources are under the sovereignty and control of the State. The right to explore and exploit them belongs to the State. The State may transfer this right to real and legal persons for a certain period of time. The exploration and exploitation of any natural wealth and resources by the State in partnership with real persons and legal entities or directly by real persons and legal entities shall be subject to the express authorization of the law. In this case, the conditions to be complied with by real persons and legal entities and the procedures and principles of supervision, inspection and sanctions to be imposed by the State shall be specified in the law.”

⁴ Turkish Constitution art.148 “The Constitutional Court shall review the conformity of laws, presidential decrees and the Rules of Procedure of the Grand National Assembly of Turkey with the Constitution in terms of form and substance and shall rule on individual applications.”

⁵ Turkish Constitution art.155 “The Council of State is the final review authority for decisions and judgements rendered by administrative courts which are not reserved by law to another administrative judicial authority. It shall also hear certain cases specified by law as a court of first and last instance. The Council of State shall hear cases, give its opinion within two months on concession agreements and contracts relating to public services, resolve administrative disputes and perform other duties prescribed by law.”

related law and for the performance of some services requiring advanced technology or high financial resources and the contractor is tenderer and the SPV on whom the tender is made, and the contract is signed.

Suggestions involve all stakeholders in the project teams developing standards, use holistic model of risk control by four elements, give maximum members of the public an opportunity to make comments on the standards during the public review. Transparency supports the fundamental principles of independence and neutrality. For people first principle

EU law suggested universal model for SPV PPP in case of preventing crimes. Legal risks of a SPV PPP in the area of the prosecution of qualified economic crime could therefore mitigate the problems outlined above: it goes without saying that this would be beneficial to both parties. A contractual partnership of convenience exists between the state and the private forensic services provider. The contracted private forensic services provider is responsible for the efficient and timely provision of the agreed service, while the public sector – specifically the prosecuting authorities – helps the government enforce its right to punish criminal conduct with the most advanced equipment and techniques.

3. Developed idea of PPP SPV as an approach to combating economic crime and risk of subcontractors.

3.1. For effective SPV model the responsibility, legal rights and obligations of the SPVs are determined by and derived from the PPP agreement, which is model normative standard accepted by national government rules or regulation. The works delegated by the SPV to the subcontractors are construction, procurement of equipment and maintenance and operation activities. Although the responsibilities of the SPV towards the administration are fulfilled by subcontractors specialised in their field, subcontracting the works to subcontractors does not remove the legal responsibility of the SPV for this work. The SPV shall also be liable for any damages to third parties during the contract period. In case the SPV fails to fulfil its obligations stipulated in the contract, provisions regarding the compensation of the damages. Public-private collaboration is also key for the creation of an enabling policy and an institutional framework for SPV.

3.2. The SPV shall also transfer all its rights and obligations arising from the contract under the same conditions and in the tender document to another real or private law legal entity that meets the qualification requirements determined by the local public partner administration with the approval of the supervision of central public administration and PPP expertise centres. In construction works requiring the establishment of a special purpose company, the transfer can only be made to the special purpose company established. In this case, the contract for the overriding right shall also be transferred on behalf of the transferee. In the event that the contract is transferred in this manner, other contracts shall be deemed to have been transferred to the transferee real person or private law legal entities.

Suggestions: The transferor and transferee contractors are jointly and severally liable for the obligations arising before the transfer of the contract. In the event that the contractor fails to fulfil its commitments under the contract during the fixed investment period after the signing of the contract, except for the cases of immediate termination specified in the contract, the contractor shall be given a period of time appropriate to the nature of the work in order to fulfil the requirements by clearly stating the arbitrariness with a written notice to be made by the administration through a notary public. In addition, the contractor shall also be notified to the finance providers that provide funding for the financing of the project. In most cases it becomes huge problems of public administration, that's why it SPV mostly should be controlled and regulated by public law. Turkey government give higher level of political support for PPP SPV than EU or Latvia, as a result bigger amount of successful infrastructure project than in Baltic states region

4. Dispute resolution period shall not affect the duration of the contract, nor shall it prevent the application of the penal clause arising from the delay. In the event that the commitment is not fulfilled at the end of the period specified by the notice, the finance providers may ensure that the work is carried out by making a change in the partnership structure of the contractor in agreement with the public administration. If this cannot be achieved, the contract shall be terminated by the administration.

5. In PPP projects, the financing of the project must be provided by the SPV. One of the main obligations of the contractor is to provide project financing. At the point of financing, it is possible to provide financing as a capital investor partner within the SPV, as well as in the form of financing from banks or other funds and in the form of a contract with the SPV. Establishing and maintaining the cash flow of the project is one of the most important elements and risks in PPP projects. The public administration as a contracting authority shall audit or have audited the SPV's activities within the scope of the contract at all stages.

Suggestions: The SPV to be authorised for audit shall be asked for the necessary information and documents to determine their economic and financial competence and professional and technical competence. For this purpose, the SPV shall be required to provide necessary information and documents: documents related to its financial status to be obtained from banks, its balance sheet or the required parts of its balance sheet that must be published in accordance with the relevant legislation, or equivalent documents, its total turnover showing its business volume or the amount of work undertaken and completed in relation to the work subject to the tender, and documents to be used in the qualification assessment according to the nature of the work subject to the tender, in the tender document and in the announcement or invitation regarding the tender or pre-qualification.

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INSTITUTE OF EUTHANASIA: BETWEEN A PERSON'S RIGHT TO LIFE AND THE RIGHT TO A DIGNIFIED DEATH: PROBLEMS AND CHALLENGES IN THE IMPLEMENTATION OF HUMAN RIGHTS OF CHOICE IN LITHUANIA

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DOI: 10.37804/1691-6077-2023-14-31-36

Abstract.

The title of the scientific article is the problem of euthanasia as a possibility for the implementation of natural human rights in Lithuania and foreign countries. The purpose of this paper is to analyze the relationship between the individual's right to life and the prohibition of torture in the implementation of euthanasia as one of the natural human rights in Lithuania and foreign countries. This work has theological and comparative methods. The theological method, which leads to the first part of the work, analyzing international and national legal acts regulating natural human rights. The comparative method compares the legal regulations and social differences between countries that have legalized and those that have not legalized euthanasia. The main conclusion of the article - the legalization of euthanasia is one of the possibilities to implement the prohibition of torture in the context of natural human rights. The practical significance of this scientific article is particularly important for states that have not legalized euthanasia, because the main conclusion of this article is proving the obligation of states to legalize euthanasia in order to provide suitable conditions for the realization of natural human rights. The originality of this scientific article is based on the fact that the compatibility of euthanasia in the context of human rights and freedoms and the equating of the illegalization of euthanasia to torture at the national and international level have not been analyzed in any scientific articles. The value of the article is proven by the fact that the authors used only the latest scientific editions of national and international legal acts and the latest and most comprehensive literature.

Keywords: euthanasia, obligation, human rights, regulations, legal, implementation.

Introduction

Euthanasia is an individual choice to end one's life due to suffering. In most countries, this is equated to murder or suicide, but when evaluating euthanasia in the context of human rights and basic freedoms, it can be said that it is one of the possibilities for the realization of human fundamental rights.

Fundamental rights are individual fundamental possibilities that guarantee and implement human dignity in the areas of social life - the right to life, the right to freedom, the prohibition of torture and other rights and freedoms. These rights are enshrined in the European Convention for the Protection of Human Rights and Fundamental Freedoms (hereinafter - the Convention), the Universal Declaration of Human Rights (hereinafter - the Declaration) and the Constitution of the Republic of Lithuania (Constitution of the Republic of Lithuania, 2019), but what is the relation of these fundamental human rights and freedoms to the choice to end suffering and die? Convention 2 g. Establishes a person's right to life, and Article 3 of the Convention. prohibits torture. These two articles are next to each other, but when analyzing the importance of Euthanasia in the context of natural human rights and freedoms, they have a common connection. Everyone has the right to live, but suffering from an incurable disease, suffering physical and mental pain, he experiences (feel) agony. The task (objective) of every state is to create such conditions that it will be possible to implement the legal acts of the fundamental rights of each person and to provide the conditions (clause) for that implementation. That is why, when analyzing euthanasia in the context of fundamental human rights and freedoms, it is important to find the right border between the aforementioned articles of the Convention: the right to life and the prohibition of torture (Euthanasia and assisted dying: what is the current position..., 2018; Euthanasia and assisted suicide, 2015).

Human rights are universal subjective rights that owns every person without exception, regardless of the legal system and other local factors, but each state understands and applies them according to its customs and principles (Euthanasia in Lithuania: are we mature for dialogue?, 2021). Euthanasia as an option to end life suffering is legalized in

seven countries of the world: New Zealand, Holland (Pool, 2016), Belgium (Belgian Act on Euthanasia, 2003; Baksheev, A. I., et al, 2018), Colombia, Luxembourg, Western Australia and Canada (tu zemiau rasai, kad dar yra Spain). In Lithuania, euthanasia is currently equated to murder. The recognition of euthanasia in the context of fundamental human rights and its legalization is determined by many factors - religion, customs and the interpretation of these rights in each state according to the formed (developed) public opinion. In Lithuania, human rights are implemented in accordance with the Constitution, Declaration and Convention of the Republic of Lithuania, but why does our state decide for us regarding our dignified death? Why do Lithuanian citizens have to suffer pre-death spiritual and physical agony? Is the only way out of earthly life to choose to end suffering in a state that enforces the ban on torture? These questions will be analyzed in this work, guided by the Constitution, Declaration and Convention of the Republic of Lithuania, looking for the connection between these international and national legal acts and in the context of fundamental human rights and freedoms.

The aim of the paper is to discuss the possibilities of legalizing euthanasia as a fundamental human right in Lithuania.

Tasks:

1. Define the relationship between fundamental human rights and euthanasia.
2. Assess the implementation of fundamental human rights in Lithuania.
3. To compare the legal regulation of Lithuania and foreign countries and the possibilities to legalize euthanasia.

The object of the work is the problem of implementing euthanasia as a fundamental human right.

The subject of the work is the analysis of the importance of legalization of euthanasia.

Methods - analysis of scientific literature, analysis of national legal acts, analysis of international legal acts, philosophical analysis, historical analysis, systematic, logical analysis, comparison, generalization.

Structure of the work - The work consists of an introduction, three chapters, summary and list of references. The first chapter reviews fundamental human rights, the concept of euthanasia and highlights the relationship between fundamental human rights and euthanasia. The second chapter analyzes Lithuanian national legal acts, their compliance with international legal acts and fundamental human rights. The third chapter compares the conditions of euthanasia between Lithuania and foreign states, as entities that are obliged to provide their citizens with suitable conditions for a socially dignified life. The work is concluded with a summary and a list of references.

I. The relationship between fundamental human rights and euthanasia

In the context of current events, it is particularly important for every person to be born with rights and freedoms. Most authors argue that the fundamental rights of the individual exist in democratic states, but analyzing the scientific literature and the doctrine of fundamental law, it can be said that every living or dead individual who comes to this world brings rights and freedoms with him. It is these fundamental rights and freedoms that guarantee an individual's ability to exist in this world and in the spheres of social life (to have active social life). Fundamental rights and freedoms are inseparable from the individual and completely unrelated to the territory, the nation, its legal regulation (Čekanauskaitė, 2019). Creating the conditions for the implementation of these rights is the task of every state, therefore every legal act or its clause, in which positive law contradicts fundamental law, (must be changed according to the position, that the implemented law cannot take away from a person fundamental human right and freedoms) must be changed to such a law that would implement what cannot be taken away from a person.

The development of fundamental and inalienable human rights and freedoms goes back to the ancient East. We can find the beginnings of fundamental law theory in the works of Confucius, a Chinese thinker, educator and one of the most important creators of Confucianism. The concept of legal theory was formulated in ancient times by the Greek philosopher Zeno Kitijietius, the founder of Stoicism. His works has not reached nowadays, there are only fragments, but the concept of the theory of fundamental law is formulated and recognized until now from them, that the ultimate goal of any desire is a virtuous life in accordance with nature and the laws of necessity. Plato, Socrates, Aristotle and other philosophers raised questions about fundamental law theories, in such way agreeing with the already mentioned Confucius and Zeno Kitijieci, therefore, after summarizing the statements, ideas and opinions of all philosophers and thinkers, it can be stated that natural justice and legal justice are different forms of justice, but what is determined by nature cannot be higher than what created by people like us (Downie, et al. 2021).

The thoughts of the world's most famous philosophers and thinkers led to the creation of the first civil codes in Europe - in 1756. Maximilian's Bavarian Civil Code, 1794 Prussian Universal Land Law, 1797 Austrian Civil Code, 1804 The emergence of the French Civil Code. The gradual official consolidation of fundamental rights may have been determined by political relations, but from a philosophical point of view, individuals who create laws and govern states are, first of all, people who want a dignified social life and the conditions provided for it. Possibly for this reason or for others, the modernizing and increasingly popular protection of fundamental human rights was established in one of the most important acts - 1789. The Declaration of Human and Citizen Rights was adopted in France, which led to the adoption or change of constitutional provisions of many states, including Lithuania. After this important step, human rights became even more highlighted and emphasized. That is why, on the 10th of December 1948 in Paris, at the General Assembly of the United Nations, the Universal Declaration of Human Rights was adopted. It became one of the main and encouraging steps for the world, obliging the state to observe fundamental human rights and freedoms - the right to life, liberty, inviolability, civil and political and other fundamental human rights and freedoms. The most important step

towards the obligation of states to ensure dignified social conditions for their citizens took place in 1950, when the European Convention for the Protection of Human Rights and Fundamental Freedoms was prepared and approved by the Council of Europe. This convention enshrined the right of every person to life, the prohibition of torture, cruel, inhuman or degrading treatment and punishment, the prohibition of slavery, forced labor, the right to liberty and security, and other fundamental rights and freedoms. These fundamental human rights and freedoms, enshrined in the convention, obliged the states - participants of the European Convention on Human Rights - to guarantee these rights and freedoms to every person under their jurisdiction. Thus, taking into account the entire development and formation of the doctrine of fundamental law, it can be concluded that fundamental human rights had, have and will have a special significance for the legal system of each state, which is confirmed by the European Convention on Human Rights and Fundamental Freedoms, which has the highest legal authority in Europe, in which fundamental law is established by way of positive law.

In conclusion, it can be said that positive law is not a phenomenon in the modern world. This direction (trend) of legal doctrine has derived from ancient times and investigation was discussed and started to be formed in times when society had no awareness of the types of legal doctrines. The foundation of fundamental law, which (that) began to form a long time ago, led to the fact that fundamental human rights were formalized in a way that is more understandable to modern society - in the Universal Declaration of Human Rights, the European Convention on Human Rights and Fundamental Freedoms, and a little later (afterwards), the provisions of these acts were formalized or changed the old norms of state constitutions and precisely because of this, it can be concluded that fundamental law is the foundation of the legal system, while positive law and especially national legal acts are only a way to establish and formalize what fundamental law says.

Euthanasia (Greek euthanasia < eu – good + thanatos – death) – an incurable patient painless euthanasia by medication or other means to save him from languishing, physical and mental agony. The topic of euthanasia legalization has been discussed for three thousand years, but states and society have not been able to find a common solution on the legalization issue. Just like the development of fundamental law doctrine analyzed before, euthanasia is not only a popular issue of today (issue became popular not only nowadays). In ancient times, this was called "mercy killing" and it had no relation to the concept of euthanasia as it is understood today.

In ancient times, euthanasia was understood as the active death of the patient or the passive death of the patient, in cases of dehydration or starvation. In those days, medical possibilities were limited, so even today, simple diseases became sufferings for us and caused great physical pain, accompanied by spiritual agony, knowing that death was coming. Euthanasia, as a way to make human life easier, was also applied to babies who were born underdeveloped and would not have been able to survive in later life. Based on these facts, it can be concluded that since ancient times, people have considered euthanasia as a fundamental human right not to suffer, to avoid agony and to die "with dignity".

Analyzing the concept of euthanasia today, we cannot fail to notice the identification of the concepts of euthanasia and murder. Manslaughter is defined as the intentional, unlawful taking life of someone, and it can be considered done by acting - by doing something that causes the person's death or by an omission - when the result of the inaction is the death of another person. Euthanasia is an easy, painless termination of a person's life at his request. Euthanasia is divided into two types - active and passive. These two types are similar to the already mentioned active and inactive type of murder. Active euthanasia is when a person directly performs actions that cause the death of another person, such as administering lethal drugs, while passive euthanasia is when advice is given to help the patient end his or her own life. Basically, killing and euthanasia are different concepts that have a common point of contact. Analyzing the concept of killing more deeply, the types of killing can be divided into three parts: killing out of altruistic reasons (altruistic reasons), killing out of neutral reasons (neutral reasons) and killing out of negative reasons (negative reasons). Relevant to our analyzed topic and the concept of euthanasia is killing out of altruistic reasons, which is perceived as mercy killing, for example, killing an incurable patient at his request. Basically, comparing these concepts, we can say that it is similar to euthanasia or even the same. The essential relationship between these concepts is that the action has positive incentives - to reduce the mental and physical pain of the patient. However, euthanasia and killing with altruistic reasons are separated by one fundamental thing - the national legal regulation of states. In some states, euthanasia is not considered as type of murder, actions aimed on helping incurable patients to end life's suffering are considered as euthanasia - a legal way to end a person's pain, without seeing the prospects of improving his health care. In other countries, for example, in Lithuania, euthanasia exists only from a theoretical point of view, because from a practical point of view, euthanasia is killing out of altruistic reasons and is considered as a criminal act.

Pursuant to Article 2, Part 6 of the Law on Registration of Human Death and Critical Conditions of the Republic of Lithuania, human death is the irreversible death of an organism. Paragraph 4 of the same article establishes that the fact of death is treated when a person's blood circulation and breathing are irreversibly interrupted or brain death occurs. It is important to emphasize that Article 11 of the same law provides for the circumstances in which resuscitation of a person can be terminated, for example, point 3 of the mentioned article states that resuscitation of a person can be terminated when the person has expressed disagreement about his resuscitation. In the case of euthanasia, death is determined when biological death occurs - the irreversible process of decay of the human brain cells, regardless of the fact that other functions of the body are working or can work. So, this means that a person is considered alive until biological death occurs, and any actions aimed at taking life are considered as murder.

Thus, summarizing and juxtaposing euthanasia and killing out of altruistic reasons, it can be said that both actions coincide in terms of time - death is determined after the cessation of blood flow, breathing or brain death. After evaluating the principle of operation of euthanasia and killing out of altruistic reasons, it is very important to emphasize the motive

and purpose of these actions - actions that are considered euthanasia or killing out of altruistic reasons are performed when the patient is in a desperate situation, suffering physical and spiritual agony, and there is none drugs and medical methods for him to help. Further analyzing the topic of legalization of euthanasia, it is also important that such actions are considered euthanasia in countries where it is legal, and killing out of altruistic reasons in countries where it is prohibited. So, the authors of this article raise the question - are the actions that cause a painless and dignified death, which are performed with the consent of the patient and in a desperate situation, when the person is suffering from physical and spiritual pain, suffering and having no opportunities to improve the situation, considered murder or the implementation of fundamental human rights? After defining the concept of fundamental human rights, its development and importance for society and states, and after analyzing the concept of euthanasia and the principle of operation, we can say that every person has the right to act of his own free will. In Lithuania, euthanasia exists only in a theoretical aspect, because its practical performance would be qualified as killing out of altruistic reasons. However, Article 18 of the Constitution of the Republic of Lithuania establishes that human rights and freedoms are fundamental, and from this follows the right of a person to be guided by free self-determination. Article 19 of the Constitution of the Republic of Lithuania enshrines the human right to life. However, it is important to emphasize that the law protects not life itself, but only the right to life, as the most important fundamental human right. These two articles of the aforementioned law, which has the highest legal authority in Lithuania, raise even more questions: does the state have the constitutional power to force a person to be treated against his will, even if there are no chances of recovery? Which of the two articles of the aforementioned law should we follow: the one that gives us the right to life, or the one that allows us to exercise our free will without harming other persons?

II. Lithuania and the implementation of human fundamental rights: the right to a dignified death

Euthanasia does not exist in Lithuania. Guided by the concept of euthanasia and analyzing the national legal acts of the Republic of Lithuania, it can be concluded that in Lithuania euthanasia as permitted or a criminal act in general does not exist, because the application and purpose of euthanasia is considered one of the forms of murder. However, is Lithuania and national legislation - do not contradict themselves on the issue of euthanasia? Does considering euthanasia as one of the forms of murder and banning this act implement the fundamenta prohibition of torture?

Article 18 of the Constitution of the Republic of Lithuania states that the rights of every person are fundamental. From this statement it is following that every person has the right to make a free decision, if that decision does not harm others. Taking into account the fact that Lithuania is a European country and taking into account the hierarchy of legal acts, the Constitution of the Republic of Lithuania is the document with the highest legal authority, but the norms contained in it must comply with international legal acts regulating the most important areas - the Convention and the Declaration.

Article 18 of the Constitution of the Republic of Lithuania, Article 3 of the Convention, Article 5 of the Declaration - all different legal acts, but stating the same thing: no one shall be tortured or subjected to cruel, inhuman or degrading treatment or punishment. This means that from a theoretical point of view, Lithuania, as a state, in its law with the highest legal authority, implements fundamental human rights, in this case, the prohibition of torture. But how is it in practice? From a practical point of view, euthanasia in Lithuania is equated to murder. This means that a citizen of Lithuania, suffering from an incurable disease, suffering from great physical pain, and knowing about the impending death, experiencing spiritual agony as well, cannot voluntarily end the suffering of life. in the journal of Vilnius University, 2021 the publication stated that only 3 out of 10 incurable patients receive the necessary help in Lithuania. When we talk about help, we mean psychological help, which in Lithuania is provided by palliative care, an interdisciplinary team - doctor, psychologist, nurse, social worker and clergy. In Lithuania, palliative care is regulated by the order of the Minister of Health, therefore it falls within the scope of legal regulation and only persons suffering from an incurable disease, which is included in the international list of incurable diseases, receive this help. Whether this palliative care is effective, we cannot provide an unequivocal answer, but whether the people who receive it feel physical and spiritual pain, it can be concluded that it is. Thus, Lithuanian national legal acts theoretically implement the European requirement that positive law does not conflict with fundamental law. The Constitution of the Republic of Lithuania, the Convention and the Declaration - equally state that a person cannot be tortured in any way. However, the actions of the Lithuanian state show something else. From a practical point of view, the non-legalization of euthanasia in Lithuania means suffering in the physical and spiritual sense for many people, so it can be said that seriously ill patients are tortured in Lithuania. Considering the fact that palliative care is provided in Lithuania, it can be concluded that Lithuania, as a state, not only tortures its seriously ill residents, but also violates their right to freedom of choice and a dignified death.

Taking into account that euthanasia is a particularly most debatable topic, in 2012 May 7th- 14th, the research company "Rait" conducted a representative survey of Lithuanian residents on the legalization of euthanasia, assessing the opinion of Lithuanians as people and citizens on this issue. 47% of Lithuanian residents indicated that they would agree and support the legalization of euthanasia in Lithuania. The results of this survey reflect a clear position of society regarding the need to change the legal regulation in Lithuania and to fill its deficiency in the issue of euthanasia. This means that society wants its fundamental rights, wants death to be dignified, but why Lithuania is not listening? According to the authors of the article, legalizing euthanasia in Lithuania should change the Civil Code of the Republic of Lithuania, the Criminal Code of the Republic of Lithuania (Criminal Code of the Republic of Lithuania, 2021), the Law on Determination of Human Death and Critical Conditions, the Law on Human Tissues, Cells, Organs, Donation and Transplantation and The Law of Patients' Rights and Compensation for Health Damage. This would be quite challenging

for the legislator of the Republic of Lithuania, and it can also be said that the legalization of euthanasia would mean that medicine is not innovative enough to solve all emerging health problems. But then the question should be answered: what is more important, revealing the truth that we are not yet that progressive and allowing a person to choose to suffer pain or not, or hiding from the public that medicine is not that innovative enough yet?

So, to sum up, euthanasia in Lithuania is only a theoretical concept whose application in practice is called murder. The Constitution of the Republic of Lithuania fulfills the obligation of states to establish fundamental law through positive law, but when it comes to euthanasia, Lithuania, as a state, by not legalizing euthanasia, violates the Convention and the Declaration's prohibition of torturing people in a practical aspect. Also, it is important to emphasize that the non-legalization of euthanasia violates the Constitution of the Republic of Lithuania itself, which states that we all have the right to freedom of choice, but seriously ill patients, suffering from incurable diseases, suffering spiritual and physical agony, in Lithuania do not have the right to end their suffering and choose the way they want to die.

III. Euthanasia in foreign countries

Fundamental human rights exist for everyone, regardless of the states national system. Euthanasia as a way to end life suffering is legalized in New Zealand, Holland, Belgium (Criminal code of Holland, 2023), Colombia, Luxembourg, Western Australia, Canada and Spain. The choice of these states to legalize euthanasia was widely discussed by the public, media, and especially Church, which spoke out against euthanasia, which had implications for the choice of some states not to legalize euthanasia (Frei, 2021).

Euthanasia is illegal in Italy, but legalization is on the way. Italians strive implementation of fundamental rights, therefore organized a national referendum on the legalization of euthanasia. If Italy implements the idea of legalizing euthanasia, it would become the ninth country in the world to grant the right to its citizens to die with dignity. Of course, in Italy, like in other countries, legalized euthanasia is prevented by Church. The Pope and Church instruct states to follow the "proportionate treatment criterion", which means that death is inevitable, so there is no need to use excessive and ineffective drugs and preparations, they do not support the idea of euthanasia and call it a crime against God. This interpretation of the Church is followed by a number of countries, so the legalization of euthanasia becomes an even bigger problem and fundamental human rights are forgotten. In Lithuania, the problem of legalizing euthanasia is also related to the Church and faith (Bovero, et al., 2020). Lithuanians have a saying "sudden death is a gift from God", so it is clear from this saying that Lithuanians do not want to suffer, do not want to suffer physical and spiritual pain, and consider sudden death as a gift from God. Analyzing all the actions of Lithuania and other foreign countries in general, we can say that many things are prohibited: it is forbidden to kill, steal, rape and many other things that harm the person and the public interest, but it is still done, but it is punished. One example where euthanasia is illegal, but that illegalization is disproportionate and irrational and a person is forced to break the law, came in 1998 when Romano Sampedro died. The man became paralyzed after a neck injury, fought in the courts for 30 years for the opportunity to get out of life's suffering, but was unsuccessful and did it anyway, albeit in an illegal way. This situation, which was echoed loudly in the media, proves that the states, by not providing the conditions for the realization of fundamental human rights, the right to free human self-determination, and by not implementing the ban on torture, have not abolished euthanasia, as the fundamental right of people to die with dignity, but make it an uncontrollable, illegal act, for which they punish those, who fulfilled the last wish of the deceased. When the market for any services and goods is illegal, it does not mean that it does not exist, it means that it happens in a shadowy way. In this case, when euthanasia is illegal in Lithuania and other countries, we cannot control the legal basis that would regulate the operation of euthanasia, nor can we control the doctors, relatives or other persons whom the patient asks to perform euthanasia for him. Thus, the legalization of euthanasia, the possibility and the right to choose a dignified death is a problem of Lithuania and other foreign countries, which arises due to the statements of the Church on this topic and the insufficient effort of the states to provide their people with suitable conditions for these rights to be realized. The legalization of euthanasia means that this service falls within the scope of legal regulation, it is supervised by specialists, researches and conclusions are carried out that show whether a person really cannot recover and then a person has the right to choose: to live or die a dignified death.

Summary

Summarizing the legal institution of euthanasia in the context of fundamental human rights, it can be stated that the non-legalization of the institution of euthanasia in the national law of Lithuania can be equated to causing pain and suffering to a person and restricting the right to make decisions of one's own free will. The obligation of the states enshrined in the Constitution of the Republic of Lithuania formalizes the fundamental human right in the theoretical aspect and in the ways of positive law, but in the practical aspect, with other national legal acts, it eliminates the human ability to make choices and die with dignity. The doctrine of fundamental law and the human rights enshrined in it have been considered supreme and inalienable since ancient times, and the doctrine of fundamental law itself is considered higher than positive law. So why does the Constitution of the Republic of Lithuania, which has the highest legal authority in Lithuania, tell us that we have the right to choose, forbids torturing us, but punishes us for it with other legal acts, such as the Criminal Code of the Republic of Lithuania? The answer lies in the lack of official definition of the concept of euthanasia. At the moment, euthanasia as a concept is not officially defined in Lithuania, it is equated with murder, which is why it is a violation of fundamental human rights. Taking into account the survey mentioned in this paper, it is obvious that the people of Lithuania are ready to have a choice that would be decisive in the matter of their dignified death. Thus, Lithuania

and other states that strive for a dignified social life of their peoples must legalize euthanasia and stop torturing patients who have no chance of recovery, suffering spiritual and physical agony and give them the opportunity to leave this world with dignity.

Conclusions

1. Natural human rights and euthanasia have a very close relationship. Since ancient times, people have considered euthanasia as a mandatory method to alleviate the suffering of a dying person. Currently in the world, the concept of euthanasia is equated with murder and this leads to misunderstandings. The authors of the article would recommend the states to define the purposeful and correct concept of euthanasia officially.
2. Lithuania does not implement natural human rights properly. In Lithuania, euthanasia is illegal, officially there is no possibility for a person to choose a dignified death. It is because of this that people in Lithuania suffer agony before death and do not have the opportunity to end it. The authors of the article would recommend first to define the concept of euthanasia and then to change the legal regulation of Lithuania, separating murder from euthanasia.
3. Comparing Lithuania and foreign countries regarding the legalization of euthanasia, it can be concluded that the number of countries that choose to implement natural human rights is already increasing. Lithuania lags behind in this matter and adheres to old and unfounded reasoning that has no real basis. The authors of the article would recommend following the example of countries that have achieved a lot and legalize euthanasia in Lithuania, as it has chosen the option for seriously ill people.

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STRENGTHENING SUSTAINABILITY IN ENTREPRENEURSHIP EDUCATION - IMPLICATIONS FOR SHIFTING ENTREPRENEURIAL THINKING TOWARDS SUSTAINABILITY AT UNIVERSITIES

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Abstract. By developing innovative solutions to social and environmental problems, sustainable ventures carry great potential. Entrepreneurship which focuses especially on new venture creation can be developed through education and universities, in particular, are called upon to provide an impetus for social change. But social innovations are associated with certain hurdles, which are related to the multi-dimensionality, i.e. the tension between creating social, environmental and economic value and dealing with a multiplicity of stakeholders. The already complex field of entrepreneurship education has to face these challenges. This paper, therefore, aims to identify starting points for the integration of sustainability into entrepreneurship education. To pursue this goal experiences from three different project initiatives between the partner universities: Lapland University of Applied Sciences, FH Aachen University of Applied Sciences and Turiba University are reflected and findings are systematically condensed into recommendations for education on sustainable entrepreneurship.

Keywords: climate change, entrepreneurship education, Finland, Germany, Latvia, SECA project, social entrepreneurship, sustainability, sustainable entrepreneurship, sustainable development goals

DOI: 10.37804/1691-6077-2023-14-37-48

Introduction

Practitioners and academics agree that sustainable entrepreneurship plays a central role in accelerating the development of sustainable economies (Cervelló-Royo et al., 2020). Entrepreneurship is considered a key element for economic development that can be promoted and developed through education (Kuratko, 2005; O'Connor, 2013). The Consortium for Entrepreneurship Education (2008) notes that entrepreneurship is not just about teaching someone how to run a business, but also about fostering critical thinking and self-esteem. (Martínez-Gregorio et al., 2021)

Sustainable ventures (SVs) are characterized by a dual mission to generate (measurable) social, environmental value while generating economic returns (Saebi et al., 2019). Sustainable entrepreneurs innovate new solutions to social and environmental problems that are more efficient than the public sector and activate a virtuous circle of social capital within local communities that, if scaled up, can bring us a step closer to the 17 sustainable development goals (SDGs) (Rahdari et al., 2016). The SDGs were introduced by the United Nations in 2015 to mobilize global efforts toward sustainable development by 2030.

Innovations that aim to address social challenges face specific obstacles that limit investment and hinder their development and diffusion. These challenges are related to the multidimensional nature of social challenges and the involvement of multiple stakeholders. The OECD has identified challenges such as the inadequacy of current indicators like GDP to reflect new values such as sustainability, limited prospects for large gains in the social sector, traditional boundaries between disciplines and sectors hindering the development and diffusion of social innovation, the need for the integration of multiple disciplines, and the necessity for greater involvement of stakeholders in the innovation process.

Given these challenges, there is a need to integrate sustainability into entrepreneurship education and to consider the relevant aspects of sustainable entrepreneurship education. But the central question

arises as to how sustainability can be integrated into entrepreneurship education. What aspects should be considered in sustainable entrepreneurship education?

To answer this question, the experiences from three different project initiatives between the partner universities – Lapland University of Applied Sciences (Lapland UAS) -Finland, FH Aachen University of Applied Sciences (FH Aachen) -Germany and Turība University (Turība) - Latvia are reflected. Firstly, the Sustainable Entrepreneurship for Climate Action (SECA) project is examined, which seeks to create a digital handbook for entrepreneurs and decision-makers to shift their entrepreneurial mindset towards environmental consciousness. By analyzing numerous sustainable entrepreneurship best practice examples from Germany, Finland and Latvia, insights are gained into which approaches, concepts, and methods have demonstrated success in practical applications. Second, the “Sustainable Entrepreneurship Summerschool” in Aachen, Germany and third, the “International Intensive Study Programme” in Rovaniemi, Finland, have given the opportunity to test different teaching formats. Subsequently, a compilation of the most significant findings from the Sustainable Entrepreneurship Summer School and International Intensive Study Programme is presented, emphasizing the participants’ viewpoints. These findings are then methodically considered into recommendations for teaching sustainable entrepreneurship.

1. Implications for Sustainable Entrepreneurship Education

Entrepreneurship Education is defined as a qualification measure with the goal “[. . .] to make a person a more competent and a more professionalized business owner” (Katz 2007). According to the broadness of the definition, entrepreneurship education can be categorized as 'new business creation', 'opportunity recognition and exploitation' and entrepreneurial thinking and action'. (Bijedic, 2019) While the first category is seen as too formalistic and narrow, great importance is attached to the second and third category. (Bijedic, 2019, Grichnik et. Al. 2017) Accordingly, the following section looks at how sustainability can be integrated into the opportunity recognition and exploitation, where the object is in the focus and entrepreneurial thinking and action which refers to the subject (Ebbert 2019). However, as explained above, conceptual confusion makes it difficult to deal with the topic of sustainability. Therefore, it is useful to first turn to the clarification of the crucial terms.

1.1. Clarifying the underlying concepts and frameworks

The learning events on sustainable entrepreneurship within international intensive study programme in Finland and summer school in Germany highlighted a common issue across Europe where there is inconsistency in how sustainable and social entrepreneurship are understood, leading to confusion around framework concepts such as SDGs, ESG, and CSR. To alleviate this confusion, clear definitions and explanations of these terms should be provided to the learners to avoid misunderstandings. The upcoming chapters aim to provide clarification on the fundamental concepts crucial for sustainable entrepreneurship training. By doing so, they can aid educators in imparting a deeper understanding of the essential principles and practices underlying sustainable entrepreneurship.

1.1.1 Sharpening Social Entrepreneurship and Sustainable Entrepreneurship concepts

Social entrepreneurship and sustainable entrepreneurship are two related but distinct concepts that have been the subject of academic research and practical applications. In the following, the differences between these two terms in academic and practical terms will be elaborated.

Based on the literature review it seems to be evident that no consistent understanding of the terms has yet been established in the literature. One difference is seen in that social entrepreneurship is focused on creating social or environmental impact, whereas sustainable entrepreneurship is focused on creating economic, social, and environmental value in a balanced manner. Both concepts have the potential to create positive change, but they may require different approaches and strategies and have also consequences to innovation, governance, stakeholder engagement and impact measurement. (Mair & Martí 2006)

Social Entrepreneurship seeks alternative methods of leveraging opportunities that create positive social benefits (for example social "intrapreneurship," community-based businesses, nonprofit organizations). It also aims to find charitable motivations in entrepreneurship by placing a social agenda before the financial goals. Social Entrepreneurship has its disciplinary roots in the nonprofit and public sector. Sustainable Entrepreneurship has its roots in sustainable development, innovative systems and transition management. (Lumpkin, Katz 2011a)

According to Oestreicher, the relationship and differences between social and sustainable entrepreneurship can be defined as follows: social entrepreneurs are driven by a mission and often focus on social goals in addition to economic goals, whereas sustainable entrepreneurs are more profit-oriented and guided by the triple bottom line of economic, social, and environmental goals. Social entrepreneurs tend to focus on present problems, while sustainable entrepreneurship also takes future generations into account. The terms "social" and "societal" are closely related, but social entrepreneurship does not solely refer to NGOs (Oestreicher 2017).

The scholars also debate whether sustainable entrepreneurship is a type of social entrepreneurship because the benefits of sustainable action are also social or whether sustainable entrepreneurship is to be seen as the superior term because the implications are social as well as economic and environmental. (Lumpkin, Katz 2011b). Not only in the literature, but also in practice, as discussed above, it can be seen that the terms are not used consistently within Europe. For example, as explained above, the term social entrepreneurship is generally used as the overarching term in Germany. This can lead to misunderstandings, especially in international cooperation. Therefore, a conceptual clarification must be made at the beginning of each training session so that all participants of potential training can have the same idea especially when international participants come together.

1.1.2 Refining SDGs, ESG and CSR as Sustainability Framework

The concepts of SDG, ESG and CSR are widely used in the context of sustainability discussion. Even though the concepts are very much related, an attempt is made here to draw a distinction in the sense of sharpening the terms to avoid any confusion (Bak 2022).

The SDGs are the 17 Sustainable Development Goals established in 2015 at Paris Climate Conference to advance global human rights, combat poverty, and increase social responsibility for climate and environmental protection, production, and consumption. They are the most ambitious plan of the world community, agreed upon by 193 countries (Gigliotti 2019). The SDGs are an initiative primarily directed at regulators and governmental institutions. Companies can support peace, the rule of law, and improving institutions, but they are not responsible for doing so. Nevertheless, companies can also make use of this framework and map their activities accordingly. The SDGs show possible starting points for activities to push sustainability, while measurability is not yet in the focus. (Bak 2022)

CSR is a well-established framework that emerged from the increasing demand for businesses to take responsibility for their impact on society and the environment. However, the initiatives undertaken are often limited in scope and difficult to evaluate in terms of their contribution to sustainable development. While companies may assess the effectiveness of their CSR initiatives voluntarily, there is often a greater emphasis on implementation rather than monitoring and evaluating the outcomes (Książka 2016).

ESG delivers a comprehensive framework for addressing sustainability issues. It focuses on how a given initiative can be assessed and quantified (Pérez et. al. 2022). Using many different scoring ratings, that are based on the ESG Framework, companies can legitimately evaluate their condition and present their ways of managing the supply chain, carbon footprint, or corporate governance to investors and clients. Implementing ESG shows the maturity of the business processes and the willingness to more precise monitoring of its impact. ESG is seen as a measure of sustainability as companies can properly assess their situation and showcase their methods of controlling. (Bak 2022)

1.2. Applying opportunity recognition as a starting point in Sustainable Entrepreneurship Education

During the SECA project learning events on sustainable entrepreneurship within international intensive study programme in Finland and summer school in Germany, there was actively utilized an approach of opportunity recognition. It is said that "without opportunity, there is no entrepreneurship" (Brühlhart 2013). Opportunity recognition and exploitation is the focus of entrepreneurship education in general according to the scholars (Brühlhart 2013). It is assumed that learners, as a result of participating in entrepreneurship education will recognize an appropriate opportunity in the market and, in the best case, (further) develop it with regards to a corresponding start-up idea (Grichnik et al. 2017) Social innovation also represents an opportunity for an entrepreneur. Social innovation creates business opportunities and synergies that can be utilized if social challenges are better placed at the heart of innovation activity (OECD 2011).

The process of opportunity recognition, the initial step in developing a business idea, can be divided into problem perception and idea generation. It is a form of creative problem solving and an important aspect of entrepreneurship. The literature also distinguishes between opportunity discovery and opportunity creation. Idea generation is a crucial outcome of opportunity recognition, but it begins with problem analysis or opportunity discovery (Jarskog and Stevenson 1996).

Analyzing the literature on opportunity recognition, the process can be divided into sub-steps. Opportunity recognition is classified as a special case of creative problem solving (CPS), which can be divided into two phases: (I) Problem perception and (II) Idea generation. (Hills 1999; Basadur and Gelade 2003; Winzen 2009). This subdivision is also found in other studies, where opportunity recognition is subdivided as opportunity discovery and opportunity creation (George et. Al. 2014). Accordingly, idea generation is to be understood as an important outcome of opportunity recognition, which, however, begins with an initial step of problem analysis or opportunity discovery.

The identification of sustainable business opportunities and problem analysis can be guided by considering sustainability factors in particular fields. The Sustainable Development Goals (SDGs) can provide a helpful framework for pinpointing key areas of focus, especially when selecting specific goals such as climate action. Similarly, when addressing social issues, specific SDGs can be used as a reference point.

The SECA project partners have emphasized opportunity recognition in their sustainable entrepreneurship training as an approach to encourage sustainable mindset and entrepreneurial attitudes. In the International Summer School and the International Intensive Study Programme (IISP), specific SDGs, climate change, and sustainable business cases were approached using a problem identification framework. Among other design thinking is a problem-solving methodology that is often used in conjunction with opportunity recognition to develop innovative solutions to complex problems (Brown 2008) were found useful in the sustainable entrepreneurship training process of SECA project.

1.3. Sustainable Entrepreneurship Education in enabled learning environment

The education of sustainable entrepreneurship requires an enabling learning environment that fosters innovation, creativity, and critical thinking. It is relevant to enable the learner to gain awareness of entrepreneurial thinking and acting in non-traditional learning setting. This is possible above all when situations are created for learners in which they can act independently or gain experience through their own actions (Ebbers 2004). This requires a learning environment in which this thinking and acting can be tried out or simulated in a protected way and without negative consequences (Ebbers 2004). Such experimentation can lead to an initial self-assessment of the ability and willingness to actually become entrepreneurial or not. The aim is to give learners confidence in dealing with entrepreneurial thinking and action. This creates a so-called self-efficacy and the ability to assess oneself as being able to think and act entrepreneurially is promoted. (Bandura 1997)

Particularly with regard to the multidisciplinary and complexity of social innovations (OECD 2011) the learning environment is to be designed openly with plenty of freedom for own experimentation

and the opportunity to experience self-efficacy in a protected space. Non-curricular integrations such as summer and winter schools without exam stress in inspiring premises outside the normal lecture rooms are a good way to create the necessary free space. It is important to make an environment where students can try things out and to develop team skills through intensive social interactions, especially in interdisciplinary teams, as mentioned in the previous chapter. The aspect of sustainability can be taken into account here by sensitizing and motivating the participants with appropriate best practice examples and role models. This can be ensured by having practitioners who are themselves pursuing a sustainable start-up idea enrich the Summer or Winter School with their experience.

Following the idea that teaching concepts have to be designed backward, the concept of the Summer School was developed. “Our lessons, units, and courses should be logically inferred from the results sought, not derived from the methods, books, and activities with which we are most comfortable” (Wiggins & McTighe, 2005). The motivation of students by interacting effects, such as self-efficacy, supportive Environment and value, which can result from attainment, intrinsic and instrumental value (Ambrose et. Al., 2010). Regarding the value, the intrinsic value has to be considered, which represents the satisfaction that one gains simply from doing the task rather than from a particular outcome of the task. The Summer School is neither curricularly integrated nor can a certain result be expected. In the external case one has dealt with an entrepreneurial idea for a week, which then does not turn out to be promising. The program varies on the daily and includes workshops, exciting lectures, joint exchange as well as leisure time. Interdisciplinary teamwork will be included and each participant will receive a certificate of participation after the successful completion

Equipping learners with knowledge, skills, and attitudes to identify and exploit opportunities that address societal needs and contribute to sustainable development can be done the best in such learning environment, that offers a range of resources, tools, and techniques that promote experiential learning, collaboration, and networking. It should also promote the use of sustainable and ethical business practices, which are essential for sustainable entrepreneurship. Ultimately, this type of education equips learners with the skills and mindset needed to create sustainable value for themselves, society, and the planet.

The concept of enabling environments proved to be fruitful in the process of the summer school and intensive study programme.

In the case of the summer school, the variety of learning events included case examples and speeches by entrepreneurs implementing successfully sustainable business practices, site visits demonstrating the practical application of sustainability concepts as well as design thinking workshops to innovate sustainable value for a customer to better understand how sustainability can be incorporated in the real-life situations.

Similarly, during intensive study programme the workshops took place in an environment that is atypical to traditional classroom, with plenty of space and availability of tools for interaction and brainstorming. Real life business cases were incorporated in the process of learning with actual company representatives’ participation and work facilitation.

2. Experience from practice

SECA project is an initiative of three partner universities: Lapland University of Applied Sciences (Lapland UAS), Finland, FH Aachen University of Applied Sciences (FH Aachen), Germany, and Turība University (Turība), Latvia. Three universities collaborated to form a joint Erasmus+ Strategic Partnership project aimed at addressing a shared challenge related to the provision of suitable training and education in sustainable entrepreneurship. The project's main target groups are students, aspiring entrepreneurs, businesses, and people in decision-making positions at all levels, with the ultimate goal of increasing the number of green companies and sustainable thinkers.

Despite the abundance of general information available on sustainability, it has been observed that there is a dearth of methodological approaches for delivering adequate training and education on entrepreneurship that incorporates sustainability as a fundamental aspect of entrepreneurial training. Furthermore, appropriate, easy to access open source digital education

material was not easily available at the time of project initiation. The project, which began in February 2022 and is set to conclude in January 2024, endeavors to address the inadequacy of suitable training and education in sustainable entrepreneurship.

The overall objective of the project is to provide knowledge on how organizations, entrepreneurs, and businesses can become more resilient to climate change. The specific goal is to shift entrepreneurial thinking towards environmental consciousness and sustainability by providing fundamental education on climate change and sustainable business practices. The main target groups are students, aspiring entrepreneurs, businesses, and people in decision-making positions at all levels. The project aims to increase the number of green companies and sustainable thinkers as a result of the training and provision of education material on sustainable entrepreneurship. The failure to adjust to climate change is identified as the most critical risk confronting businesses in The World Economic Forum's annual Global Risk reports (WEF 2023).

The project partners have conducted the supportive study and interviews with selected best practice examples on sustainable entrepreneurship from Finland, Latvia and Germany to derive the main fields of action to foster sustainable entrepreneurship training. In a long run, the project is expected to impact on increased number of green companies and sustainable thinkers, which can indirectly affect all employees and people in their environment, reducing the problems of climate change. The project will deliver a digital handbook for entrepreneurs and decision-makers containing the steps towards resilience to climate change and sustainable start-ups (SECA project 2022).

2.1. Different meanings of terms in the partner countries

In the initial phase of the project, the partners carried out a comprehensive research study to examine the background of sustainable entrepreneurship and gain a deeper understanding of the current state of the field. It was found that there are variations in how different countries perceive the concepts of social and sustainable entrepreneurship, and there is no uniform definition of these terms that is accepted across all European countries.

In Germany, for example, sustainable entrepreneurship is explained as social entrepreneurship and is used as an overarching term. "The primary goal of social entrepreneurship is to solve social challenges. This is achieved through continuous use of entrepreneurial means and results in new and innovative solutions. Steering and controlling mechanisms ensure that the social goals are lived out internally and externally." (SEND e.V. 2021) This is a definition recognized also by the politics throughout Germany, here sustainable entrepreneurship is often seen as a sub topic of social entrepreneurship.

When looking into sustainable entrepreneurship in Finland, they appear to have many different meanings for the topic. Most areas when looking into the topic seem to focus more on people rather than climate action (Kestävän yrittäjyyden). One area of sustainable entrepreneurship is social sustainability. Overall, Finland is considered as a very progressive country for sustainable entrepreneurship. It is marked in the top 10 for most sustainable countries globally, never the less Finland has further plans to improve (Tella 2023).

In Latvia Entrepreneurship means managing risks and processes with the aim of achieving the long-term survival of the company, while taking care of the environment and society (Helmane&Jeramanova-Maura, 2022). It is defined, that sustainable Entrepreneurship have four pillars: economic prosperity, social justice, environmental protection and culture in the community. (KPMG Baltic, 2018)

2.2. Results from interview analysis

As a part of the SECA project's supportive research, interviews were conducted with businesses in Finland, Latvia, and Germany to gain insight into sustainable business practices. The interviews conducted provided valuable insights into best practices, sustainability initiatives in companies, and areas that need improvement (Interviews 2022). It was evident that some companies have already

integrated sustainability into their operations and implemented new approaches, such as the use of the sustainable business model canvas. However, it is evident that sustainability needs to be a comprehensive part of a company's strategy in order to achieve long-term sustainability goals.

The interviews also revealed the need for more education and awareness on sustainability-related issues. Misconceptions surrounding sustainable practices, such as the assumption that recycled or organic products are always more sustainable, were identified as a challenge. Additionally, it was noted that start-ups may struggle to measure the impact of their sustainability initiatives due to a lack of knowledge in this area.

It was apparent that many companies recognize the importance of sustainability and the need for more educational resources on this topic. The interviews provided a useful overview of the current state of sustainable entrepreneurship and identified areas where further progress can be made.

Most companies also agree that climate action and climate protection measures are one of the most important issues to be addressed in the context of sustainability, especially increasing nature's ability to absorb CO₂ and reducing greenhouse gas emissions.

Besides climate action and protection, interview results showed that it is also important to adapt and change social habits to protect the nature for next generations. Some companies suggest that the way to solve sustainable challenges is to make a shift towards a value-creating economy that is viable in the long term, which requires discussions between governments and companies about different ways to measure success and KPIs. They also mention that climate change impacts can be measured through the ecological footprint or KPIs such as the impact of waste products.

Overall, it can be concluded that there are insufficient incentives for companies to adopt sustainable growth tools. Additionally, some companies struggle with the affordability and feasibility of sustainable production, as it may be more expensive or challenging to find affordable suppliers. The problem is not so much about relying on external tools that may yield inaccurate information or lead to flawed conclusions if used improperly. Ultimately, comprehending one's own processes and their interconnectedness is crucial, and being able to analyze one's own data is paramount. The question that should be asked is, "How can I make every step more sustainable?"

2.3. Results from Summer School on Sustainable Entrepreneurship

The Summer School was organized and held by FH Aachen UAS from 22.08.2022 to 26.08.2022 as part of the Seca Project. A total of 27 national and international students participated for one week in the Summer School with a focus on Sustainable Entrepreneurship. The aim was to give the participants an insight into the topic of sustainable entrepreneurship with a special focus on the Sustainable Development Goals (SDGs). The best practices developed in the Seca Research were included. The participants had the task to develop a sustainable business idea within their team in the short time. For this purpose, they were provided with various methods such as the design thinking method.

At the beginning of the event, participants were asked about their level of knowledge about sustainable entrepreneurship. Some already had some prior knowledge of the SDGs, but most had no prior knowledge of the SDGs or of sustainable entrepreneurship. The interest to learn more was very high.

At the end of the event a survey was conducted. The question "How important do you find the topic of sustainable entrepreneurship?" received the highest rating from 50% of the participants and the second highest from the other 50%. To the question "Would you like the topic of climate change to be covered more in your studies? If so, in what form?", a general integration in combination with practical projects was most frequently desired. The participants saw the biggest problems why companies often do not act sustainably in the following aspects: Acting sustainably is expensive and for many still new; there are too lax consequences; lack of awareness; less profitable. All participants agreed that incorporating sustainability into a company or startup can be challenging, but that they still consider it incredibly important and would incorporate it themselves (Summer School, 2022).

2.4. Results from International Intensive Study Programme

International Intensive Study Programme (IISP) on Sustainable Entrepreneurship was organized by Lapland UAS in Finland from the 27th of February to the 3rd of March 2023 as a part of SECA project. One-week study programme focused on sustainable entrepreneurship, with a particular emphasis on design thinking and problem solving. More than 60 participants, students and teachers from Lapland UAS (Finland), FH Aachen UAS (Germany), Turība University (Latvia) and Fontys UAS (the Netherlands), had the opportunity to learn about the SDGs and climate change, as well as explore innovative solutions to societal problems through design thinking method. Throughout the week, participants took part in workshops, company case studies, and an SDG challenge assignment. The event reached its culmination as awards were presented to the most creative teams with the most promising start-up concepts aimed at addressing Climate Change challenges.

From the methodology point of view the focus was on problem-based learning approach (Yew & Goh 2016), that included design thinking approach and application of problem-solution tree tool (Madu, Adesope, & Ogueri, 2018). Design thinking approach is proved to be suitable to define the customer value in business innovation and development (Tschimmel, 2012). It was applied during the workshop of the programme to shift the attention in particular towards the sustainable value creation. It was useful to the practical case study during the visit to Santa Claus Village where students performed an empathy walk to define the problems and needs of the tourism business customers in Lapland region. Problem and Solution Tree (PST) tool was tested in the SDGs challenge workshop. Students were stimulated to define cause-effect relationships to define the most pressing problems causing climate change and with the help of PST they were encouraged to identify potential sustainable business start-up ideas and pitch them in short videos.

One important goal of the IISP was to test the teaching methods of Sustainable Entrepreneurship and understand the impact of selected methods on students' learning. Preceding the training, the students were asked to assess their prior knowledge on the subjects of sustainability, SDGs, climate change, sustainable entrepreneurship, sustainable business models, green skills, social entrepreneurship, methods of how to make business sustainable and whether they are familiar with innovation methods for sustainability. Upon completion of IISP, students were repeatedly asked to what extent their knowledge and skills have improved over the study week programme. In the assessment scale of the survey - one was considered as very little knowledge and five as significant.

Comparing the results we can see that in all areas of knowledge there was remarkable improvement (See Figure 1.)



Figure 1. Survey results prior the training and after training, measured in the scale 1-5 ("1" is very little knowledge, "5" stands for significant knowledge) (IISP, 2023)

For example in the advance knowledge assessment of sustainability, 15 % of respondents felt that their knowledge is poor, 55% of respondents felt that their knowledge is satisfactory and 32% rated their knowledge as good.

After the training, the students felt that their knowledge has increased rather significantly or significantly (69% of respondents) and only 8% felt that their knowledge has improved very little. Similarly the knowledge on SDGs and climate change issues have increased significantly according to the students. It seems that there was considerable increase of knowledge in particular on such subjects as social entrepreneurship and methods how to make the business more sustainable. Similar improvement was observed also in regards to sustainable entrepreneurship. There was obvious change compared to the initial situation where 9% of students marked their knowledge as very poor and 40% as poor. Students admitted that after the training their knowledge on sustainable entrepreneurship improved rather significantly (42%) or significantly (25%), thus most of the respondents found the training useful in developing their sustainable entrepreneurship skills.

3. Key Learnings

The study and interviews conducted revealed variations in how different European countries perceive social and sustainable entrepreneurship. There is no uniform definition of these terms, but some companies have integrated sustainability into their operations and implemented new approaches. Sustainability needs to be a comprehensive part of a company's strategy to achieve long-term sustainability goals. The interviews also revealed the need for more education and awareness on sustainability-related issues, as well as challenges such as misconceptions and difficulty measuring impact. Insufficient incentives and affordability were identified as barriers to adoption of sustainable growth tools. Understanding one's own processes and analyzing data is crucial for achieving sustainability goals.

The Summer School participant teams have all dealt extensively with the topic of sustainable entrepreneurship and were able to apply what they had learned directly by developing sustainable business ideas. They have learned how important it is to anchor sustainability in (entrepreneurial) thinking and action. They also learned how well a project with interdisciplinary people can work through different expertise, experiences and perspectives. For the Seca Project, they were able to test methods for the first time and take away insights into how well teams can work with them, whether the desired results could be achieved and, above all, where there is potential for improvement. Students are keen on knowing more about the concepts and implication for their own projects. Relation to Praxis and Experiences of founders are a great inspiration

International Intensive Study Programme shows that interactive innovation and problem-solving techniques, specifically design thinking and problem tree analysis, have been found to be highly effective. This finding was based on both student feedback and survey results. While the process of intensive learning can be demanding and challenging, concentrating on a specific topic, such as sustainable entrepreneurship and its various dimensions, can yield positive outcomes. In essence, utilizing interactive and collaborative methods can lead to success in addressing complex issues and acquiring knowledge about sustainable entrepreneurship.

Conclusions

1. Sustainable entrepreneurship is essential for the development of sustainable economies and the achievement of the 17 sustainable development goals (SDGs). Sustainable entrepreneurship can have a dual mission of generating measurable social and environmental value and economic returns. However, innovations aimed at addressing social challenges face obstacles related to the multidimensional nature of social challenges and the multiplicity of stakeholders.
2. Sustainable entrepreneurship education development includes key aspects that should be considered across disciplines - deep understanding of the complex interplay between economic,

social, and environmental issues, encouraging the use of innovative solutions to address social and environmental problems, and promoting a multi-stakeholder approach to entrepreneurship. Additionally, sustainable entrepreneurship education should aim to create a culture of sustainability that encourages problem-solving approach, values ethical decision-making, and social responsibility.

3. To enhancing the understanding and application of sustainable entrepreneurship concepts - problem-based learning approach and emphasis on design thinking and problem-solving as a appropriate approach could be used to enhancing students' knowledge and skills.
4. An approach of designing the curriculum that is focusing on self-efficacy and intrinsic value helps motivate students to learn more about sustainable entrepreneurship concepts.
5. Sustainable Entrepreneurship Education needs an enabled learning environment that fosters active and collaborative learning, critical thinking, and problem-solving. It encourages students to take ownership of their learning and apply their knowledge to real-world situations. This type of environment should incorporate modern teaching methods and technology to enhance the learning experience and prepare students to become agents of change for sustainable development.
6. Sustainable entrepreneurship education has the potential to inspire and encourage students to pursue sustainable entrepreneurship careers and contribute to solving societal problems through innovative solutions.
7. By integrating sustainability into entrepreneurship education, we can better equip future entrepreneurs with the skills and knowledge they need to create ventures that are economically viable, socially responsible, and environmentally sustainable.

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CHALLENGES FOR LATVIAN APARTMENT BUILDING MANAGEMENT COMPANIES REGARDING WITH PERFORMANCE OF THEIR SERVICES ON THE WAY TO MAINTAIN SUSTAINABLE HOUSING FUND

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Abstract

The legislation of the Republic of Latvia in the field of apartment building management are not enough effective both for apartment owners and apartment building management companies due to complicated decision-making procedure, which slows down the management process, and as consequences are clients' unsatisfaction with apartment management service.

Within this research authors studied theoretical aspects of service quality, studied apartment building management system in Latvia and compared it with Finland. Finland was chosen due it is located geographically close to Latvia, and Latvia is closer to the Scandinavian culture and lifestyle.

Authors made survey of apartment building owners and made interview with expert to find out the current problems of apartment building management services.

A monographic and descriptive method was used to analyze the theoretical aspects of service quality, secondary data analysis and expert interview were used to describe the situation of industry of apartment building management services, but quantitative research method such as survey of the clients of the apartment building owners, in connection with the comparative, analytical, deductive, logical approach method was used in this research.

Keywords: apartment building management companies, apartment building management services, performance of services.

DOI: 10.37804/1691-6077-2023-14-49-58

Introduction

The apartment building management industry is challenging for both service providers and customers, as customers are all apartment owners in multi-apartment buildings who have different needs and understandings of home maintenance. Changes in regulatory enactments changes in customer requirements, development of information technology, force every company to think about its development and improvement of customer relations. Often, companies are limited to fulfilling the minimum requirements within the service, but customers expect much more involvement from the service provider, as well as proactivity, real help, and solutions.

The purpose of the research is to investigate whether there are challenges for Latvian apartment building management companies regarding with the performance of their services on the way to maintain sustainable housing fund.

Theoretical framework

Several authors (Evans, 2012; Harker, 1999; Butscger & Stephan, 2002; Kotler & Keller, 2006, 196–197; Toedt, 2015; Reisheld, 2003) have researched about customer's relationship management system.

Customer satisfaction and its management has become the basis of each company's competitiveness and an integral part of business (Anderson, Jolly, Fairhurst, 2007). M. Evans considers that the essence of the customers' loyalty is the support and rewarding of the customer for its constant cooperation with the company (Evans, 2012). The customers' satisfaction should not be maximized but also not ignored; optimization is the key. Companies thrive by delivering on customers' satisfaction expectations in combination with quality, value, and complaint handling. The focus should then be to manage the optimization of satisfaction relative to customer expectations and company resources used. (Hult, Morgeson, 2023). Corporate belief is that the company and its employees put the customer in the first place (Buble, 2015, 14).

Customer satisfaction is at its lowest point in the past two decades. Companies must focus on 10 areas of the customer experience to improve satisfaction without sacrificing revenue (Hult, Morgeson, 2023).

Rogers founds: "Companies recognize that customer relationships are the underlying tool for building customer value, and they are finally realizing that growing customer value is the key to increasing enterprise value" (Rogers, 2005, 262).

Often the companies do not see the needs of their customers, although they confidently think that they are aware of what is happening with the service provider, because service companies are limited to the implementation of bureaucratic procedures and do not see the overall picture of all customers and service (Moeller, Bauer, 2022).

Materials and methods

The purpose of this research is to investigate what are the main challenges for Latvian apartment building management companies regarding with the performance of their services on the way to maintain sustainable housing fund.

To achieve the goal of the research, three tasks were set: 1) to analyze the theoretical basis of the customers satisfaction of the services; 2) to analyze the industry of the apartment building management services comparing it with Finland; 3) to analyze results of customers satisfactory based on customer survey and ready to go on the way to maintain sustainable housing fund.

The research question was: *do Latvian apartment building management companies have challenges regarding with the performance of their services on the way to maintain sustainable housing fund?*

The results of the application the monographic and descriptive method were used to analyze the theoretical aspects of customers satisfaction and customer's relationship management system, secondary data analysis and expert interview were used to describe the situation of premises cleaning industry, and customers' survey (with 200 valid answers to survey) was used to study consumers satisfaction with apartment building management services, provided an answer to the question raised by the authors. Qualitative data analysis method such as *drawing conclusions* was used at the conclusion part of the research.

Results and Discussion

1. The major problems of fulfillment of apartment building management service and customers satisfaction with that service

During the research, authors conducted a survey of owners of apartment buildings in order to find out the opinion of owners about building management services, its efficiency and quality.

On the question, how satisfied with the apartment building management services are owners of apartments, the results of the survey show that respondents are not very satisfied, but the majority admit that the house manager provide only the minimum, as only 24.2% are very satisfied.

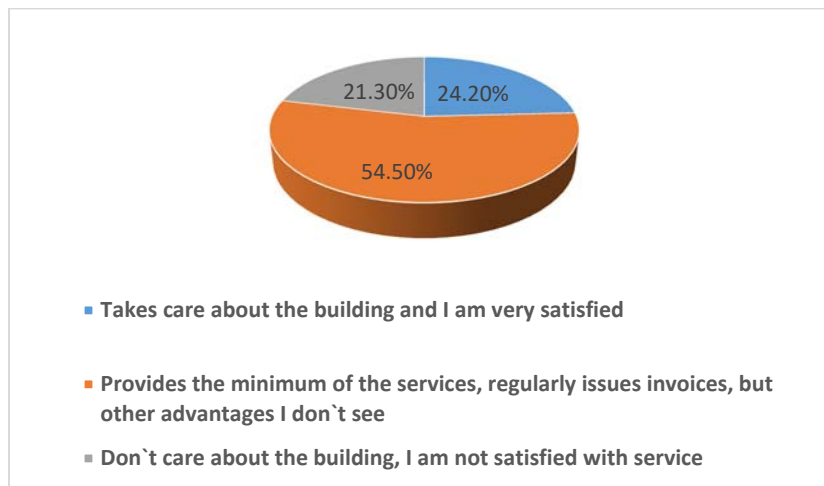


Figure 1. **The opinion of apartment building owners about their apartment building management service company**

Figure 1 shows that 54.5% of the respondents answer that the apartment building service provider fulfills only the minimum duties, i.e., issues an invoice, but the residents do not see significant improvements of their building, does not indicate that the situation is encouraging.

Authors wanted to find out whether apartment owners of apartment buildings are familiar with the regulatory acts that regulate the management of engineering communications in apartment buildings, carrying out repairs, compliance of the technical condition of the building with the Latvian Building Regulations.

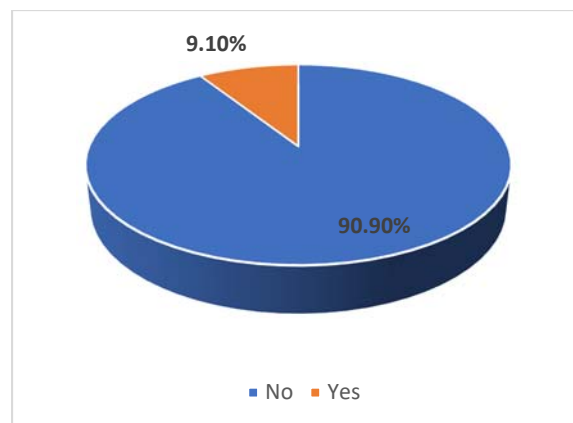


Figure 2. **The opinion of apartment owners of apartment buildings, whether they have knowledge about regulatory enactments that regulate the management of engineering communications in apartment buildings, carrying out repairs, compliance of the building's technical condition with Latvian Building Regulations**

Figure 2 shows that the majority - 90.9% of respondents have answered that they are not familiar for these issues.

The next question was, who should be familiar with the regulatory acts that regulate the management of the engineering communications of multi-apartment buildings, carrying out repairs, compliance of the building's technical condition with Latvian Building Regulations.

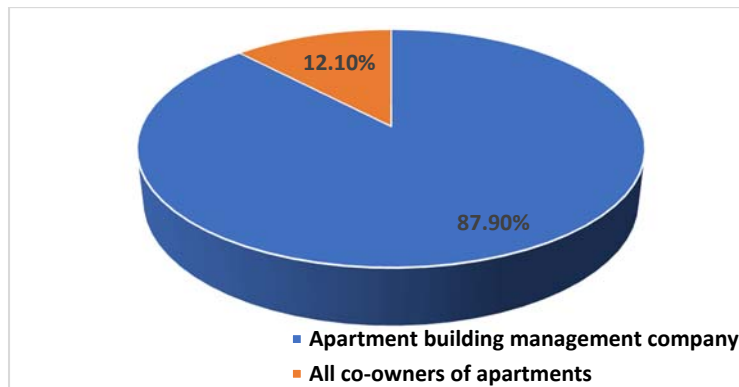


Figure 3. The opinion of apartment owners of apartment buildings, who should be familiar with the regulatory acts that regulate the management of engineering communications in multi-apartment buildings, carrying out repairs, compliance of the building's technical condition with Latvian Building Regulations

Figure 3 shows and the majority - 87.9% considers that the apartment building service provider should be aware and should understand regulatory enactments, which proves that house management issues cannot be left in the hands of apartment owners, but must be entrusted to a professional house manager.

To the question, whether apartment owners of apartment buildings have knowledge about the building structure and technical maintenance of building elements, technical survey of the building, necessary repairs, and provision of the building in accordance with Latvian Building Regulations, 87.9% of respondents answered that they do not have such knowledge.

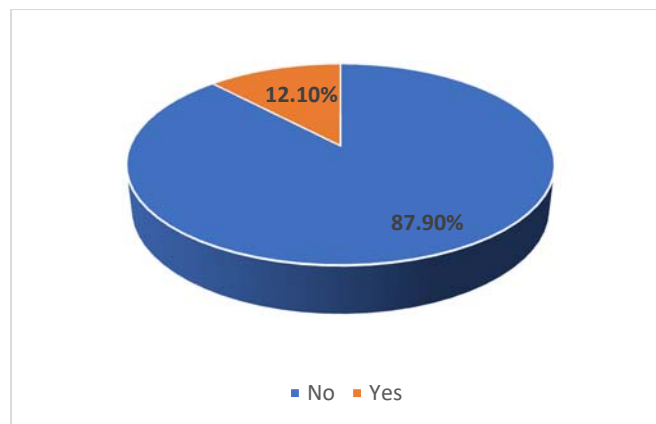


Figure 4. Opinion of apartment owners of apartment buildings, whether they have knowledge about the building structure and technical maintenance of building elements, technical inspection of the building, necessary repairs and provision of the building in accordance with Latvian Building Regulations

The last question was - do the owners of apartments would like the apartment building service provider takes full responsibility about everything. With this question the author wanted to find out whether owners of apartments want themselves to be involved in the process of building maintenance and management service or to delegate to competent service provider.

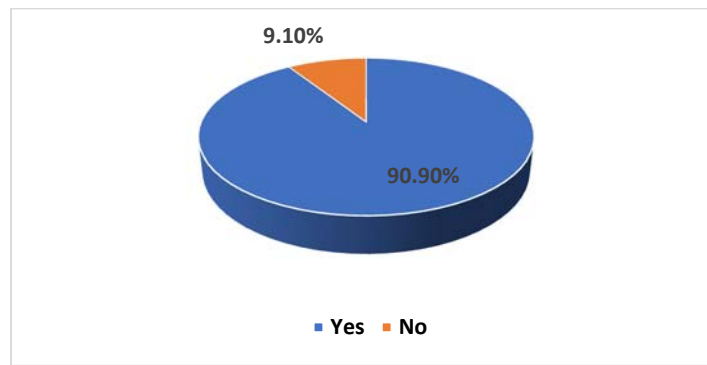


Figure 5. **Opinion of the apartment owners of apartment buildings, whether they would like that building management service provider takes full responsibility and do everything**

The results in Figure 5 show that the majority - 90.9% of apartment owners of apartment buildings would like to receive complete management from the building management service provider, so that the owners do not have to deal with these issues themselves, and that building service provider do everything.

Even if the owners of apartment building get together and decide on solving some issues, with difficulty find a repairer, then it often turns out that the conducted survey is invalid, all the time has been wasted and the owners of the house can wait indefinitely.

2. The kinds of apartment building management companies in Latvia and major problems of the providence of the service

Authors made research about kinds of apartment building management companies operating in Latvia, based on public Lursoft data. As visible in Figure 8, a major part of the companies are municipality companies (46%), 21% services are provided by private companies and 33% - are other kind of companies (societies or cooperative societies or small private companies). Authors analyzed the largest management companies whose annual turnover exceeds 1 million euros, comparing the percentage with the annual data of the total turnover of all apartment building management companies.

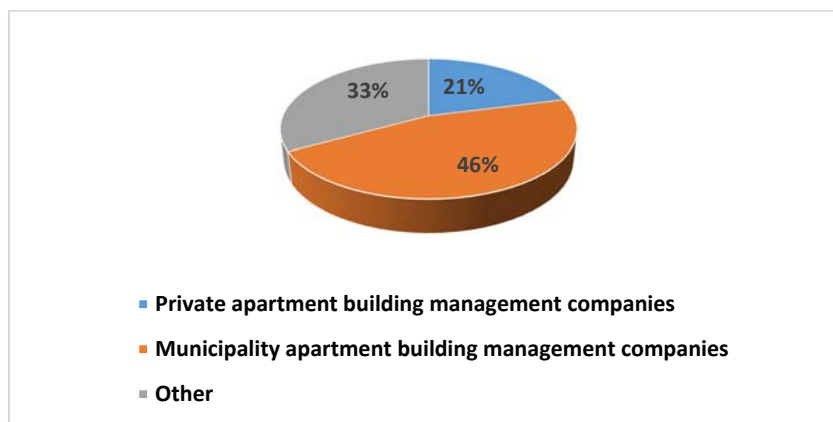


Figure 7. **Kind of apartment building management companies operating in Latvia (Lursoft, 2023)**

As visible from Figure 7, the important part – almost ½ are municipality companies, which provides apartment building management services, and this is due historical situation, which arose due

apartment buildings were not taken over from the municipal balance sheet, did not choose their own management service company, therefore such buildings are currently managed by municipal management companies.

As authors discovered in previous section No.1, the apartment owners of apartment buildings would like to receive complete apartment building management service from the building management service companies, so that the owners do not have to deal with these issues themselves, and that building service provider shall do everything.

Authors chose the expert interview as a method for the research to evaluate the apartment building service provider industry, to find out industry's essential main problems and to understand what should be done to improve the residential fund in Latvia and to improve and to facilitate services of maintenance of apartment buildings. Expert was a business consultant from Latvia, with wide professional management work experience in various cleaning and apartment building management service providers companies of the Republic of Latvia, as well with international experience in crisis, change management, restructuring management and M&A transactions, with international Business and Finance education, in middle age (around 35-45 year).

The results of the expert interview allowed authors to conclude that the existing regulatory enactments and regulations slows down the decision-making speed of co-owners, operational efficiency, the provision of house management services would be much more effective if the apartment building management service provider should have more right to act as a professional itself and not to expect residents' activity and signatures on decisions for every repair. A contradiction arises, because the customers themselves should know the technical condition of the buildings and when and what repairs should be made.

Authors find several problems regarding executing of housing renovations existing for apartment building management companies and apartment owners as well:

1. All apartment owners are participants of the community of apartment owners and constitute as a legal entity (Law of Apartment Ownership, article 15, part (1)).

The problem is that apartment owners don't have real possibilities to manage this community, since they don't have access to contacts of other owners, they have no knowledge and ways how to start to manage the community. For instance, if there is a company, all shareholders know each other, and they know the purpose of the company and aims to achieve opposite that apartment owners as participants of the community of apartment owners don't know each other and don't have access to contact information of other owners. For instance, if some activists would like to call all other owners, there is no possibility to do it, due access to other staircases are closed with electronic keys.

2. There is conflict in that fact that owners of the apartments considers that the apartment building management company is responsible about technical situation of the building and must do everything, including renovate the building, shall make repairs to the building, and shall prevent all consequences of the accidents caused to the building, but in praxis this is not so. The owners of the apartments don't understand that they are owners, and they commonly have to decide – whether to renovate the building or not and when to do it.

3. The overview of Finland's apartment building management service system

Within this research authors discovered if there exist other models of apartment building management systems in European Union countries. As example authors choose Finland and researched the apartment building management system in Finland.

In contrary to situation in Latvia, where apartment building managers are all co-owners of the building, in Finland when the person buys an apartment, the person becomes **the shareholder of the apartment**. The main difference between Latvian legislation is, that in Finland **the building itself is owned by the housing company**.

The Articles of Association represent the internal law and order that must be observed in relevant apartment buildings. The Articles of Association are registered in Finland's Trade Register. The Articles of Association determine the grounds for payment and the scope of the possession rights granted by the shares (Satuli, 2014).

As written in Satuli H. expert interview with Lawyer at the Finnish Real Estate Management Federation Marina Furuholm, there are 5 benefits from Finnish Limited Liability Housing Companies Act:

1. Articles of Association: determine the house-specific rules.
2. Charge for common expenses: the payment of the charge is the most important obligation of the shareholders.
3. Maintenance: the housing company is responsible for maintaining the exterior areas and the shareholders the interior areas.
4. Alteration works: the apartment owners can modify the interiors of their apartments as they wish.
5. General Meeting: the highest decision-making body of the housing company. Shareholder's chance to be heard (Satuli, 2014).

In Finland the apartment building management companies must find financing tools to renovate and refine their properties (Karjalainen, Ilgin, Somelar, 2021).

4. The challenges for Latvian apartment building management companies to execute the apartment building renovation in scope of energy saving politics

The current conditions caused by the consequences of the Covid-19 pandemic, as well as the Russian war in Ukraine, have caused an increase in the prices of energy resources, fuel, and consumer goods around the world and in the European Union, thus there has been a need to accelerate energy efficiency and increase the use of renewable energy in the European Union.

In Latvia only 6% of the apartment buildings are energy efficient and the residential sector is rapidly aging. To insulate those buildings that urgently need renovation, around 5-6 billion euros would be needed, but only 156 million are currently available from European Union funds. Latvia lags other European Union countries in the use of European Union funds for energy efficiency projects, while the funds available for it continue to decrease (Energoefektivitāte, b.g.)

There are several benefits for the apartment owners after house renovation:

- Reduces heating invoices in average of 40%;
- The apartment owner adjusts the heating energy temperature in the apartment that is comfortable individual person;
- The apartment owner pays only for your consumed heat energy;
- The apartment building gets a new and modern look;

- The property value of the apartment increases (Daudzdzīvokļu māju energoefektivitāte, 2023).

A positive fact is that at the Cabinet of Ministers of the Republic of Latvia right now are initiated amendments in Law of Apartment Ownership, and some amendments, which maybe will do easier decision taking procedure, and the main amendments are: if the general meeting of apartment owners shall not be with voting value, the next general meeting shall be with voting value despite number of the owners participated in the next meeting (if the issues in the general meeting are the same). The same principle shall be applied to the written survey (Amendments in Law of Apartment Ownership, 2023).

Amendments in Law on Apartment Owners will not solve all the problems, but will help easier to take decisions, especially, when some activists from the building want to initiate repairs, changes, but rest of owners are against or not take in part at all in maintenance activities.

As a result of the entire research, gave an answer and allowed to draw conclusions that the customers are not satisfied with the performance of apartment building management services, and they expect that apartment building management service provider shall be with much more authorities to carry out building maintenance services. The Latvian apartment building management companies have challenges regarding with the performance of their services on the way to maintain sustainable housing fund due existing barriers in regulatory enactments, process of apartment building management services and apartment owners knowledge and wish to initiate an apartment building management activities.

Conclusions

1. The companies, which operates in the industry of apartment building management services, not enough concentrates to customers` satisfaction due they don`t act proactively and with initiative.
2. The owners of apartment buildings are not competent and are not specialists in legal, technical and other kinds of requirements. Apartment owners of apartment buildings are basically natural persons who do not have knowledge of regulatory acts and bureaucratic requirements; therefore, they cannot commonly manage the apartment building`s maintenance.
3. The planned amendments to the Law on Apartment Owners must be adopted, but the law should be written new or re-worked, and for that reason must be called up the working group and taken in mind interests of all stakeholders.
4. The municipality companies, which provide apartment building management services, are not efficient to provide commercial service, due to this not being their main duty.

Proposals

1. Proposal **for all apartment building management companies**: to improve communication with the customers, to improve service quality, to work with more initiative and to make services more clear and easy understandable for customers.
2. Proposal for **the Cabinet of Ministers of the Republic of Latvia**: to initiate an amendment in Law on Apartment Owners, by which it will be provided that apartment building managing services are not provided by municipality companies, but only from private apartment building management companies.
3. Proposal for **the Cabinet of Ministers of the Republic of Latvia**: to initiate an amendment in Law on Apartment Owners, by which there will be adopted and changed the apartment building management system in Latvia similarly to Finnish legislation, that there is one owner of the apartment house who is responsible about maintenance and management of apartment building. In Latvia situation there is no need to change the apartment ownership model due most of apartments in Latvia

are separate apartment ownership, but it would be reasonable to change the ownership of common parts of the building – that the apartment owners just have using rights to use common parts of the building, but the building owner has ownership rights to the common parts of the building and responsibility about maintenance of the building.

4. Proposal for **all municipalities of the Republic of Latvia**: to initiate easier and simple financing support system, as well less the bureaucratic requirements (less papers and documents) for apartment buildings for performing renovations of the apartment buildings.

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THE PROBLEMS OF IN-HOUSE PROCUREMENT IN LITHUANIAN PUBLIC PROCUREMENT

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Abstract. Although the in-house procurement, as an exception to public procurement process, have existed in Lithuanian law for more than a decade and the European Union has expressed a clear positive position on the issue by legalize it in international level with Directive 2014/24/EU, but this legal institute still is not analysed enough in scientific level in order to evaluate its situation and problems in Lithuanian public procurement law. Especially, when in order to find the most optimal legislative regulation of the in-house procurement, the Lithuanian legislator has changed this legal institute many times and in many ways without its clear decision as to how the issue should be regulated in statutory regulation. Therefore, the object of the research is the legal institute of the in-house procurement in Lithuanian public procurement law and the aim of the research is to analyse the peculiarities and problems of this legal regulation and its application in legal practice. The article uses basic research methods such as document analysis, systematic analysis, comparative analysis, the deduction analysis and generalization methods. The analysis of this article shows main problems of this legal institute of Lithuanian public procurement law seen clearly in legal regulation and practice require as well as provide the certain solutions for necessary substantial adjustment of existing legal regulation on this question.

Keywords: in-house transactions, public procurement, Lithuanian law, administrative law.

DOI: 10.37804/1691-6077-2023-14-59-68

Introduction

There is constant debate in the media about how in-house procurement should be regulated as it is an exception to the application of formal public procurement procedures, therefore, a significant part of the public sees more dangers in it than positive features of this institute, i.e. lack of transparency, risk of possible decision-making in favour of personal interests, etc. (Balčiūnaitė, 2019; Lithuanian Free Market Institute, 2019). While others are in favour of liberalizing the in-house procurement institute, giving institutions as much power as possible in the area of in-house procurement (Soloveičik, 2019; 09.10.2019 Letter of the Association of Lithuanian Municipalities). In search of the optimal and most suitable legal regulation, the Lithuanian legislator changed the regulation of in-house procurements many times, i.e. either by narrowing or expanding the scope of such transactions, by including, or by abolishing provisions related to the control of in-house procurements, and even attempts have been made to ban in-house procurements. And this shows that Lithuania does not have a clear direction as to how in-house procurements should be regulated in the national legal system, especially because the constantly changing political processes and political directions have a strong impact on this. Although the in-house procurements, as an exception to public procurement processes, have existed in Lithuanian national law for a little over a decade, and the European Union in Directive 2014/24/EU clearly stated the position by which it approved this legal practice and legitimized this legal institute at the cross-border level, however, this issue still does not receive more serious scientific research, which would provide a more detailed overview of the situation and problems of this law institute in public procurement. The last research on this topic was carried out more than a decade ago by D. Soloveičikas (2009), and in general, public procurement law is not a common phenomenon in Lithuanian legal doctrine as an object of scientific research, therefore, such research significantly contributes to the development of this narrow but at the same time very important public procurement law in Lithuanian national law. All this shows and justifies the importance and relevance of this study, especially since it can be a

weighty basis for discussions on the regulation of in-house procurements in the Lithuanian public procurement law amendment law.

The object of the research – the legal institute of the in-house procurements in Lithuanian public procurement law.

The aim of the research – to analyse the peculiarities and problems of legal regulation of the in-house procurements in Lithuanian public procurement law.

The tasks of the research:

- 1) to reveal the concept, establishment process and peculiarities of the in-house procurements in Lithuanian public procurement law;
- 2) to examine the main issues of legal regulation of the in-house procurements in Lithuanian public procurement law and its application in legal practice;
- 3) to provide solutions in order to solve specific issues of this legal institute in Lithuanian public procurement law.

Methodology of the research: depending on the topic, goals and objectives of the scientific article, the following research methods are used: the systematic analysis and comparative analysis methods are used when comparing legal provisions and case law as well as Lithuanian law and EU law; the deduction analysis method made it possible to define specific problems arising in legal practice from the general requirements, while the generalization method helps to systematize the entire analysis and to provide structured conclusions.

Abbreviations in the research:

1. the LPP – the Law on Public Procurement of the Republic of Lithuania.
2. the LC – the Law on Competition of the Republic of Lithuania.
3. the CJEU – the Court of Justice of the European Union.
4. the EU – the European Union.
5. the CCRL- the Competition Council of the Republic of Lithuania.

Discussion

1. The concept and emergence of in-house procurements in Lithuanian Law and EU

The conclusion of an in-house procurements is understood as a procedure where the procuring organization can purchase resources from an entity whose activities it can have a decisive influence on and can effectively control, and the main feature of an in-house procurement is that no public procurement is announced, i.e. mandatory public procurement rules do not apply, and such a contract is not considered a public procurement contract (Soloveičikas, 2009). An in-house procurement in the narrow sense is to be considered when a transaction is concluded with one of its divisions (departments), which does not have legal subjectivity, and an in-house procurement in the broadest sense is to be considered when the transaction is concluded with persons controlled by the procuring organization, who have independent legal subjectivity (Janssen, 2014). Public procurement legal norms do not affect internal procurement in the narrow sense, because then the contracting organization and its employees have labour legal relations, however, when it comes to internal procurements in a broad sense, these are indeed problematic, which will be the main focus.

In the absence of consolidated regulation of in-house procurements, CJEU in the 12.11.1999 decision No. C-107/98 (hereinafter - the *Teckal* case) laid the foundation for the institution of in-house procurements and formed two main criteria in which cases an in-house procurement can be concluded: 1) the procuring entity must exercise control over the other counterparty in a manner similar to its own departments, structural parts, units or divisions; 2) the other party to the transaction carries out most of its activities together with or for the benefit of this procuring organization. Although the in-house procurement criteria established in the *Teckal* case became the basis for the in-house procurement institute, however, this was just the beginning and due to the abstractness of the criteria, the CJEU repeatedly provided clarifications on various aspects of in-house procurements until the publication of EU Directive 2014/24/EU in 2014, Article 12 of which

established the exception of in-house procurements and the conditions for their conclusion. It is noteworthy that this directive sets out a third condition, which complements the criteria of the *Teckal* case, i.e. condition for direct participation of private capital. However, this condition was not new, but only derived from the doctrine of the CJEU, e.g. CJEU 11.01.2005 decision No. C-26/03, 22.05.2003 decision No. C-18/01 and others. Although the conditions for the conclusion of in-house procurements established in this directive are not sufficiently detailed and clear by themselves, it is necessary to refer to the practice of the CJEU, however, it cannot be said that such consolidation of in-house procurements and their conclusion criteria in EU positive law was insignificant, on the contrary, it gave this institution of law more clarity and definition than it had before (Janssen, 2014).

Meanwhile, analysing the situation in Lithuanian law, it should be noted that the LPP, in 02.03.2010 established the exception of in-house procurements for the first time. The text of the exception was then drafted slightly differently than the current version, i.e. it provided that the requirements of the law do not apply to procurements if the contracting organization enters into a contract with an entity that has a separate legal entity status that it controls, as its own service or structural division and in which it is the only participant (or exercises the rights and duties of the state or municipality as the only participant), and if the controlled entity derives at least 90 percent of its sales revenue from activities designed to meet the needs of the procuring organization or to perform the functions of the procuring organization (LPP wording valid from 02.03.2010 to 26.11.2010). It is noticeable that the norm already distinguished a specific part of 90 percent of the income from the activity, i.e. a specific essential part of the activity, when there was no EU regulation providing for the essential part of the activity. It should also be mentioned that the requirement of the state or municipality as the only participant was established in the LPP, which was later established in Directive 2014/24/EU with a similar wording (with an exception) as the third criterion for in-house procurements. It should be noted that from the protocol of the 22.12.2010 meeting of the Economic Committee of the Seimas of the Republic of Lithuania No. 108-P-49 can be seen, that in the same year, it was proposed to abolish the exception for in-house procurements, based on the fact that the assessment carried out by the Special Investigations Service stated that in-house procurements in municipalities take place in a non-transparent manner, and the regulation at that time does not ensure the control of in-house procurements, especially the exception of in-house procurements threatens competition between services. However, the in-house procurement exception has not been removed from the LPP, but its wording has changed slightly, i.e. the previously valid version of the law was supplemented with categories of income during the last financial year and established the provision that in order to ensure internal procurement control, when the procuring organization approves the public procurement plans planned for the current budget year, information about the planned in-house procurements must also be provided, and within 30 days from the end of the reporting calendar year, submit to the Public Procurement Office reports of all in-house procurements carried out during the calendar year (12-23.12.2010 Law No. XI-1255).

In response to the criteria for in-house procurements established in Directive 2014/24/EU, new amendments to the regulation of in-house procurements in Lithuanian law came into force in 2014, i.e. in the new version of the LPP, the criterion of at least 80 percent of sales income from operations was established (22.10.2013 Law No. XII-569). The legislator motivated this change by the fact that the second condition for the conclusion of an in-house procurement provided for in the previous version of the LPP before the changes, compared to the one specified in the *Teckal* case, unreasonably narrows the application, although in fact the *Teckal* case referred to “an essential part of the activity of a legal person“, however, this part is not expressed as a percentage. And the legislator also took into account the latest changes made in Directive 2006/97/EC59 at that time, where the essential part of the activity of 80 percent of income is also established. However, from the 12.06.2013 conclusion of the Education, Science and Culture Committee of the Seimas of the Republic of Lithuania No. 106-P-25 can be seen, that the CCRL did not agree to the change and stated that the extension of the limits of the application of in-house procurement criteria increases

the possibilities of procuring organizations - state or municipal institutions - to avoid the application of public procurement rules when purchasing goods that they could buy from entities operating in the market, in this way, institutions find themselves in a privileged position, which could create different conditions of competition between private and state- or municipal-run entities.

Judicial practice undoubtedly had further influence on legal regulation, since from the middle of 2015 in the practice of the court of cassation, such as in civil case No. e3K-3-120-469/2018, the legality of in-house procurements begins to be associated not only with the conditions established by the *Teckal* case, but also with additional value bases arising from the provisions of the LC, i.e. continuity of service provision, good quality and availability, opportunities to compete and impact on the equality of other economic entities.

In the penultimate change in the regulation of in-house procurements in 2017, the legislator changed the wording of the in-house procurement exception, prohibiting such transactions in state-controlled companies, as it is precisely such transactions that raise the most questions about abuse and non-transparent tenders. Also, in the new wording of the LPP, there was no longer a requirement to obtain the consent of the Public Procurement Office for the conclusion of an in-house procurement. The President of the Republic of Lithuania did not approve of this amendment to the law, and in the 18.04.2017 decree No. 1K-940 stated, that such an amendment privileges municipalities and does not comply with the constitutional principle of equality, since according to this amendment in-house procurements can only be concluded by municipalities and companies managed by them, especially the number of such transactions is growing and this shows that in the practice of some procurement organizations this exception has become the rule. Such a position was followed by the CCRL in the 30.04.2015 resolution No. 1S-45/2015, where it is noted, that without violating the constitutional imperative of fair competition, the municipality could enter into a transaction with the company it manages in only one case, when, after creating public, transparent and non-discriminatory conditions for all entities operating in the market to compete for the supply of a service or product, the municipality would not receive any bids or would receive bids that do not meet the purchase conditions established by it, however, in such a case, the in-house procurement exception is not required, as unannounced negotiations can then be conducted. Despite this clear disapproval, the relevant amendments to the LPP were adopted.

In 31.12.2019, the last changes to the LPP were made, i.e. Section 2 of Article 10 of this law has been amended, stipulating Point 2, that in-house procurements may be concluded when public services are purchased, administered in accordance with Section 2 of Article 9 of the Law on Local Self-Government of the Republic of Lithuania. Thus, the amendments to the law created wider opportunities for municipalities to carry out in-house procurements. According to the changed procedure, public procurements may not be announced in a fairly wide range of public services and in cases where immovable property owned by municipalities would be required to provide the services. According to the amendment, the aforementioned services for municipalities can be purchased either from existing companies or new ones can be established. Such an amendment to the law should be considered as expanding the discretion of municipalities to choose how public services should be provided. However, it should not be forgotten that the discretion of municipalities is limited to certain services enshrined in the law, which are considered extremely significant for local self-government, without which our society cannot function normally. Undoubtedly, the legislator, when making such a change, relied on the tendencies of other countries to return certain services to the public sector, i.e. based on materials of the 18.10.2019 VII session of the Seimas of the Republic of Lithuania No. 333, the trend of returning the water supply sector to the public sector is clearly visible in France - as many as 106 cases, 61 cases in the United Kingdom, 27 cases in Spain, 17 cases in Germany and in the waste management sector: in Germany - 13 cases, in the United Kingdom - 7 cases, etc.

Thus, during the entire period of the LPP on the regulation of in-house procurements, in order to find the most optimal regulatory option and to reduce threats due to distortion of competition or corruption, the legal provisions of the LPP were repeatedly changed, however, at the same time, it

is difficult to see the position of the legislator in which direction the regulation of in-house procurements should go.

2. Problems of regulation of in-house procurements in Lithuanian law

2.1. The LPP problem of regulating some in-house procurement conditions

The condition enshrined Section 1 of Article 10 of the LPP that in-house procurements can only be concluded with the purchasing organization leads to the fact that, in most cases, the conclusion of an in-house procurement alone is not enough to achieve the ultimate goal of the purchasing organization, but at the same time, public procurement has to be carried out, since it is not always possible to purchase the various instruments required for the execution of an in-house procurement from a controlled procurement organization. In addition, the condition that in-house procurements can only be concluded with the purchasing organization rather restricts the possibilities of non-transparent use of funds. As a result, smaller in-house procurements should generally be made, which would be seen as a positive step.

The most critical of the requirements established in Article 10 of the LPP for concluding an in-house procurement is the provision of Section 2 of this article, that when purchasing by public procurement, it would be impossible to ensure the continuity, good quality and availability of the service, which means that, above all, the procuring organization must announce a public procurement tender and only in the event that no single supplier's offer meets the requirements of the procuring organization or if none supplier would not submit a bid, the procuring organization could enter into an in-house procurement. In this way, entities owned or controlled by the state are directly or indirectly eliminated from the possibility of entering into an in-house procurement altogether (Soloveičik, 2019). It can also be assumed that in such a case, when the procuring organization is still obliged to check when announcing a public procurement, the institution of in-house procurements essentially loses its meaning, since in such a case the institution of unannounced negotiations can be used, according to Article 71 of the LPP, in-house procurements should be characterized by the speed of their conclusion, this can be considered one of the main advantages of this institute, but it is problematic that the conclusion of an in-house procurement in this case may take longer than the acquisition by organizing a competitive procedure.

In addition, a linguistic analysis of the conditions for concluding in-house procurements provided for in Article 12 of Directive 2014/24/EU and the conditions for concluding in-house procurements provided for in Article 10 of the LPP shows, that there are more requirements established in Lithuanian law than at the level of the European Union. As a result, the Supreme Court of Lithuania in civil case No. e3K-3-120-469/2018 applied to the CJEU to find out whether states have the discretion to enshrine additional restrictions on in-house procurements in their national law. Meanwhile, the CJEU in the 03.10.2019 decision No. C-285/18 explained that the Section 1 of Article 12 of Directive 2014/24/EU must be interpreted in such a way that according to it, a provision of national law is not prohibited in which a member state associates the conclusion of an in-house procurement with the condition that the conclusion of a public procurement contract would not allow ensuring the quality of the services provided, their availability or continuity, if at the stage before the conclusion of the public procurement contract, the principles of equal treatment, non-discrimination, mutual recognition, proportionality and transparency are observed when choosing a specific method of service provision. Thus, as it can be seen that the additional condition enshrined in Section 2 of Article 10 of the LPP, that in-house procurements can only be concluded if the continuity, good quality and availability of the relevant service cannot be ensured when organizing public procurement, does not contradict the regulation of Directive 2014/24/EU, however, the aforementioned essential principles must be observed, which makes the process of concluding an in-house procurement even more difficult in Lithuanian law, additionally requiring the following criteria to be assessed.

However, after the adoption of this CJEU decision, the Supreme Court of Lithuania in case e3K-3-494-469/2019 stated that all material and procedural requirements for the conclusion of in-house procurements, which the legislator seeks to apply, regardless of whether they are established in the

performance of obligations arising from EU law or using the right of internal legal regulation, must be clearly, accurately, unambiguously and comprehensibly established in one legal act - LPP. This causes a considerable problem, since the CJEU clearly stated that competition cannot be distorted in relation to private economic entities, which means that there must be a certain control mechanism to ensure that competition is not distorted, and such a mechanism is not provided for in Article 10 of the LPP. In addition, the conclusion of in-house procurements is not controlled by the Public Procurement Service, based on point 9.12 of the regulations of the Public Procurement Service of the Republic of Lithuania, from which it can be seen that it only supervises the execution of in-house procurements, but not the conclusion process. Meanwhile, no one controls even such cases when it is not even clear for which object purchase the in-house procurement is concluded, e.g. according to the data of the Lithuanian Free Market Institute (2019), in 2018 the object of the in-house procurement concluded with "UAB Grinda" specified by Vilnius City Municipality is "Purchase of mandatory services and works", the objects specified in the in-house procurements of Švenčionių district municipality and "UAB Pabradės komunalinio ūkio" and "UAB Švenčionių švara" are "Service provision agreement" and others. The lack of control also results in the fact that all the risk regarding the legality of the conclusion of an in-house procurement rest with the procuring organization, and ultimately there is a risk that such an in-house procurement will be contested, and the time and funds allocated to the in-house procurement will be wasted.

2.2. The problem of the exclusivity of in-house procurements for municipal entities

In addition, another visible threat due to the conditions for concluding an in-house procurement provided for in the norm of Article 10 of the LPP, according to which the purchased public services are administered in accordance with Section 2 of Article 9 of the Law on Local Self-Government of the Republic of Lithuania, is that this condition makes the exception of in-house procurements no longer of such an exclusive nature. It is doubtful whether it was really necessary to include such a large number of cases where the conclusion of in-house procurements is allowed, since one could hardly agree with the statement that in absolutely all of these areas, i.e. waste management, passenger transport, maintenance and management of territories and streets, catering, education, social care services, etc., there are not enough economic entities that can compete for the provision of services, especially if some of such public services can also be provided by private entities. Even more doubts arise as to whether this condition is not just an attempt to save inefficient municipal companies. As a result, it is positive that in at least one case of in-house procurements, a certain control is introduced - obtaining the consent to enter into an in-house procurement from the CCRL.

In addition, the situation that state-owned companies are prohibited from entering into in-house procurements, while municipal companies have expanded opportunities to enter into these transactions, raises questions as to why public entities are treated so differently. The ban on in-house procurements for state-owned enterprises means that not only state-owned joint-stock companies cannot enter into transactions with subsidiaries, but also, for example, ministries or other institutions cannot enter into internal procurement contracts. Thus, it is difficult to find objective criteria that lead to such a different determination of the rules for the conclusion of in-house procurements between state-owned and municipality-owned companies, after all, such a different treatment of subjects in itself leads to a violation of the principle of equality.

Another problematic aspect of the regulation of in-house procurements is that they can be concluded for a very long time, i.e. according to the data provided by the Lithuanian Free Market Institute (2019), some in-house procurements are concluded for a period of 10, 15 or even 20 years. For municipal companies, this ensures constant income and makes it easier to plan the company's future flows - which can facilitate not only the company's daily operation, but also provide various guarantees, such as facilitating the obtaining of loans, while other market participants cannot apply for such facilitations. The conclusion of such long-lasting transactions indicates to market participants that there will be no need for a certain service or product in the market for a long time, and as a result, private entities wishing to engage in such activities may not appear. This closes the market to potential suppliers of goods or services. As a result, even after the end of the in-house

procurement period, there are no other alternatives than to buy services from the municipal company again, and an in-house procurement has to be concluded again.

However, it is doubtful whether the abolition of the in-house procurement institute would solve these problems, as the public sector would find other ways to subsidize subordinated companies. Especially after the elimination of in-house procurements, efficient and non-competitive public entities in the market would have to participate in public procurement tenders, in which they would be the only participants, which would waste a lot of time and funds.

2.3. The relationship between the regulation of in-house procurements and competition law

Meanwhile, when assessing the relationship between the regulation of in-house procurements and competition law, it should be noted that, as already mentioned, in the 03.10.2019 decision No. C-285/18 CJEU stated, that the conclusion of an in-house procurement that meets the conditions provided for in Point a-c of Section 1 of Article 12 of Directive 2014/24 does not in itself comply with EU law, since in-house procurements can only be concluded when it is ensured that competition will not be distorted in relation to private economic entities. In the absence of in-house procurement control established by the LPP, which can ensure that competition against private entities will not be distorted, Article 4 of the LC has been used for a long time, which prohibits public administration entities from privileging individual economic entities. Despite the fact that the LPP provided for the possibility of concluding in-house procurements, the CCRL recognized such decisions (to enter into an in-house procurement) as contrary to Article 4 of the LC and even when the provision that in-house procurements could only be concluded in exceptional cases was not established in the LPP. The CCRL and the administrative courts have shaped the narrowing application of internal procurement and the practice providing for the exclusivity of this institute (e.g. Decision of the Supreme Administrative Court of Lithuania on 29.03.2016 in case No. A-347-552/2016 and others). Thus, a situation arose that the institution, which should enforce the laws, actually changed them, deciding to apply the norms established by the LC to in-house procurements, although in the case of a conflict between the *lex generalis* (Article 4 of the LC) and the *lex specialis* (Article 10 of the LPP), the conflict must be decided in favour of the *lex specialis*.

Only after the aforementioned CJEU decision No. C-285/18, it was understood that administrative authorities cannot create rules themselves, and thus distort the regulation established by law. And the Supreme Administrative Court of Lithuania formed a new direction in the practice of administrative courts and in case No. eA-893-556/2020 stated that there is no reason to conclude that the Lithuanian legislator did not fully implement his constitutional competence in the legal regulation and did not determine all the necessary aspects of in-house procurement regulation, nor is there any basis for such an interpretation of the law, according to which, ignoring the will of the legislator, the application of the in-house procurements institute remains permanently exclusive, regardless of the regulatory change in Article 10 of the LPP. This position was confirmed by the Supreme Court of Lithuania in civil case No. e3K-3-494-469/2019, in which it was noted that that all material and procedural requirements for the conclusion of in-house procurements sought to be applied by the legislator, regardless of whether they are established in the performance of duties arising from EU law or using the right of internal legal regulation, must be clearly, accurately, unambiguously and comprehensibly established in one legal act – LPP. Thus, the practice according to which Article 4 of the LC was additionally invoked should be considered flawed and should not be applied, therefore, the conclusion of in-house procurements according to the LPP cannot be considered as a conflicting LC. However, this does not change the fact that it is necessary to ensure that competition against private entities is not distorted, therefore the control mechanism ensuring competition should be clearly, accurately and unambiguously established in the LPP.

Conclusions

1. During the entire period of the LPP for the regulation of in-house procurements, the threat of removing this institute from the legal regulation of Lithuania has repeatedly arisen, precisely because of its insufficiently optimal regulation and the threat posed by distortion of competition or corruption. It is also difficult to see the position of the legislator in which direction the regulation of in-house procurements should go, because at one time the scope of using the institute of in-house procurements is narrowed, and at another time such an opportunity is being expanded, although the institutions responsible for this area had categorically negative positions regarding the existence of this institute.

2. The performed analysis substantiated that there are a number of problem areas in the regulation of in-house procurements established by the LPP:

2.1. the procuring organization must in all cases announce a public tender in order to make sure that it is impossible to ensure the continuity, good quality and availability of the service, as a result of which the in-house procurement institute, which should be characterized by operational efficiency, basically loses its meaning;

2.2. there is no general real control mechanism that ensures undistorted competition and the compliance of the conclusion of an in-house procurement with all the conditions imposed on it, which leads to the fact that all the risk regarding the legality of the conclusion of such transaction rests with the procuring organization;

2.3. extended opportunities for municipal companies to enter into in-house procurements leads to an obvious violation of the principle of equality, and the possibility to enter into an in-house procurement for an extremely long time leads to the absence of new alternatives for the services or goods provided, after the end of such a transaction period;

2.4. the legal practice of additionally formally applying the provisions of competition law to in-house procurements by strengthening their exclusivity is flawed, but the stricter regulation of in-house procurements provided for in Lithuania does not contradict EU law as long as it does not violate other fundamental principles of EU law.

3. The performed analysis substantiated that after establishing a proper mechanism of real institutional control of in-house procurements in the LPP, assigning these functions to the Public Procurement Service, narrowing the range of cases according to which municipalities can enter into in-house procurements, abolishing the ban on state companies entering into such transactions and determining the maximum possible duration of such transactions in the legislative regulation, the institute of in-house procurements would not only be preserved, but would also function much more efficiently.

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THE FUTURE ROLE OF INTERNATIONAL TRADE RISK ELIMINATION AND INVESTMENT PROMOTION IN THE DEVELOPMENT OF ECONOMIC RELATIONS BETWEEN AZERBAIJAN AND LATVIA

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Abstract

After regaining its state independence, Azerbaijan got a favorable opportunity to enter the world market. The income from the country's rich oil and gas resources served to rapidly increase the gross domestic product. Today, the government of Azerbaijan is preparing an action plan for the development of the non-oil sector in order to reduce the country's dependence on oil and gas exports. In particular, there are some economic spheres that have a great need to be revived and have the main share in budget revenues. Although Azerbaijan has left behind most of its competitors in the viticulture and winemaking sector for many years, in the current conditions this sector relies on foreign investments for its development. Although tourism opportunities in Azerbaijan are very wide, the level of service in hotels and recreation centers is very low. Expensive prices in return for the level of service provided have a negative impact on the growth of Azerbaijan's tourism revenues. Unfortunately, there are also serious problems in the development of the forestry and machine-building industries and wheat production in the country. Latvia has already specialized and has some experience in exporting in the listed economic sectors in Eastern Europe. The entry of Latvian investment into Azerbaijan will serve to strengthen economic relations between the two countries and maximize mutual income. In the research work, these issues will be considered and analyzed separately by economic spheres.

Keywords: tourism revenues, oil and gas products, foreign investments, energy security, viticulture and winemaking sector, forest industry, wheat production, machine industry

DOI: 10.37804/1691-6077-2023-14-69-79

Introduction

While the political relations between Azerbaijan and Latvia are in a very good place, the figures shared in mutual economic relations are not so satisfactory. In the 2021 report of the Azerbaijan State Customs Committee, the volume of export to the Republic of Latvia was 9.9 million, and the volume of import was 17.3 million US dollars. Compared to Eastern European countries, the volume of trade turnover of Azerbaijan with Latvia cannot be considered satisfactory. For example, last year, Azerbaijan had a larger volume of trade with countries such as Lithuania, Slovakia, Slovenia and Bulgaria. Considering that 87% of Azerbaijan's exports are oil and gas products, the majority of Eastern European countries have established trade cooperation with Azerbaijan mostly in the non-oil sector. Because in 2021, the crude oil produced in Azerbaijan was mostly exported to Italy, Israel, Croatia and Germany. Among the countries of Eastern Europe that are part of the European Union, only the Czech Republic is in the forefront. It can be concluded that the weight of oil and gas products exported from Azerbaijan to Latvia is very small. Geographical positions of the countries, being far from each other, cause obstacles in solving certain commercial issues. For example, although Azerbaijan has rich oil and gas resources, its export opportunities to some Eastern European countries, especially the Baltic countries, are somewhat limited. Although Azerbaijan has started transporting gas to Greece and Italy through pipelines, the construction of new gas pipelines through the Black Sea to Romania and from there to Central European countries seems to be somewhat difficult in terms of both finances and time. Due to geopolitical reasons that change every day, various economic projects are waiting for their time. Of course, the new gas fields discovered in Azerbaijan in recent years, the hopes of the Central Asian countries to access the European energy market through Azerbaijan, it is already possible to believe that the trade between Azerbaijan and the Baltic countries will increase in the future.

Literature Review

To talk about the current situation of economic relations between Azerbaijan and Latvia, the potential of Latvian companies to invest in different economic spheres of Azerbaijan, it is not so important to mention the opinions of representatives of different schools of economic theory, the results of reports presented by international organizations (only in this field) in the conducted studies, a partial place is given in the study of the methodological base). Because, in order to analyze the general economic situation between the two countries, it is enough to look at the annual official

figures presented by both countries. The main issue in this study is to consider the potential movement of Latvian investment to Azerbaijan. Another issue is that Azerbaijan's access to the foreign market is currently limited to oil and gas exports (90 percent of exports). That is, the list of Azerbaijani companies that can invest in Latvia in the non-oil sector is not very extensive. Therefore, this study will be limited unilaterally to the possibilities of improving the investment environment in Azerbaijan. The annual reports of the State Statistics Committee of Azerbaijan will play a central role in the conducted research. The reports of the Statistics Committee are important for two reasons. First, the figures presented by this Committee are official and have a specialized team involved in the collection of statistics on different spheres of the economy. Secondly, unfortunately, a number of enterprises in Azerbaijan avoid submitting annual reports. A separate study may also be required to address the internal reasons for this.

Research Methodology

Both induction and deduction methods were widely used in the research. Systematic and comparative analyzes were conducted only in Azerbaijan on specific internal indicators and on separate economic sectors. In the development of bilateral relations, the historical and logical method approach is also included in some issues. The main goal of the study is to review the potential opportunities of the tourism sector, forest industry, winemaking, winemaking and machine-building, and to present the current situation, which can play a decisive role in the deepening of economic relations between Azerbaijan and Latvia, and the import of foreign capital to Azerbaijan. The main objects of the research are state and private enterprises operating in the so-called economic sectors and their subordinate production areas. The main hypothesis in the research is: "In order to ensure the development of the non-oil sector in Azerbaijan, investment import from which economic sphere Latvia specializes in is more suitable?".

Creating a methodological base for promoting foreign investments in Azerbaijan and presenting optimal indicators is a complex issue. As an example, if we talk about the promotion of investment in the forest industry, if we look at it from the perspective of organizations, the Food and Agriculture Organization of the United Nations has proposed measuring risk reduction, resource sustainability and economic sustainability indices to stimulate investments in the forest industry (Food and Agriculture Organization of the United Nations. 2016). The Principles for Responsible Investment (PRI) considered it important to create and disseminate standardized impact metrics for consistent measurement in promoting investments in forestry (Principles for Responsible Investment. 2019).

Chinese scientist Lin Song put the error tracking method in the center to test the performance of passive investment strategy (Song L., 2020). Economist Douglas Thomas highlighted the methods of net present value, internal rate of return and payback period for making economic decisions in investment policy (Thomas D.S., 2017). In the report presented by the CFA Society United Kingdom, it was noted that investment managers have a large share in the development of decision-making methodologies in the process of investment promotion. Thus, it is stated that investment managers should disclose their research methodologies to the public and have a healthy competition to ensure effectiveness (CFA Society of the UK. 2014).

The differences between all the examples show that in the conditions of increasing mutual economic relations between the two countries, it is more important to conduct research and reach conclusions through traditional theoretical economic methods in the investigation of investment problems.

1. Information limitation in the development of economic relations between Azerbaijan and Latvia. Potential for increasing tourism opportunities

Although diplomatic relations between these two countries were established in 1994, relations between the two peoples have existed for at least more than 2 centuries. We can find enough similarities between the two states. Both countries have fought against the Russian occupation for years, and have preserved their historical past, mother tongue, and traditions. Most importantly, they got rid of the Soviet mentality and transitioned to a market economy as an independent democratic country. All these are very important issues from a political and economic perspective. Although Latvia joined the European Union in 2004, the Azerbaijani government has not yet taken any steps in this matter. Although Azerbaijan has strong relations with the European Union, especially in the field of energy security, not joining this union has a negative impact on its foreign economic relations. Taking advantage of the free trade between the countries of the European Union can be very useful for a country with rich oil and gas resources like Azerbaijan. Azerbaijan needs separate strategies and government programs to develop economic relations with these countries. In particular, this is very necessary in the development of relations with Latvia. The number of Azerbaijani students studying in the countries of the European Union is much less than those studying in Turkey and Ukraine. It is inappropriate to exaggerate financial issues and the visa procedure here. Because 80-90 percent of Azerbaijani students want to study in European countries despite all difficulties. In general, there is a need for more cooperation between Azerbaijan and Latvia in the field of science and education. This will also speed up the political-economic processes that will lead to an increase in the trade turnover between the two countries, as the specialists of the two countries get to know each other closely, conduct joint socio-economic projects, and as a result of this. The exchange of information in the field of science and education between the two countries will automatically affect other spheres, and in the end Latvian-Azerbaijani relations may come to the fore in the annual statistics.

Oil and gas export in Azerbaijan cannot continue for centuries. If 87-90 percent of budget revenues are formed from oil and gas sales today, this is a signal of excitement in ensuring future economic stability. The specialization of the

country's economy in one sphere cannot create a pleasant picture. It follows from this that there is an alternative economic sphere that can replace the share of the oil and gas sector in the budget solutions in Azerbaijan. Of course not. The future solution of this problem is possible. Because, for example, there are sufficient natural resources for the development of the tourism sector in Azerbaijan. In the development of this sector, there are misunderstandings between the public and private sectors, lack of investment, weakness of the service sphere, a large number of non-professional tourism specialists, high cost of air transport, etc. factors have a serious impact. This is, of course, the visible side of the problems in the press, the seriousness of the case is on a completely different level. Today, if international organizations report that the shadow economy in Azerbaijan is more than 40 percent, it would be far from reality to achieve serious results in the development of the tourism sector here in a short period of time. Without ensuring transparency in economic activity, it is too early to talk about the development of the non-oil sector. In the long-term perspective, the tourism sector can be decisive in the growth of economic relations between the two countries. For this, it is necessary to start with the solution of the main problem that currently exists, that is, the organization of direct flights.

Direct flights between the two countries have not been operating for a long time now. Both countries have an important weight in the region where they are located. Being located on important transport hubs, Latvia provides access from the Baltic region to Western Europe and Scandinavia. The country's historical past, unique climate attracts foreign tourists from all over the world. Reasonable prices offered by low-cost airlines operating in Latvia are calculated for the well-being of all segments of the population. Recently, further modernization of the city center-airport transport line and its accessibility to tourists should be an example for Azerbaijan. Although there are greater opportunities for the development of the tourism sector in Azerbaijan compared to Latvia. The country's climate is warmer, seaside beaches are open for 4 months of the year, world-famous mud baths, ski centers in mountainous areas during winter tourism, boating and horse-riding areas in the regions, in short, there are many things that attract the interest of foreign tourists. Airports are very close to tourist centers. Day by day, Azerbaijan eases visa conditions with all the countries it cooperates with and stimulates the flow of foreign tourists to the country. It has already been mentioned that there are serious problems in this area, but the lack of direct air transport between the two countries is thought-provoking. Azerbaijan Airlines, the only airline of Azerbaijan, currently does not organize flights not only to Latvia, but also to the entire Baltic region. There are no direct flights from Azerbaijan to Scandinavian countries, which are popular in winter tourism, or to Spanish beaches, which are world famous in summer tourism. The company is busy increasing charter flights to Turkey only in the summer months. While there are 2-3 flights to Moscow, the capital of the Russian Federation, for no serious reason during the day, there are no flights to Italian cities where thousands of Azerbaijani students live. There are no flights from the country to the Americas. It should be taken into account that every year hundreds of Azerbaijanis migrate to the USA and Canada. Today, the families and relatives of these people have to buy tickets to Istanbul at a fantastic price to visit them, so that they can get direct flight tickets from other airlines. Unfortunately, these steps taken by Azerbaijan Airlines cast a shadow on the future of the country's tourism.

AIR BALTIC, a domestic airline operating in the Republic of Latvia, was founded in 1995, and nearly 98 percent of the company's shares belong to the Latvian state. The company operates 68 flights from Riga, 15 from Tallinn, 10 from Vilnius (Air Baltic Corporation AS. 2022). The high number of flights per population is an example of the Latvian government's commitment to the tourism sector. The state's special attention to the development of this sector creates conditions for the flow of foreign tourists to the country, accelerates economic activity, and of course, this should be welcomed. Today, there are international flights from Riga to the capitals and major cities of most European countries. A trip to regions that play a central role in both winter and summer tourism is organized. Flights to Tbilisi and Tel Aviv are also appreciated. In the development of economic relations with Azerbaijan, a direct flight to Baku must be organized by the company, so that mutual tourism activity can be revived. The revival of cooperation between the two countries in recent years makes it possible to say promising things for the future.

Low-budget airlines of third countries can also see the function that both Azerbaijan Airlines and AIR BALTIC will perform. International airlines of Turkey, which are not strangers to Baku airport, are able to distinguish the airlines of various European countries that operate regularly at Riga airport. If we are talking about bringing the two nations closer to each other and increasing the share of revenues from the tourism sector in the budget, opening a Baku-Riga direct flight is necessary under any conditions and promises potential profitability to the airline that will carry out this work.

2. Existing problems and investment potential in the development of the forest industry in Azerbaijan

Although the forest area in Latvia covers more than 50 percent of the country's territory, this figure is much lower in Azerbaijan. This field is almost not developed in Azerbaijan. Revenues from the forestry industry make up a very small portion of the budget. Azerbaijan supplies all raw materials for the forestry industry from abroad. Most of the imported products are ready-made products and are brought by order of door-window and furniture manufacturing enterprises (The State Statistical Committee of the Republic of Azerbaijan. 2021-2022). Although the country has fertile conditions for the production of cardboard from wood products, this production sphere is not developed. If we look at the general situation, the state pays more attention to the protection of flora and fauna, protection of forests. They justify this for several reasons. First, since oil and gas products account for up to 90 percent of the country's income, and taking into account the long-term nature of its natural resources and the greater potential for generating income, strategic economic plans for the revival of the forest industry have not yet been launched. The number of forestry enterprises has also decreased over the years (Figure 1). More emphasis is being placed on the export of agricultural goods in the non-oil economy than in the forestry industry. In recent years, the products of the chemical industry have also been tried to be

brought to the fore, but everything is not as simple as it seems. The share of the non-oil sector in the country's budget revenues has been hovering around 10 percent for years. Another worrying point is that the measures taken to protect forests are not satisfactory. Because, in the last 2 years, the total wood stock in Azerbaijan has decreased from 157.4 million cubic meters to 143.7 million cubic meters (Figure 2).

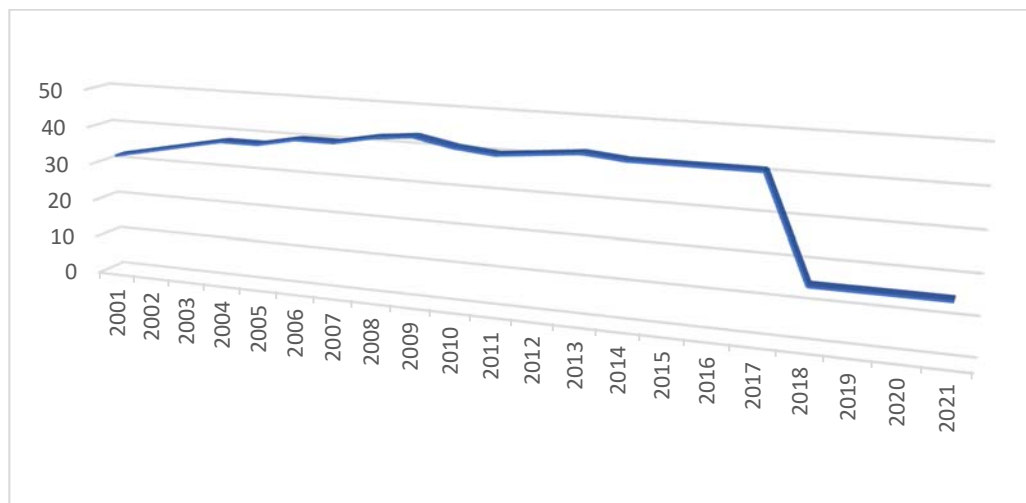


Figure 1. Number of forest farms in Azerbaijan, unit

Source: Annual report of the State Statistics Committee of Azerbaijan

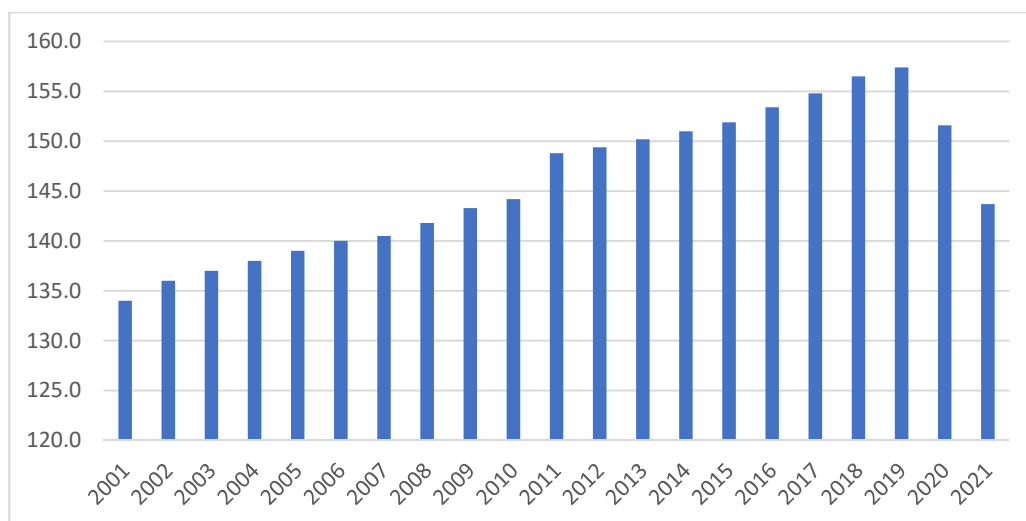


Figure 2. Total wood stock in Azerbaijan (mln. m³)

Source: Annual report of the State Statistics Committee of Azerbaijan

Secondly, there is a lack of local professional qualified personnel to raise the development of this field to world standards, implement innovative projects, and build new wood products factories. Currently, a certain forest industry infrastructure and huge industrial parks should be built to bring specialists from abroad. New generation technologies should be placed in enterprises and the number of employees should be set. Most importantly, it is more important to measure the economic role of foreign experts in obtaining maximum income from this field. In general, for the revival of the forest industry in the country, it is more important to create modern forest industry centers in the regions than in the capital Baku. Because the forest reserve in Azerbaijan is mostly located in remote regions and mountainous areas, and it is more appropriate to create infrastructure in these regions in order to reduce transport costs. For now, this issue is being postponed by the state.

Thirdly, the marketing strategy of local companies operating in the forest industry in the country is very weak. The cooperation agreements that have not changed for years, the provision of imported finished products only from the Russian market, internal management structures far from innovation trends, avoiding all risks by not entering the alternative forest industry markets create serious obstacles in the improvement of the forest industry infrastructure of Azerbaijan. In general, some issues are not clear. It is clear that many Azerbaijanis live in the Russian Federation today and these people create a positive balance in foreign trade with Azerbaijan. However, this does not mean that it is

necessary to overshadow the development of the country's forest industry with innovative entrepreneurs, taking into account the historical and geographical proximity. If the companies operating in this field get rid of their "traditional" business strategy, they will realize how important it is to prioritize cooperation with developed Eastern European countries in this field. However, the visible picture is that without increasing the export orientation of the agricultural and chemical industry in the non-oil sector (this issue also seems impossible to realize at the moment), neither the state nor the private sector in Azerbaijan has any action plan for the development of this sector. does not perform.

Fourthly, there has been no case of the countries of the world investing serious capital for the development of the forest industry in Azerbaijan. Investments in the country mostly belong to the oil and gas sector. The share of investments in the development of forestry decreased from 4 percent to 2 percent in the last 2 years (The State Statistical Committee of the Republic of Azerbaijan. 2021-2022). The number of forest fires has increased in the last 3 years under the conditions of a complicated situation. In 2017, forest fires occurred 8 times in the country, and last year this number was already 41. Although 10.4 thousand hectares of the forest fund were restored in 2020, this figure decreased to 9.3 thousand hectares in the following year. The amount of burnt trees that have died on their roots has more than doubled in the last 5 years. The forest area covered by fires increased from 32 hectares to 309 hectares within 2 years (Figure 3).

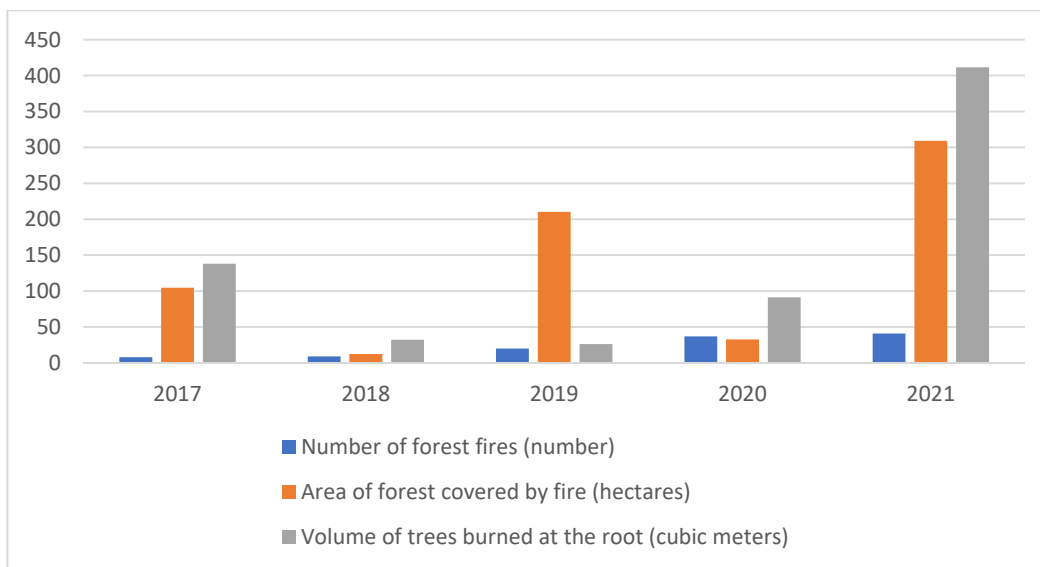


Figure 3. Damage to forests in Azerbaijan in the last 5 years

Source: Annual report of the State Statistics Committee of Azerbaijan

Promotion of investments in 3 sectors is more important in the development of the forest industry in Azerbaijan. These are cardboard and paper production, printing products production and furniture production. In 2014, more than 21 million manats were invested in the production of cardboard and paper, but in 2020, it was equal to zero. About 1 million manats are invested annually in the production of printing products (The State Statistical Committee of the Republic of Azerbaijan. 2021-2022). Although the investment involved in furniture production exceeded 71 million manats in 2018, it decreased to 54 million manats the following year (Figure 4). Thus, there is a need to increase the investment volume of these 3 areas in the forest industry in Azerbaijan. A favorable liberal economic environment should be created for Latvian entrepreneurs specializing in forest industry to invest in Azerbaijan.

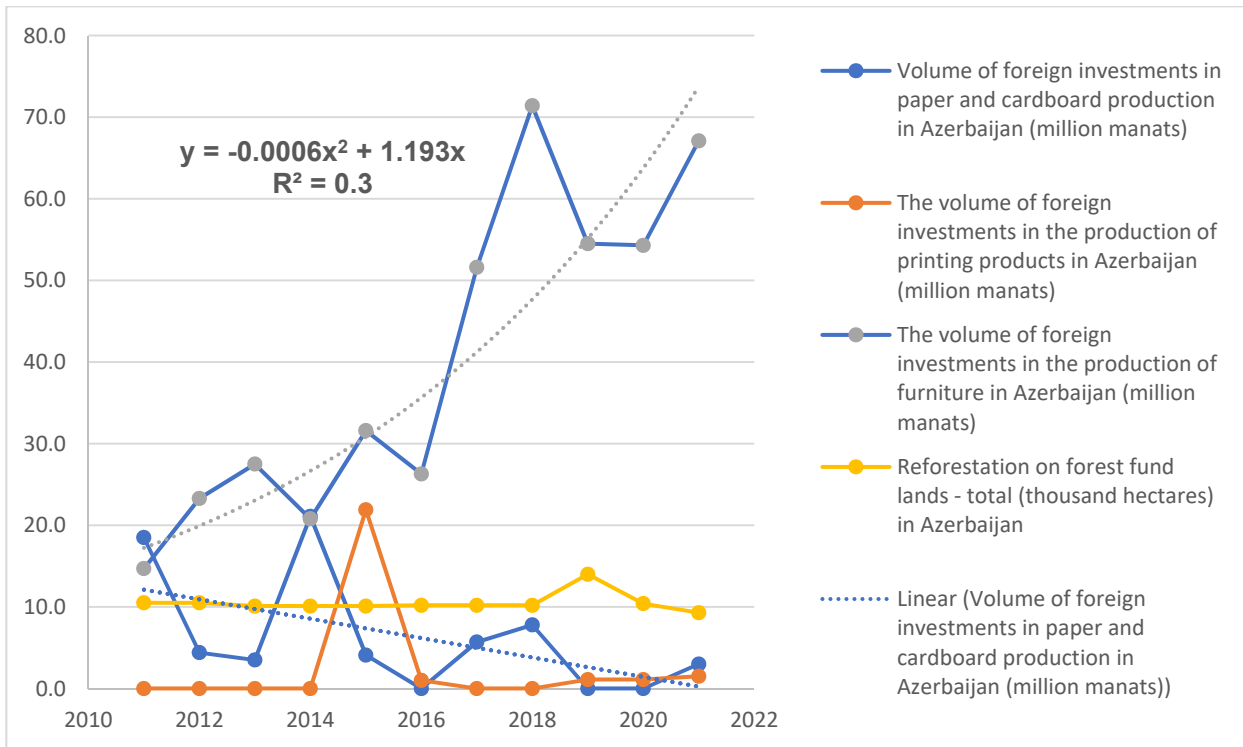


Figure 4. The volume of investments in the production of forest industry products in Azerbaijan

Source: Annual report of the State Statistics Committee of Azerbaijan

3. Existing problems and investment potential in the development of the viticulture and winemaking sector in Azerbaijan

The winemaking industry and viticulture in Azerbaijan have a long historical development path. During archaeological excavations in Azerbaijan, many ancient finds related to the winemaking sector were discovered. In the middle of the 19th century, the Germans living in Azerbaijan paid more attention to the production of alcoholic beverages and obtained large profits in foreign trade. In the second half of the 20th century, the winemaking sector in Azerbaijan reached its peak, and the revenues from this sector accounted for more than 60 percent of the budget revenues. This was a very serious number for those times, because currently, nearly 90 percent of budget revenues in Azerbaijan are based on funds from the oil and gas sector. Between the 1980s and 1990s, Azerbaijan began to stand out among the former Soviet countries for the production of cognac and cognac, and in this sector, around 15-20 percent of the country's population was employed. The viticulture sector, which plays a key role in the development of winemaking in the country, has stagnated in recent years due to the expansion of cultivated areas. Serious increases in the total harvest of grapes and the level of productivity are not noticeable (Figure 5 and Figure 6).

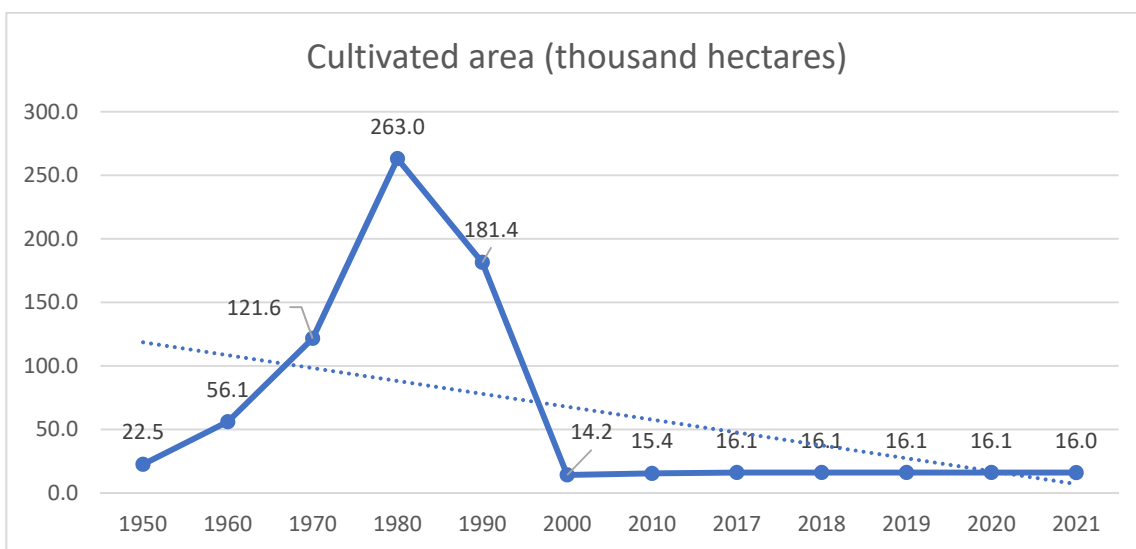


Figure 5. Cultivated area of grapes in Azerbaijan (thousand hectares)

Source: Annual report of the State Statistics Committee of Azerbaijan

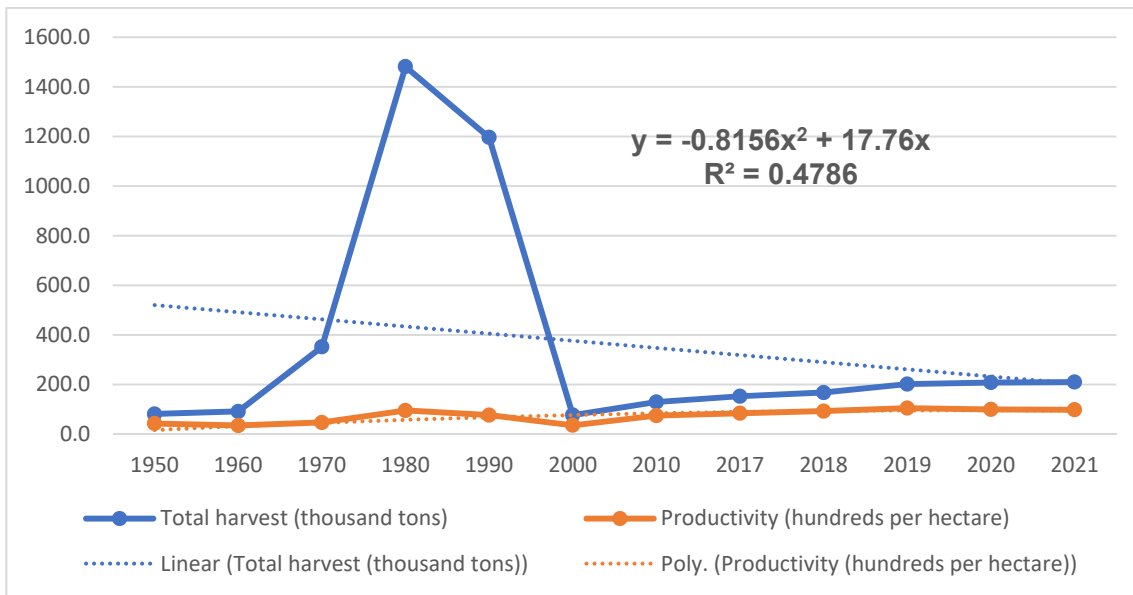


Figure 6. Total harvest and productivity statistics of grapes in Azerbaijan

Source: Annual report of the State Statistics Committee of Azerbaijan

In Azerbaijan in the early 1990s, as part of the economic measures implemented to prevent alcoholism, hectares of vineyards were destroyed, replaced by grain crops and other infrastructure complexes serving the agricultural sector were built. The importance of the cereal sector for preventing food insecurity in the country is undeniable. However, at present, this field cannot meet domestic demand in Azerbaijan. Azerbaijan imports a large part of both grain and meat products from abroad. The vineyards were canceled by the wrong state policy, and the planting of grain crops on the spot has minimized the weight of both viticulture and wheat production in agriculture as an export product.

Today, in order to revive viticulture in Azerbaijan, the wine sector needs large investments to return to its previous strength. The number of companies engaged in the production of beverages in Azerbaijan has increased from 110 to 146. The value of industrial products has increased twice in the last 5 years. Problems in the production of grape wine are immediately noticeable and there is a decline in this area (The State Statistical Committee of the Republic of Azerbaijan. 2021-2022). In recent years, no foreign capital has been invested in the winemaking business in the country, and the share of domestic investments is also not very high. (Figure 7).

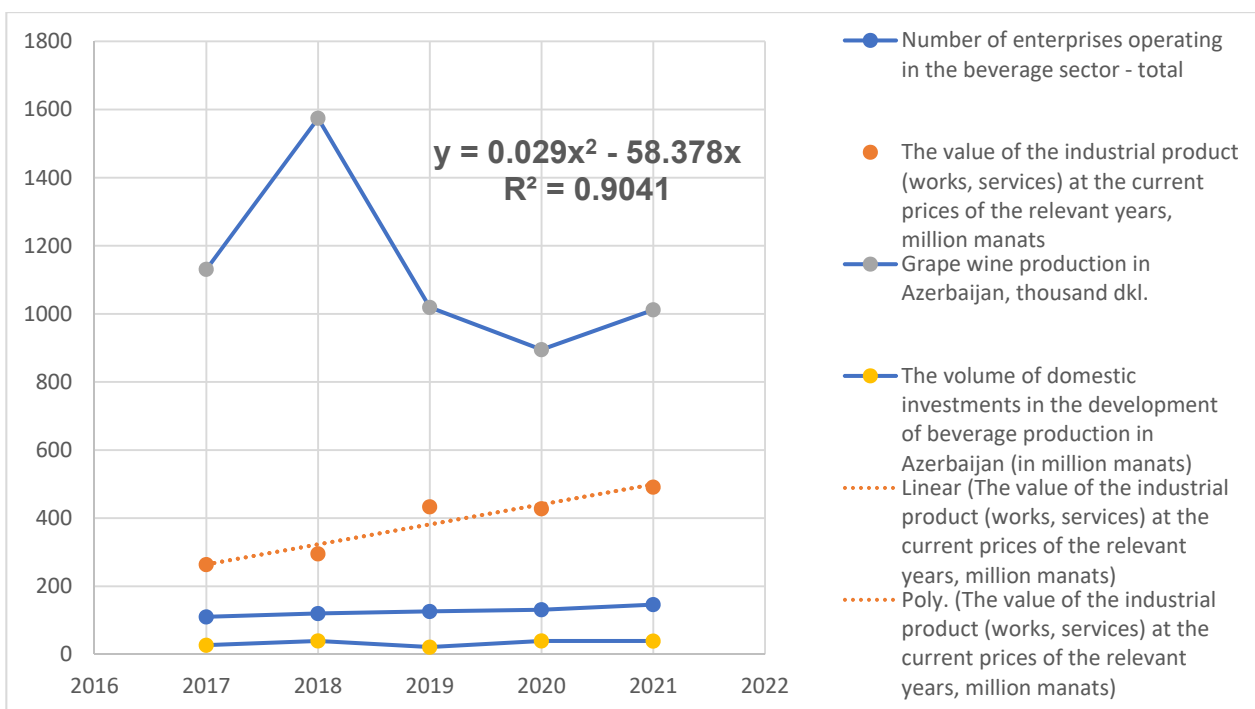


Figure 7. Enterprise-production-investment triangle in the beverage sector in Azerbaijan

Source: Annual report of the State Statistics Committee of Azerbaijan

Latvia has already specialized in this field in Eastern Europe and continuously exports its products abroad. Latvia's beverage industry is already export-oriented and already specialized in this field, while Azerbaijan aims to maintain its previous production capacity in this field, has a large labor force, natural resource potential. The most important issue in foreign investments is the presence of these last two indicators. Therefore, today there are great opportunities for Latvian companies to invest in the winemaking business in Azerbaijan, and in the future mutual economic relations can be developed in this area.

4. Existing problems and investment potential in the development of wheat production in Azerbaijan

The importance of wheat production in ensuring global food security has increased even more than in previous periods. In the first half of 2020, the rapid spread of the pandemic around the world forced countries to implement protectionist measures. The economic shutdowns primarily had a negative impact on the production of food products. Most food production enterprises, which could not work at full capacity, began to need more preferential financial support from the state. On the other hand, the main wheat exporters in the world have changed their previous strategies and started to fill up their wheat warehouses for some reason or another. It was not surprising that Russia and China did it the most. Currently, more than half of the world's wheat reserves are in these countries, and they create an artificial increase in the price of wheat exports on the world market. In particular, the Russian government has violated agreements with neighboring countries on grain exports, and is even trying to prevent Ukraine's grain exports as much as possible. Seeing that Russia has violated its commitment, Azerbaijan is trying to speed up negotiations on wheat import with Kazakhstan.

There is no stable positive trend line of wheat production in Azerbaijan. Although the production growth in some years in the last 21 years has generated positive forecasts, the subsequent declines again question the country's food security. The post-pandemic period shows us a decline in production. On the contrary, we see a slight recovery in productivity (The State Statistical Committee of the Republic of Azerbaijan. 2021-2022). At a time when food security is so important, wheat acreage continues to decrease for no economic reasons. In the annual report of the Statistics Committee, there was no specific figure on how much foreign investment was invested in the wheat production sector. Only overall investments in agriculture have annual changes. In the presented statistics, no division of domestic and foreign investments was given, which made it difficult to deepen the research (Figure 8).

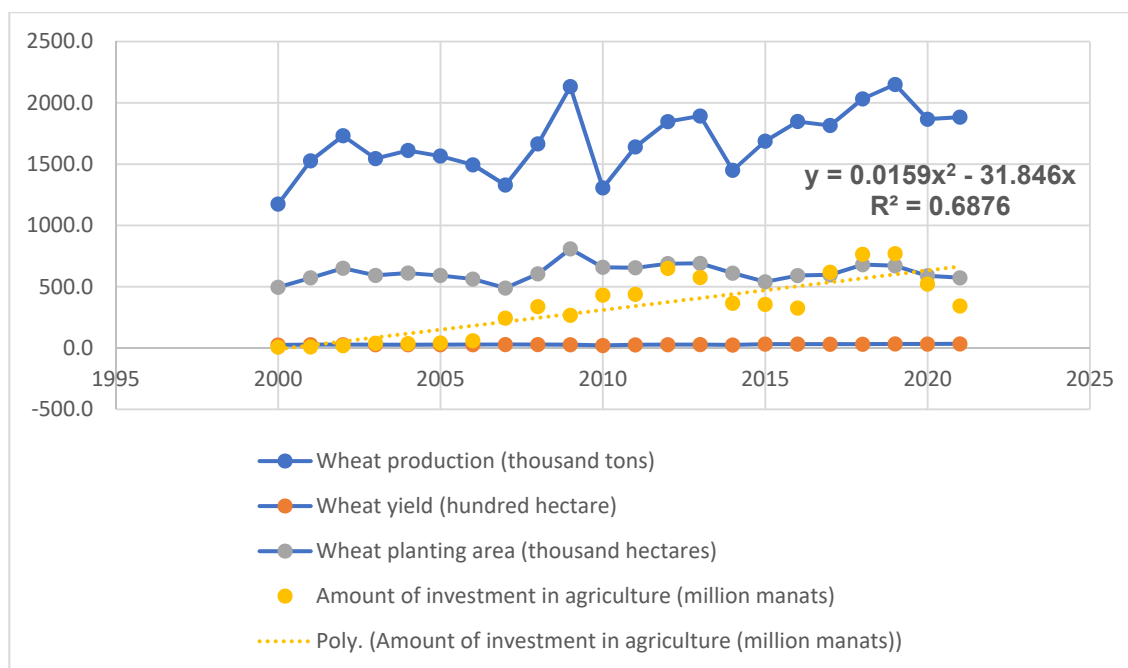


Figure 8. Latest statistics on wheat production in Azerbaijan

Source: Annual report of the State Statistics Committee of Azerbaijan

It is also very important to know the level of use of mineral fertilizers in increasing the productivity of cereal crops in Azerbaijan. Before the pandemic, the share of mineral fertilizers per 1 hectare of cereal crops reached 89 kilograms (The State Statistical Committee of the Republic of Azerbaijan. 2021-2022). Overall, although this figure is not entirely satisfactory in the development of productivity, at least progress was made in a positive direction. In the last two years, it has already gone down, and this is not a good sign (Figure 9).

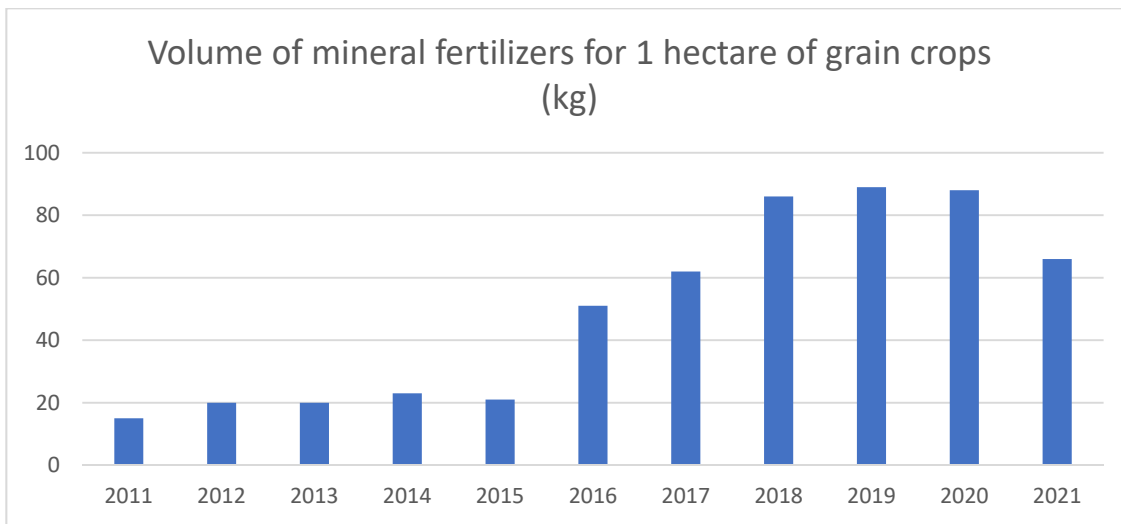


Figure 9. The latest statistics on mineral fertilization of cereal crops in Azerbaijan

Source: Annual report of the State Statistics Committee of Azerbaijan

The demand for flour and bread in Azerbaijan is higher than in other countries of the region. The reasons are diverse, and the people's food traditions, which have not changed since ancient times, also play a role here. Currently, the country is able to cover only about 50 percent of its own wheat and is highly dependent on foreign sources. Although there are multifaceted government programs to increase food security, there is no serious achievement in this field yet. Latvian companies can help Azerbaijan to fill domestic wheat warehouses and establish stable international cooperation. Wide opportunities for the development of grain farming in Azerbaijan. The central and western regions of the country have fertile lands for increasing grain production. At a time when the importance of food safety is increasing, the government of Azerbaijan can carry out extensive economic reforms and changes in tax policy to encourage foreign investments in this field. Thus, by rebuilding this infrastructure in Azerbaijan, Latvian companies can increase their income and implement programs to encourage other companies to export wheat to Azerbaijan.

5. Existing problems and investment potential in the development of the machine industry in Azerbaijan

The beginning of the machine industry in Azerbaijan is considered to be the first industrial oil extraction in the world in 1848. After 11 years, the first oil refinery in the world started working in Baku. During the Second World War, defense industry-oriented engineering enterprises became more active. Near the end of the war, oil engineering enterprises in Azerbaijan used 100 percent of their production capacity. Of course, on the one hand, this ensured the country's specialization in oil engineering, and on the other hand, it increased the number of workers working in hard working conditions. The limitation of technological possibilities, the main role of the planned economy in the country, the lack of regulation of the social welfare of the workers showed itself in the economy of Azerbaijan in the 90s of the last century. Thus, one of the reasons for the "Contract of the Century" (signed between the Azerbaijani government and international oil companies on September 20, 1994), which played an exceptional role in bringing Azerbaijani oil to the world markets, was to bring the technologies of well-known companies specializing in oil production to Baku. Only after the introduction of foreign modern oil extraction technologies, Azerbaijani oil began to be exported to the world market in 1999.

During 1970-1985, Azerbaijan stood out in the Caucasus for the production of household appliances. The geographical spread of enterprises specializing in this field extended to the remote cities of Azerbaijan. He could keep the export-import balance stable in this sphere. At the same time, agricultural machinery was developing in parallel and could satisfy the demand of the domestic market. The widespread use of agricultural equipment in harvesting has revived the field of horticulture and stimulated the export of fruits and vegetables. At the end of the century, a period of stagnation began not only in agricultural machine industry, but also in the production of all machine equipment. Most of the qualified personnel moved to other economic spheres, some started their own small business and some naturally lost their jobs. A certain revival was felt in car production during 2000-2010, but it did not last long, and domestic buyers still continued to pay attention to the use of foreign cars. In the last 2-3 years, there has been a great demand for electric vehicles in the market. Most of this type of cars are imported from Georgia. It is interesting that the increase in inflation in the country, the fact that the pandemic has bankrupted many enterprises, unemployment has reached record levels, and the tendency of gasoline prices to increase does not deter the population from the idea of buying a new car, and the import of cars into the country increases many times every year. Currently, Baku is getting closer to becoming a dirty city due to the large number of industrial enterprises and traffic congestion, and unfortunately, the consequences of this may be revealed sooner or later.

The volume of foreign investments invested in the machine industry in Azerbaijan was absolutely zero in the last 10 years (The State Statistical Committee of the Republic of Azerbaijan. 2021-2022). The fact that no foreign capital is

involved in the machine industry, which is an important sector in the country's economy, casts doubt on the political-economic reforms implemented in this sector. The following graph clearly shows the current shortage (Figure 10):

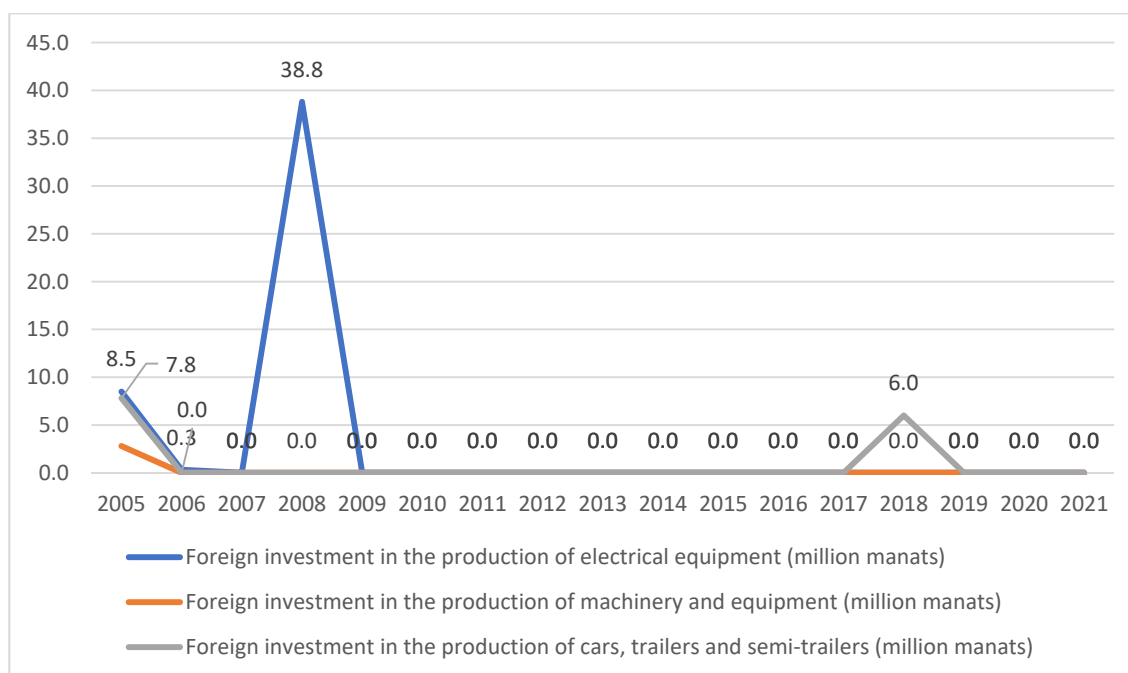


Figure 10. The volume of foreign investments in machine industry in Azerbaijan

Source: Annual report of the State Statistics Committee of Azerbaijan

If we look at the current situation of the machine-building sector in Azerbaijan, we will see that the situation in the production of oil and gas equipment is satisfactory. Any backwardness here in the future due to the technologies applied by foreign companies would be an absurd idea. The main problem is in the production of small and large household appliances. There is a huge demand for the products of this field in Azerbaijan and it is increasing day by day. Eastern European experience can be learned in the revival of this area. Latvia has the potential to invest in Azerbaijan not only in the production of household appliances, but in all areas of machine building. Of course, both countries will benefit from this by restoring the retreating workforce in this field, updating technological equipment in the production process, applying continuous innovative innovations, and making it possible for the uninterrupted flow of capital.

Conclusions

At the end of the conducted research, the following results were obtained:

1. In order to ensure the development of economic relations between Azerbaijan and Latvia, and to create a favorable investment environment, there is a need to expand liberal reforms in the non-oil sector in Azerbaijan. The dependence of the country's exports on the oil and gas industry threatens long-term economic stability. Azerbaijan has close cooperation with the European Union only in the field of energy. The country is still not a member of the World Trade Organization, and has a strict customs policy for importing goods and services from abroad. All these issues make it difficult to promote foreign investments.
2. The economic sectors in which Latvian companies specialize are, accordingly, in deep recession in Azerbaijan. Especially in the development of the forest and wine industry, there is still no effective economic policy. Confidence in the growth of oil and gas revenues leads to the abyss of food security in Azerbaijan. Latvian companies can also play an important role in the recovery of the machine-building industry today, as they will be provided with sufficient local labor force for the recovery of many machine-building enterprises.
3. The entry of Latvian companies into the Azerbaijani market will make other European Union countries interested in investing in this region. Azerbaijan must integrate into the European Union in order to strengthen its economy and take an important place in global foreign trade. Azerbaijan can obtain economic conditions for the development of its non-oil economy, while ensuring Europe's energy security. In the context of European integration, all necessary political and economic reforms should be carried out on time.
4. In all the scientific studies conducted in this field, there is a serious disagreement about the maximum and minimum optimal limits of attracting foreign investments to the country, or such an important issue has not been studied at all. The fact is that the econometric measurement of foreign investment at the macro level remains an elusive task.

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ARTICLE XX OF THE GATT 1994 AND WTO MEMBERS: SUFFICIENT FREEDOM TO DEFINE AND PURSUE ENVIRONMENTAL POLICY OBJECTIVES

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Abstract

Providing free trade conditions to all WTO Members, the GATT 1994 includes general exceptions to Article XX, which allows members to adopt trade and legislative restrictions and measures to promote values and interests and the protection of the environment. Driven by the aim of protecting the environment, various countries have been adopting a considerable number of measures to protect the environment and all human, animal and plant life and health under their jurisdiction. However, such restrictions are likely to influence the free trade regime through a clash of interests and relationships between WTO Members, which are challenged through WTO dispute settlement mechanisms. Although the WTO provides exceptions under Article XX of its free trade conditions to protect the environment via the national environmental measures of WTO Members, the justifications for such measures are challenged in meeting the requirements of Article XX.

Key words. GATT 1994, WTO, WTO Members, environmental policy, Article XX of the GATT, Article XX case law, international trade.

DOI: 10.37804/1691-6077-2023-14-80-86

Introduction

International trade and environmental protection measures have become a centre of debate over the last decades, creating significant tension with WTO Members. [1] Providing free trade conditions to all WTO Members, the General Agreement on Tariffs and Trade (GATT) 1994 includes general exceptions to Article XX, which allows members to adopt trade and legislative restrictions and measures to promote values and interests and the protection of the environment. [2, Article XX] Driven by the aim of protecting the environment, various countries have been adopting a considerable number of measures to protect the environment and all human, animal and plant life and health under their jurisdiction. However, such restrictions are likely to influence the free trade regime through a clash of interests and relationships between WTO Members, which are challenged through WTO dispute settlement mechanisms. Although the WTO provides exceptions under Article XX of its free trade conditions to protect the environment via the national environmental measures of WTO Members, the justifications for such measures are challenged in meeting the requirements of Article XX. This paper will discuss the extent to which WTO Members have the latitude to adopt environmental measures to restrict international trade under Article XX. First, it will examine the general environmental exceptions within the GATT Agreement. Section two will consider case law under the scope of Article XX (b) and (g) with various interpretations as to the meaning and language of this provision. The efficiency of regulation of environmental measures of the WTO will be discussed in

the following part of this paper. Finally, possible recommendations and changes to environmental policies will be provided.

Methodology. The methodological basis of the article is based on comparative legal, logical, systemic methods of scientific cognition, as well as a complex of general scientific methods (system-structural, system-functional, analytical) were used. Empirical base of the research involved studying international treaties and cases regarding the issue of environmental policies.

Discussion. *The GATT agreement and general environmental exceptions.* Being the result of multilateral negotiations, the GATT provides international trade with the key principles of most-favoured nation treatment [2, Article I], national treatment [2, Article III] and non-discrimination in the administration of quantitative restrictions [2, Article XIII]. There are, however, exceptions from these obligations provided for in Article XX, where sub-paragraphs (b) and (g) create environmental

measures and statethat: ‘... such measures are not applied in a manner which would constitute a means of *arbitrary or unjustifiable discrimination* between countries where the same conditions prevail, or a *disguised restriction* on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: ... (b) necessary to protect human, animal or plant life or health; (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption’ (emphasis added). [2] At first glance, the broad reading of this provision appears to give many opportunities for WTO Members to adopt environmental measures under their domestic jurisdictions.

However, the adoption and results of environmental measures are subject to justification under the scope of Article XX. Therefore, to determine the consistency of environmental policy in accordance with GATT/WTO obligations, the WTO Dispute Settlement Body has developed a test, through two steps of analysis, for given exceptions and chapeau of Article XX. The first step focuses on defining the objectives

– within the scope of exceptions of the measures – by looking at the nature of the policy connected to the conservation of exhaustible natural resources [3, para 6.22.]. Thus, to apply this provision in dispute settlements adequately and accurate, an interpretation is needed by which the WTO Appellate Body can refer to the Vienna Convention on the Law of Treaties Article 31: ‘[a] treaty shall be interpreted in good faith ... with the ordinary meaning ... in the light of its object and purpose’ [4] as in its *US-Gasoline* [3] case report. Moreover, some scholars, such as Knox, argue that the WTO and its Dispute Settlement Body should place greater reliance on the Law of Treaties Convention to allow for greater consistency and predictability. [5] Second, it looks at the application of the policy and discriminatory means of its application. Prohibition of measure application by chapeau falls under the scope of Article XX (g) by constituting: a) “arbitrary discrimination” (between countries where the same conditions prevail); b) “unjustifiable discrimination” (with the same qualifier); or c) “disguised restriction” on international trade. [3] The Appellate Body have used these two steps of examination of environmental measures in the *US-Gasoline* and *US- Shrimp* cases where measures inconsistent with GATT obligations were found. [6]

Case law regarding the issue of environmental policies. Article XX (b): Human, animal or plant life or health. Sub-paragraph (b) is particularly significant within the Article XX exceptions due to the permission it grants regarding measures ‘necessary to protect human, animal or plant life or health’. [7] Therefore, examining an approach to a defence under this provision consists in determining, firstly, measures which are pursuant to the protection of human, animal or plant life or health which fall under the scope of this sub-paragraph and that the measure is ‘necessary’. [8, paras 7.195-7.199] There are six cases under Article XX (b) considered by the WTO regarding controversial issues dealing with human life or health.

US – Gasoline. The panel agreed and accepted the argument of the US about causing risks to human, animal and plant health and life through air pollution that fall under the measures taken by US under the scope of Article XX (b). [9, para 6.21] Next, it examined whether that measure was ‘necessary’ and inconsistent with Article III:4, which means whether this was a necessary step to achieve the objectives determined under Article XX (b). However, the focus of the panel was more specific; rather than looking at a whole, therefore, the panel’s conclusion was that the import of gasoline to the US with ‘less favourable’ treatment was discriminatory and was not ‘necessary’ according the provision of Article XX (b). [9, paras 6.21-6.25] Although the US did not appeal the panel’s findings, it offered a defence under Article XX (g), where, consequently, the Appellate Body rejected the approach taken by panel.

The Appellate Body made its analysis in a two-tiered manner via testing the justification for the provision by characterisation of the measure under XX (g) and then assessment of the measure under Article XX’s chapeau. [3] Shifting the attention of the Appellate Body to the conditions of the use of the measure in accordance with Article XX’s chapeau was the first time the Appellate Body had undertaken such practice in such proceedings. [10] In doing so, this case shows the interaction of Article III and the chapeau of Article XX in their non-discrimination obligation and non- discrimination requirement, respectively. To understand what the difference is in prohibiting the non-discrimination requirement in Article XX’s introductory clause while it is already prohibited by Article III, scholars

have put forward an explanation that makes a distinction between the *effect* in Article III and *intent* in the chapeau. Although a discriminatory effect of measures is sufficient to constitute a violation of Article III:4, there can be no such violation of the chapeau. However, the Appellate Body has found violations of the introductory clause of Article XX because discrimination was intentional and, therefore, ‘must have been foreseen’ and ‘not merely inadvertent or unavoidable’. [7] Therefore, the Appellate Body in its report concluded that ‘... the baseline establishment rules in the Gasoline Rule, constitute “unjustifiable discrimination” and a “disguised restriction on international trade”...’

[3] Publication of the *US-Gasoline* report previous to a case of *US-Shrimp* that arose a year before gave a new aspect to Article XX. This is because following cases solutions would not claim addressing environmental issues pertaining to trade measures under Article XX (b) or (g) similarly in *Tuna-Dolphin I* dispute. Moreover, this dispute would not clarify the direct or indirect effects of the measure, such as in the *Tuna-Dolphin II* case. The main challenge has become the application of measures under the scope of Article XX (b) or (g) with the result of ‘arbitrary or unjustifiable discrimination’ which contradicts Article XX’s chapeau conditions. [10]

EC – Asbestos. This case in French law regarding prohibition of chrysotile asbestos fibres and any products containing this substance by way of manufacture, sale and distribution as well as import, which were challenged by Canada under the claim that the prohibition violates Article III and Article XI of the GATT. Although it is known that asbestos has harmful effects, Canada argued that such asbestos could be handled safely with appropriate precautionary regulations. Therefore, the claim was about an unjustified ban under French law. [7] Considering the issue of whether this measure fell under the scope of Article XX (b), the panel stated that ‘the policy of prohibiting chrysotile asbestos ... falls within the range of policies designed to protect human life or health’. [11, para 8.194] Next, considering necessity issue and supported the French measure as ‘necessary’ because ‘the EC has made a *prima facie* case for the non-existence of reasonably available alternatives to the banning of chrysotile and chrysotile-cement products and recourse to substitute products’ [11, para 8.222]. Furthermore, the Appellate Body concluded about Canada’s claim of “controlled use” that it ‘also upholds the Panel’s conclusion, that the Decree is “necessary to protect human ... life or health” within the meaning of Article XX (b) of the GATT 1994’ [11, para 175] because ‘... “controlled use” would not allow France to achieve its chosen level of health protection by halting the spread of asbestos-related health risks. ... would, thus, not be an alternative measure...’ [11, para 174].

This case is the only dispute which was successful in justifying a GATT- inconsistent measure under the scope Article XX. Although it represents a somewhat limited success by WTO Members, some scholars claim that it does not mean that Article XX plays only a marginal role in allowing WTO Members to adopt environmental measures under Article XX. Because of this, although many measures which have been found unjustifiable under Article XX they have been subsequently modified in accordance with the recommendations of the Dispute Settlement Body and were not challenged further. [12]

Article XX (g): Conservation of exhaustible natural resources. This norm provides an exception for policies ‘relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restriction on domestic production or consumption’. It is important to note the non-application of this provision to the protection of the environment because it is given in a narrow focus for conserving ‘exhaustible natural resources’. Nevertheless, theoretically this phrase can be interpreted with a broad meaning; for instance, the panel and the Appellate Body found in favour of some cases that clean air and sea turtles as natural resources. These led to the acceptance of the provision in a wider scope. [7]

US – Shrimp. This case dealt with measures undertaken by the US, themselves quite complex, about using turtle excluder devices (TEDs) for shrimp trawlers. This dispute was the second case brought under Article XX (g). Although initially the measure applied only to Caribbean countries, i.e., the Western Atlantic, in 1995 the application of these rules were expanded worldwide. As a result, few WTO Members brought claims to the WTO where a violation of GATT Article XI was found by the panel, the US defended themselves through Article XX (g). Despite agreeing that ‘the sea turtles ... constitute “exhaustible natural resources” for the purposes of Article XX

(g) of the GATT 1994’ [13, para 134], finding that ‘Section 609 is a measure “relating to” the

conservation of an exhaustible natural resource within the meaning of Article XX (g) of the GATT 1994' [13, para 142] and holding that 'Section 609 is a measure made effective in conjunction with the restrictions on domestic harvesting of shrimp, as required by Article XX(g)' [13, para 145], the Appellate Body reversed the decision of the panel and conducted its own further examination in accordance with the measures of the terms of the introductory clause of Article XX. Furthermore, the Appellate Body found the existence of 'unjustifiable discrimination' with emphasis on factors such as the 'coercive effect' on the specific policies for WTO members, not taking into account the different conditions of countries (prohibition of import of shrimp using TEDs, but not a certified country), not engaging in negotiations with complainant countries (India, Pakistan, Thailand, Malaysia) by the US, and a lack of time for implementing the rules (only four months) compared to Caribbean countries. [13, paras 161-176] However, neither the chapeau of Article XX nor any other part of Article XX of the GATT suggest negotiation or cooperation with other WTO Members as a precondition to the exercise of rights under Article XX (g). [14] The findings of the Appellate Body of 'arbitrary discrimination' were based on factors such as the limited flexibility to determine certification, and the non-transparent and non-predictable features of the certification process. [13, paras 177-183]

Claiming that the Appellate Body's analysis in the *US-Shrimp* case had no logical structure and a lack of grounds in the context of the introductory clause, Gaines states that through disqualification of any measure under the Article XX chapeau would result in the application of trade pressure and restrictions on other countries, the Appellate Body effectively nullified Article XX (g). [10]

Furthermore, Meier claims that finding the appropriate balance between the protection of the environment and trade interests by the GATT/WTO has remained a significant issue. While Article XX is subject to various interpretations because of its ambiguity, it does not, in fact, provide any justification for prioritizing environmental measures above trade interests. It is indicated by jurisprudence of cases where the approach to the interpretation of Article XX is narrow. Meier goes further, stating that the GATT/WTO foundation document, as a 'relic of 1947' took economic growth as the priority, rather than the environmental consequences of industrial development. [15]

The efficiency of the WTO as a regulator of environmental policies. Because of the many challenges presented by environmental measures and their inconsistency in accordance with Article XX (b) and (g) and the dispute settlement practices of the panel and the Appellate Body, the question of the efficiency of the WTO regulatory functions have arisen and, indeed, have remained open. [1] The GATT/WTO adjudicative role and jurisdiction makes concern and fear of environmentalists because it is confining only in its own agreements with law application and ignores international law dealing with environmental protection. Therefore, it decreases adoption of international environmental protection measures due to the GATT/WTO litigation records with the unfamiliarity of judges regarding the laws and agreements of international environmental protection. [16] For instance, the killing or injuring of around 250,000 sea turtles every year by fishermen has reduced their numbers between 65-90%, and shows the grave threat of international trade to the environment. [17]

Assessing the decisions of the panel and the Appellate Body, Gaines argues that interpretation of the Article XX introductory clause and the reasons given by the Appellate Body in *US-Shrimp* case in particular were impaired more than view of law and practice of the US which qualify protection under Article XX. [10] Moreover, Gaines stated that the Appellate Body's non-discrimination test under the Article XX introductory clause as an "eye of the needle" makes it almost impossible to pass any national environmental measure. He went on to claim that although the *US-Shrimp* case analysis was with a broad reading of the provision of Article XX, application of this provision was with strict criteria under the chapeau conditions. This leaves the Appellate Body with no analytical output for the cases in future. Therefore, a rethink of interpretation of the introductory clause of Article XX is needed by the WTO, the Appellate Body or the membership. [10]

Lack of capacity of the WTO and the Appellate Body in analyses in such disputes as *US-Shrimp* and severe deficiency of environmental expertise have become the WTO's most serious weaknesses. Moreover, comprehensive understanding of the meaning of environmental policies can be obtained only through experience. Therefore, hired scientific experts and trade experts with experience of dealing with environmental cases cannot themselves evolve the capacity to settle issues of environmental policy. [10]

Results and implications for Kazakhstan as a member of WTO

Five years of full membership of Kazakhstan in the WTO enables Kazakhstan to both integrate into the world trade space and study such experiences of the WTO members. Since Kazakhstan can be a plaintiff, so it can itself become the object of claims from other states, in this regard, it is very important to study the practice of resolving disputes and relevant cases in the WTO mechanism. In addition, Kazakhstan can be involved as a third party in disputes that could potentially affect its interests with new opportunities and challenges. Therefore, it is useful for Kazakhstan to participate in the resolution of WTO disputes as a third party for the formation of relevant practice and learn from it in order to define and pursue its national environmental policy objectives. In this regard, Kazakhstan as a member of WTO might use given opportunities for application of Article XX to adopt environmental measures under its domestic jurisdictions.

The issue of application of Article XX is not in a textual formulation of the GATT as it is claimed by scholars; however, there is a problem in how the Appellate Body interprets this and shapes its practice. Therefore, the most suitable solution is not the GATT amendment itself, but a comprehensive, jurisprudentially conservative and definitive reconsideration of Article XX, and of its imposed conditions and created tests, to alleviate trade and environmental tensions. [10]

For procedural and institutional reinterpretation of Article XX, there would be three basic approaches: 1) revision of Article XX's introductory clause by the Appellate Body in the future dispute; 2) adopting an interpretive statement defining the meaning of Article XX in the WTO understanding by the WTO Council or the Conference of Ministers; 3) to provide a new textual foundation, Article XX could be amended with necessary balancing tests. [10] It appears that the second solution is more appropriate due to the competence of the structural bodies of the WTO, and which would be an authoritative and less time-consuming step.

Another point of view suggested by Guruswamy argues that to generate genuine reformation of the GATT/WTO, challenging the judicial monopoly of the GATT/WTO is needed. The author suggests including international environmental law within the remit of the GATT/WTO's consideration. Furthermore, Guruswamy recommends bringing both trade and environmental issues under UNCLOS (United Nations Convention on the Law of the Sea) tribunal competence, which would accommodate such types of dispute under its umbrella convention, through considering them from the perspective of international law as treaty law as customary law. [16] Although not all states are parties to the UNCLOS as Kazakhstan, this would appear to be a more reasonable solution in the cases of many disputes of other member-states invoked against the US related to the conservation of dolphins and turtles.

Conclusion. In conclusion, although Article XX purports to provide exceptions for environmental measures, developed case law does not express a comprehensible test that allows national environmental policy to meet its requirements. Related disputes show that the scope of values and areas for protection are expanding gradually. Despite that, it appears that the protection of the environment is not a priority, notwithstanding the need to increase the tendency towards environmental considerations within the GATT/WTO framework. [15] Therefore, it is evident that Article XX (b) and (g) allows the legislative and trade restrictions for environment protection, but as previous practices have shown the justifications for these measures is not straightforward. The GATT 1994 Article XX provides WTO Members with sufficient freedom to define and pursue their environmental policy objectives in theory, but inconsistent practice within the WTO dispute settlement body leaves little incentive to use that right to its full potential.

Global environmental challenges faced nowadays by the international community require an open mind on the part of the WTO dispute settlement bodies to eliminate and prevent future adverse consequences, though not from a trade perspective.

[18] Therefore, consideration of environment protection as a common recourse of the international community and as a global concern should not be limited within the GATT/WTO framework. For the sake of future generations, environmental protection policies must be prioritized above international trade.

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CONCEPT OF IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE FOR THE PREVENTION OF CONFLICT OF INTEREST SITUATIONS IN THE PUBLIC SECTOR

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Abstract

The purpose of the article is to obtain, learn and analyse the international experience on the basic principles of artificial intelligence (AI) implementation in the public sector. In the article, the author examines the problems and offers proposals on the legal foundations that must be provided in the concept of introducing AI for the prevention of conflict of interest situations in the public sector. To achieve the goal, the author relies not only on the findings of other authors and the experience of other countries, but presents his own research. The author's research is based on a survey of Latvian state and local government officials and employees. The author's research was conducted but not fully completed at the time of submission of the article. However, in the article, the author has summarized the interim conclusions of the study and presents them. The author believes that the topic of the article and the research presented herein will allow a better understanding of the importance of AI technology, the need to regulate it, as well as ensure the safe implementation of AI in the public sector in the future with the aim of minimizing the risks of corruption and conflicts of interest.

Keywords: artificial intelligence, concept, conflict of interests, corruption,

DOI: 10.37804/1691-6077-2023-14-87-95

Introduction

Nowadays, the field of artificial intelligence (hereinafter referred to as AI) refers to the development of Big Data analysis, computer vision systems and deep learning, as well as the creation of autonomous systems and other high technologies.

Already AI can be encountered everywhere, even in the most unexpected places. Cameras installed at workplaces provide visualization of the workplace of officials, which in turn can be analysed by AI to identify illegal behaviour or irrational use of working time. AI can detect and take action if an official sleeps at the workplace, plays games or uses the phone for solving matters not related to the performance of one's official duties. Moreover, AI can detect and record illegal activities that are incompatible with the official's duties, including recording the official's presence in conflict of interest situations.

Consequently, there is a need to legitimize AI. To do so, it is necessary to develop an AI implementation concept, one of the goals of which is to introduce a new tool in the process of identifying and responding to conflict of interest situations in the public sector using AI technologies.

Hypothesis

The author of the article plans to summarize international practice on the basic legal principles of AI implementation and operation. The author seeks answers to the question of what basic operating principles AI should work on and what basic requirements need to be foreseen during the AI implementation process. In addition, the author plans to study the main principles of the operation and use of AI in order to propose introducing them into Latvian regulatory acts that will regulate the implementation of AI in the public sector with the aim of preventing the risks of corruption and conflicts of interests.

Aim and tasks

The author's goal is to analyse the global experience in the implementation of the concept of the use of AI for the prevention of corruption and conflict of interests, to determine the legal requirements necessary to create a proper regulatory environment for the use of AI, based on the balance of interests of the society, the state, as well as officials whose actions will be controlled by AI in the future.

The aim is to carry out a research of international organizations, the international law of the European Union and the national legal norms of various countries of the world, which set out the basic principles and requirements of the implementation of AI.

The author sets the following tasks to achieve the goal:

- 1) study the international experience in the implementation of AI technologies, including legal acts (concepts) with which the mentioned process has been initiated;
- 2) to analyse the basic principles of AI operations used in the world and apply them to Latvian processes for the introduction of AI.

Research

The article studies the period covering the last 3 years using general scientific and special legal methods of cognition: methods of analysis and synthesis, method of scientific induction, method of deduction and the comparative method.

In the article, the author uses the interim results of the research conducted by surveying (a total of 51 questions) state officials and employees working in the public sector of Latvia during the period from March 6, 2023 (hereinafter - Research). Although research is still ongoing, it is already possible (as of April 6, 2023) to draw conclusions about the level of AI implementation in Latvia from a survey of 270 officials and employees (hereinafter - respondents), the respondents' knowledge of AI, as well as their wishes and requirements in the AI implementation process, etc. The author believes that the research topic chosen and the research conducted will allow a better understanding of the importance of AI technologies and will ensure their safe implementation in the society in the future.

1. The concept of artificial intelligence for the prevention of conflicts of interests

Tēzaurus.lv, a vocabulary and synonym dictionary, which was developed by the AI laboratory of the University of Latvia, provides the following definition for the word “concept”: a description or explanation of the essence of a subject, phenomenon or event based on theoretical knowledge; the germ of a theory (Tēzaurus.lv, 2023).

On the other hand, the purpose of developing a concept document is to justify the usefulness of creating a planned system by analysing the existing situation and the problem that the project is intended to eliminate, and to create a clear picture of the planned situation and the possible benefits that would result from it for all parties interested in the implementation of the project (Regional Development and Local Government Ministry of Affairs, 2010).

According to the author, the goal of the AI implementation concept for the prevention of conflict of interest situations in the public sector should be the introduction of new tools to identify and respond to conflict of interest situations in the public sector using AI technologies.

Analysing the worldwide experience, it can be concluded that the use of AI in the public sector is already taking place in several countries for various purposes (Strelčenoks, 2021). Evaluating the abovementioned experience, it is acknowledged that the concept of the development of AI technologies in the public sector should be based on the balance of the interests of society, the state (Распоряжение Правительства Российской Федерации, 2020), as well as the interests of officials whose activities will be controlled by AI.

The purpose of introducing AI for the prevention of conflict of interest situations is to stimulate the development, implementation and use of such AI technologies that will help identify conflict of interest situations in the activities of officials. The result of such activities should contribute to the strengthening of public trust in the public sector, as well as the improvement of citizens' well-being

and quality of life. Taking into account the abovementioned goal of introducing AI in the public sector, the author identifies the following tasks that should be addressed in the concept document:

- 1) creation of the legal basis for the introduction of AI technologies in a system controlling the officials' activities;
- 2) elimination of the existing legal barriers that prevent the introduction and use of AI technologies in the public sector with the requirement that the necessary rights and freedoms of the official as a person and citizen are protected on the one hand and that the interests of society and the state are satisfied on the other hand by controlling the officials' activity.

However, the development of AI technologies creates serious challenges for the state system itself, because AI technologies have a huge autonomy of action when addressing the task of prevention of situations of conflict of interest in the public sector. Therefore, the achievement of the goal and tasks of AI implementation in the public sector should be based on basic ethical norms and principles:

- 1) principle of respect of fundamental rights: ensuring that the design and implementation of artificial intelligence tools and services are compatible with fundamental rights;
- 2) principle of non-discrimination: that is, the prevention of the development or strengthening of discrimination between individuals or groups of persons, during the application of AI technologies;
- 3) principle of quality and safety: use certified sources and intangible data for decisions, judgments and data processing, using models elaborated in a multidisciplinary manner in a secure technological environment;
- 4) the principle of transparency, impartiality and reliability: make data processing methods accessible and understandable, allow external audit;
- 5) principle of user control: precluding a prescriptive approach and ensuring that users are informed actors and in control of their choices (European Commission for the Efficiency of Justice, 2018).

The above mentioned basic ethical norms and principles are also supported by the respondents according to the research carried out by the author. Answering the question "Do you think it is necessary to create regulations of AI based on any special ethical principles?" 63.3% of the respondents gave a positive answer, 9% denied such a necessity and 27.7% did not know or found it difficult to answer this question.

On the other hand, out of those respondents who believed in the necessity of special basic ethical principles for the legal regulation of AI technologies, the following were considered essential: Security (75.3%), Legality (74.1%), Protection of Human Rights (61.1%), Transparency (54.3%) and Responsibility (51.2%). Other core principles were considered important but failed to reach the 50% mark among respondents, such as Confidentiality (48.8%), Trustworthiness (45.7%), Impartiality (39.5%), Fairness (37.7%) and Manageability (30.2%).

One of the obstacles, but not a main one, based on the author's research in the use of AI technology to control the activities of officials may be the lack of sufficient degree of public trust (as noted by 45.7% of respondents). In particular, the increase in the degree of autonomy of AI technologies, the decrease of people's control over the process of applying AI, as well as the lack of completely transparent decision-making logics in the operation of AI technologies can create public demand for legal restrictions on the use of AI technologies. In this regard, the concept document should foresee the occurrence of several such conceptual problems and risks and provide for their minimization to ensure impartial control of officials and the identification of conflicts of interest in the activities of officials:

- 1) the problem of determining the scope of subjects and control of the use of AI technologies;
- 2) the problem of self-identification of AI when interacting with a person (with controlling bodies);
- 3) the problem of legal delegation of AI decisions;
- 4) the problem of liability for harming an official using AI;
- 5) the problem of the legal regulation of the results of intellectual activity created using AI;

- 6) the use of possible outcomes for AI decision-making and in some cases the impossibility of fully explaining the decision made by AI;
- 7) AI algorithm transparency problem (European Commission for the Efficiency of Justice, 2018).

In order to minimise these problems, the concept should provide for requirements to create a special procedure of checks and further execution of decisions on how and in what manner the AI made the decisions in specific cases when officials were found to be in a situation of conflict of interests. In such cases, it would be desirable to ensure the active participation of specialists and experts in the development of standards to identify and respond to actions of officials in a conflict of interest situation.

Issues of liability for the damage caused by AI to the official as a result of erroneous analysis and in cases of erroneous detection of violations are significant issues regarding the use of AI technologies in the public sector in the context of monitoring activities of officials. Therefore, the concept should provide for issues of liability in the event that officials are harmed as a result of the operation of AI technologies (which have a high degree of autonomy in decision-making regarding the detection of unjustified conflicts of interest in the actions of officials). In such cases, it is necessary to determine the scope of persons who would be liable for legitimate and erroneous actions of AI, and allow compensation for material or moral (for example, reputation) damage caused to officials as a result of AI operations. The concept should guarantee an efficient and fair distribution of liability (between developer, distributor, owner, etc.) in case of such damage. Depending on the amount of damage caused to officials or public interest, the concept should provide for civil, criminal and administrative liability.

The increase in the amount of accessible data, as well as the development of the information and communication infrastructure for data access are main factors in the development of AI technologies for the implementation of control of activities of officials. In general, the current legal framework in the field of data is mainly focused on ensuring confidentiality of information and does not take into account the considerable potential of significant data sets for the creation of AI technologies that would work with the personal data of a specific official, his relatives and business partners. In light of this task of improving the accessibility and quality of data on officials, their relatives and business partners, it would be necessary to review and adapt data legislation that should ensure:

- 1) favourable legal conditions for access to developers' data and exchange of various types of data about officials, their relatives and business partners, including not only public data, but also data accrued and collected in the private sector;
- 2) special conditions (regimes) for access to data, including personal data, in order to generalize AI technologies, analyse and develop technological solutions for identifying conflicts of interests in the activities of officials, which would require expanding the practice of data disclosure in the public sector (Распоряжение Правительства Российской Федерации, 2020).

The concept should lay not only the legal foundations for the accessibility of data in the public sector for AI technologies, but also provide for the extension of data accessibility to the private sector (to the data of merchants and credit institutions) by creating the necessary legal conditions (Распоряжение Правительства Российской Федерации, 2020). Taking into account the special sensitivity of merchants and credit institutions regarding their data, in order to ensure the guarantees of personal data rights of officials, their relatives and business partners, such access should provide for increased protection of personal data. It is also recommended to consider the possibility of using data from foreign sources to identify conflicts of interest of senior management officials in cases where an activity abroad is concealed. In such cases, it is necessary to provide for the conclusion of international agreements or supplement already existing agreements.

The use of AI technologies in the public sector, along with the monitoring of activities of officials, their relatives and business partners and the identification and prevention of conflicts of interest, will potentially reduce the number of daily activities of state and local government officials, reduce costs, and increase the speed of decision-making by state and local government institutions. Such AI

technologies should preferably be introduced gradually, starting with areas of the public sector that are not related to critical decision-making. The main problems in the current regulation on the use of AI systems in the public sector are the lack of legal options for delegating any legal decisions to AI technologies, including those regarding:

- 1) review of applications of inhabitants;
- 2) provision of state and local government services;
- 3) performing positive actions or making positive decisions;
- 4) implementation of control and monitoring measures.

The above mentioned lack of legal regulations in the author's research is also confirmed by the respondents, who answered in the affirmative in 41.9% of cases to the question on whether greater monitoring and regulation of AI technologies is needed than is currently the case. 12.8% of respondents answered this question in the negative. On the other hand, 45.3% of the respondents did not know what to answer. According to the author, this may indicate that AI technologies are not widespread in the public sector or that the respondents are not aware of their existence at all. This is also indirectly confirmed by the respondents' answers that only in 7.8% of cases their institutions have developed or approved a strategy for the implementation of digital transformation or AI technology. On the other hand, 92.2% of respondents had not heard anything about such strategies or claimed that no such strategy existed in their institutions at all.

On the whole, the approval of transparent regulations is a topical issue for the public sector, i.e. the development of key standards and a mechanism to assess the compliance of AI technologies with security requirements, compliance with human rights, protecting officials, their relatives and their business partners against discrimination and selective enforcement, as well as reducing the risk of disclosure of personal information, etc.

2. Basic standards for the implementation of the concept of artificial intelligence for the prevention of conflict of interest situations

According to the author, in order that public and officials trust AI technologies in regulating conflict of interest situations, the state should provide stakeholders with clear explanations about what decisions are made in the information environment by automated AI systems, which AI systems are controlled by humans, as well as provide information about common logic elements used by these AI systems. Officials should also be informed that the personal data they provide to public and private sector entities will become part of the data set used by AI technologies (either directly or through services or through website access) so that officials can take this into account when consenting each time to data collection or leaving information about themselves.

Similar to the public announcements made while using CCTV cameras, users must be actively informed about the use of AI technologies in a clear and comprehensible way (using innovative means such as pop-up messages on the computer) that AI technologies are involved in the decision-making process regarding officials, that AI collects data about processes in which officials are involved, and AI technologies also collect comprehensive information about them (The Global Principles on Protection of Freedom of Expression and Privacy, 2017).

Transparency

Transparency is not limited to informing individual users about the presence of AI technologies in platforms and online services used by officials. The state must ensure transparency throughout the entire chain of AI operations. Effective transparency does not necessarily have to be complicated; even a simple explanation of the goals, strategies, contributions and results of AI technology can contribute to public education, development of public dialogue and public trust in AI technologies (Rieke & Bogen & Robinson, 2018). The state can achieve public trust not by explaining complex technical issues, but by trying to provide information about the goals and principles of operation of AI technologies in the simplest manner. In this regard, special attention should be paid to informing

the public and officials about the existence, purpose, structure and impact of AI systems, rather than providing information about the source codes, calibration data and the system input or output data (Rieke & Bogen & Robinson, 2018).

In order to ensure complete transparency regarding the impact of the use of AI in the information environment, it is necessary to disclose information such as information used by AI systems, the amount of information used, instances where cases confirmed by AI systems were deemed controversial in nature, as well as when decisions made by AI were successfully challenged by officials. Officials and the public must have access to data collected by AI technologies, as well as data that illustrate trends and allow understanding of the logic of decisions made regarding the control of officials to identify conflict of interest situations. Public and private sector entities that use AI systems should also disclose information about AI system operations, its capabilities, as well as about safeguards in the event that there are problems with the operation of AI technologies or erroneous conclusions are drawn based on the performance of AI technologies (Amnesty International and Access Now, 2018).

Impact on Human rights

Combating the spread of discrimination in AI systems is a vital national task. The inability to solve the problem of eliminating discriminatory elements and negative effects makes AI technologies not only ineffective, but also dangerous (Iason, 2018).

The author provides an example of how erroneous algorithmic calculations of AI technologies resulted in a serious and fatal decision for an individual. In the United States, a program COMPAS with elements of artificial intelligence was introduced, which was used in the courts of many states to decide whether to recommend prison terms or bail for people awaiting trial. The program was well received and was also used in parole cases. However, when the portal Propublica.org decoded the black box of the COMPAS system, the following was revealed. The system was found to preemptively reduce the chances of bail and parole for Hispanics without legal status in the United States, as well as for African-Americans with incomes above the poverty line but below the middle class level. While the first conclusion was intuitive, the second led to general confusion, and the system was suspended after a public outcry (Russian Journal of Criminology, 2018).

Therefore, according to the author, in order to ensure maximum protection of human rights and transparency of AI systems, the state should apply measures to ensure access to such AI systems for analysis and control at all stages of the life cycle from concept development to implementation. One way to ensure transparency is to prepare impact assessments of AI systems in terms of their human rights readiness, and this work should be carried out before the initiation of AI technology procurement activities, before its development and implementation phases, and should include self-assessment as well as external assessment (Reisman, 2018).

In the public sector, AI technology purchases from private service providers should be made after consultation with the public to obtain opinions and proposals on the development and implementation of the AI system. The state must constantly hold constructive consultations with representatives of civil society and human rights groups (Reisman, 2018). The author believes that officials should also be consulted, since AI technologies are aimed at controlling such category of persons in order to prevent and identify conflicts of interest in their activities. These consultations should take place before the design, purchase and implementation of the AI system.

Audit inspections

External audit of AI systems is a strong guarantee of the accuracy, independence and transparency of the assessment. Regular audits of independent procurement activities should therefore complement the preparation of initial human rights impact assessments as an important mechanism for ensuring transparency and accountability of the AI system (Council of Europe, 2017).

Conducting AI technology audits will protect the interests of the public, the interests of officials and at the same time minimize the risk of confidential information getting into the public space (Pasquale, 2015). Access to AI systems can be provided to a specific state institution that would be competent

to engage in industry regulation and supervision (Council of Europe, 2017). 85.3% of respondents believe that it could be the State Data Inspectorate or the State Security Service (75%).

Various types of problems may arise with the use of an external control mechanism, but the state should do its best to create the conditions for audits of AI systems. In order to carry out effective audit for the evaluation of the AI system, the state should more actively adopt policy decisions and the corresponding legal framework, which will force companies to develop an already auditable AI code, guarantee the preservation of the audit history, thus also ensuring that the people affected by AI technology have access to more information and its operation is transparent and will not give any reason for doubt. 61.8% of respondents also agree with the above mentioned statement of the author, believing that the parliament or the government should generally be more actively involved in the work on the legal regulation of AI technologies. Most of them (i.e. 56.3%) believe that the parliament or the government should initiate discussions between institutions about the need for legal regulation of AI, as well as initiate discussions with society about legal regulation of AI - 54.4%. In addition, a significant number of respondents - 55% believe that the parliament or the government should come up with initiatives and offer national proposals for a common European Union AI legal framework. A minority of respondents (8.8%) believe that it is necessary to wait for the creation of AI technologies and only then start developing the foundations of the legal framework for AI.

Information and consent

In the context of the majority in the study, who believe that the parliament and the government should initiate discussions with the public about the legal regulation of MI (54.4%), the author believes that the state should ensure that the public and officials are fully informed about decision-making algorithms used in different types of platforms, websites, etc. Disclosing information about AI technology operations, the algorithm and aggregated data upon the official's request, on the basis of which a conclusion was made, for example, about the official being in a conflict of interest situation should also be considered. It would be useful for the government to make such requirement mandatory. Natural entities (especially relatives and business partners of the official) should also have the right to know whether the AI collects personal data and whether this data will be included in a data set that will later be used in AI technology operations to draw conclusions, for example, on whether or not the official is in a conflict of interest situation. Moreover, the mentioned natural entities must be informed about the conditions of use, storage and deletion of this data (UNESCO, 2020).

Legal remedies

The adverse impacts of AI systems on human rights must be remediable and remedied by the companies or institutions responsible. A mandatory condition for the creation of an effective legal protection system is to inform officials, as well as their relatives and business partners that they have been subject to AI technology solutions. Furthermore, the responsible companies or a competent institution must ensure that the person will be provided with legal remedies, i.e. the person must be offered the opportunity to ensure that the conclusions reached by the AI system are properly verified and held accountable in the event of errors. The author also believes that it is also necessary to publish data on the number of cases of recourse to legal remedies related to decisions made using AI technologies (UNESCO, 2020).

Conclusions and Proposals

1. The development and use of AI technologies must be carried out in accordance with the basic principles of ethics: respect for people, autonomy of AI, prevention of offenses and explainability of AI processes.
2. The development, implementation and use of AI technologies must meet the following requirements: human control and supervision of AI technologies, technical reliability and security, privacy, transparency, diversity, non-discrimination, fairness and accountability.

3. The use of AI technologies will make it possible to manage huge amounts of data by controlling and monitoring the activities of officials, their relatives and business partners, thus minimizing the risks of corruption and the possibility of officials being in a conflict of interest situation.
4. It is necessary to provide for the possibility for AI technologies to use the personal information of officials, their relatives and business partners, which are at the disposal of state and local government institutions.
5. Access to information from sources in the private sector should be provided to AI technologies through regulatory acts, such as access to large volumes of confidential information of commercial and credit institutions, social networks, video and audio recording devices, etc.
6. The risk of bias by AI technologies must be foreseen, therefore the state must ensure mandatory state monitoring and control of AI systems, its detailed documentation, allowing the state regulator and citizens to understand how the AI operates, explaining the decisions made, actions taken and conclusions drawn.

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FROM *BONA FIDES* TO *LABA TICĪBA*: HISTORICAL INTERPRETATION OF GOOD FAITH PRINCIPLE IN LATVIAN LAW TO PROTECT PAYMENT SERVICE CONSUMERS' RIGHTS FROM DE-BANKING

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Abstract

This paper focuses on a scientific analysis of the genesis and historical development of the good faith principle as a doctrinal interpretation of the Latvian regulations' governing issues when closing a payment account against a consumer's will. Starting from the origin of *bona fides* in archaic Roman law and its rediscovery by Justinian's *Corpus Juris Civilis*, passing through its application in the western medieval *ius commune* and its continental renaissance in the early twentieth century, noting its limited place in the Code of Civil Laws of the Baltic Provinces and paying tribute to its triumph in Latvian Civil Law, this paper focuses on the evolution of attitudes towards this principle in modern legal science and case law. This comparative historical research shows that a clear definition of good faith could be found through a system-historical interpretation of the good faith rule. This should help identify the target essence of subjective rights and duties under each legal rule governing specific legal relationships. Therefore, when de-banking, in view of good faith, the target essence of a bank's right to withdraw from an account contract is to save justice by respecting the justified consumer's interest in retaining payment services.

Keywords: *Bona Fides*, Good Faith, Historical interpretation, De-banking

DOI: 10.37804/1691-6077-2023-14-96-111

1. Introduction

When closing a bank account against the will of a payment services consumer, overly strict positivism when applying legal rules and contractual conditions, which authorize a bank to terminate an account agreement unilaterally, is a barrier to effectively protecting the consumer's rights. Regulatory dualism also does not contribute to justice concerning this issue. To mitigate this, the author proposes to turn to the time-tested Roman maxim of *bona fides* as a doctrinal interpretation of modern Latvian legislation regulating banks' withdrawal of payment services. Such an *interpretatio prudentium* is ineffective without a scientific analysis of the genesis and historical development of the good faith principle to which this research is devoted.

Starting from the origin of this legal principle in archaic Roman law and its rediscovery of Justinian's *Corpus Juris Civilis*, passing through its application in the western medieval *ius commune* and its continental renaissance of the early twentieth century, this paper focuses on the triumphant "laba ticība" approach by 1937 Latvian Civil Law. Paying tribute to the role of good faith in restoring the supremacy of law under the Western legal tradition after the fall of the occupying communist regime, the author analyses the evolution of attitudes towards this principle in Latvian modern legal science and case law.

The methodological basis of this research is based on formal logical and general scientific approaches (analysis and synthesis, abstraction and concretization, deduction, induction, comparison, and analogy). To begin, a special historical and legal scientific research method was used.

2. Advent of *dona fides*

There is no doubt that the notion of good faith, known as *bona fides*, finds its origin in Roman law.¹ In the old *ius civile's* time,² when subjective rights being enforceable by law were defined only by the limited number of claims recognized by legislation - on the Twelve Tables or by subsequent *plebiscita*³ - and were actionable exclusively by the utterance of the correct solemn *formulae* before the *praetor*⁴ later named the procedure of *legis action*,⁵ the concept of *fides*⁶ - literally, faith - was a moral and sacral principle supported by religious sanctions.⁷ In this context, *fides* served as an extra-legal basis for the enforcement of relations not admitted by civil law, but in which a man had given his word. It required that his word must be kept and that his conduct conform with it.⁸ Thus, *fides* generated an obligation, not unlike one arising from the strict civil law. However, from the viewpoint of the old *ius civile*, it was still not a legal principle of obligation, but rather its precursor.

As the Republic advanced, the need for developing society and commerce overran the limitations of the *legis actiones*.⁹ Probably during the third century BC, a response to these challenges became a supplementation of the *legis actiones* by a new type of procedure - the formulary system.¹⁰ This was no longer reliant on the utterance of ritual phrases by the parties in the dispute. The *agere* of the plaintiff and defendant was confined to a free recital of the facts and the submission of both to the procedural formula issued by the praetor, which established the litigation program and appointed a judge to determine the dispute.¹¹ This judge had to examine the facts of the case as described in the *formula (demonstratio)*¹² and pass judgement on the asserted claims and defences (*intentio*). The *formula* also contained instructions for the judgement (*condemnatio*), should the plaintiff's assertions prove correct.¹³ Since the *formulae* had to be publicly announced by the new *praetor*¹⁴ in his yearly edict (*ius honorarium*), its arrangement offered extensive opportunities to expand the list of enforceable actions.

Besides, since the formula contained not just a recital of the agreed facts and a direction as to the judge's task, but a reference to the foundation of the action, it could determine its common objective standard (*una norma obiectiva*), which might be "fides bona."¹⁵ In this way, "*bonae fidei indicia*" were devised as the *formulae* commencing with a *demonstratio*.¹⁶

It is unknown at what point the edict began to contain actions based not on the old *civil oportere*, but rather on the *oportere ex fide bona*. Italian jurist Mario Talamanca¹⁷ and some other researchers¹⁸ date the emergence of *bonae fidei indicia* as far back into the third century BC, because they connect it more closely with the development of the formulary procedure. Conversely, the famous German legal

¹ Whittaker and Zimmermann, 2000, at 16

² Bove, 1971.

³ Kaser and Hackl, 1996, at 35

⁴ Guarino, 1984, at 176

⁵ Pugliese, 1961 at 11

⁶ Kunkel, 1939, at 2

⁷ Wieacker, 1963, at 29-31

⁸ Turpin, 1965, at 262

⁹ Ibid. at 263

¹⁰ Wieacker, 1989, at 447

¹¹ Selb, 1978, at 199

¹² A *demonstratio* was contained only in actions for a claim, the amount of which was still uncertain at the time when the action was brought (actions for an *incertum*).

¹³ Schermaier, 2000, at 73

¹⁴ Wieacker, 1989, at 429

¹⁵ The example of formula for *actio empti (actio depositi)* would have run as follows: "*Quod Aulus Agerius de Numerio Negidio bominem, quo de agitur, emit, - quod Anlus Agerius apud N-um N-um mensam argenteam, qua de agitur, deposuit - qua de re agitur, quidquid ob eam rem Numerium Negidium Aulo Agerio dare facere oportet ex fide bona, ejus, iudex N-um N-ium Aulo Agerio condemna, si non paret, absolve.*" (Zaikov, 2012, at 472).

¹⁶ Arangio-Ruiz, 1946, at 25

¹⁷ Talamanca, 1993, at 303

¹⁸ For example, Kaser and Hackl, 1996, at 153

historian Franz Wieacker¹⁹ estimates its emergence to have occurred during the second half of the second century BC only as a procedural reform to modernize the existing *ius civile* remedies. In contrast to both above, Luigi Lombardi,²⁰ the Italian professor of Philosophy and Law, argues that the *bonae fidei iudicia* did not come into being until “*ai tempi di M. Catone e Q. Mucio,*” that is, until Cicero's time. At any rate, Cicero's *De Officiis* contains a catalogue directly quoted from Quintus Mucius Scaevola Pontifex, of those contractual relationships that were subject to *bona fides*.²¹ Therefore, we can safely say that at the beginning of the first century BC, *bona fides* had definitely ceased to be ethical yardsticks of contractual liability and were incorporated into the praetorian law (*ius honorarium*).²²

The genesis and typology of *bonae fidei iudicium* reconciled²³ the two types of fides application when *bona fides* was initially invoked as the ground of obligation,²⁴ that is, when it formed its new source where it was only the measure of the judge's discretion,²⁵ where it merely supplemented the old *civilian oportere*, thus giving the judge a tool to assess the standard of performance required. While the modern lawyer finds this dilemma essential, in the Classical Roman law view, this is somewhat of a false dichotomy.²⁶ Indeed, as claims based on *bona fides* had no statutory grounds,²⁷ they could only be enforced through the formulary procedure. In turn, the *ex fide bona* clause of the formula extended the *officium* of the judge from factfinding and applying the terms of the formula to these facts to an assessment of the legal merits of the case.²⁸ He was free to consider the claim himself and assess, according to the principles of good faith, whether and to what extent the claim was substantiated. A significant element of the *praetor's* task was thereby transferred to the judge. Of course, the judge did confine himself to the formula issued by the praetor, but the *bona fides* clause allowed him to shape its substantive content. Therefore, even where *bona fides* was the basis of liability, it had, *per se*, also governed the exercise of the judicial function to broaden the scope of the judge's discretion for wholly investigating the circumstances of the case.²⁹ However, for the ideal of fides to be legally relevant, it had to be set up as the standard of one of the claims protected by a procedural formula.³⁰ Since the *praetor* was specifying more closely, the *civil oportere* was unlikely given the novelty of the claims.³¹ If the *formula* was nevertheless conceived *in ius*, describing the plaintiff's obligation as *dare facere oportere*,³² it might be assumed that the praetor regarded fides as a new source of obligations separated from the actions of the older *ius civile*.³³

Ultimately, the *bona fides* approach gave the Roman judge equitable discretion to decide the case before him in accordance with what appeared to be fair and reasonable.³⁴ However, applying this procedural *formula* did not lead to uncertainty and arbitrariness, which have become a nightmare for modern legal positivists. This was due to a concrete and uniform understanding of what accorded with both *fides* and *bona fides*. This insight was rooted in Roman social ethics that recognized the comprehensive duties of fidelity and faithfulness and encompassed both citizens and peregrines.³⁵

¹⁹ Wieacker, 1963, at 34

²⁰ Lombardi, 1961, at 180

²¹ Schmidlin, 1980, at 365

²² Schermaier, 2000, at 74

²³ Kaser, 1966, at 27

²⁴ Kunkel, 1939, at 5

²⁵ Carcaterra, 1964, at 36 and 45

²⁶ Turpin, 1965, at 266

²⁷ Cicero, *De officiis* 3, 61 (In Dyck, 1996, at 570)

²⁸ Schermaier, 2000, at 76

²⁹ Turpin, 1965, at 266

³⁰ Schmidlin, 1980, at 369

³¹ Noordraven, 1988, at 349

³² Watson, 1965, at 172

³³ Schermaier, 2000, at 75

³⁴ Zimmermann, 1996, at 667

³⁵ Schermaier, 2000, at 77

Whereas *fides* were understood as remaining faithful to one's word,³⁶ *bona fides* was applied to ascertain the content of contracts concluded.³⁷ Faithfulness to one's word is a precondition of any legal intercourse, and Cicero, therefore, describes it as *fundamentum iustitiae*.³⁸ *Per contra*, the *bona fides* does not demand performance itself, but by requiring the parties to act honestly, it influences the way performance occurs.³⁹

While the way in which *fides* was extended to *bona fides* is largely unclear,⁴⁰ its qualification as *bona fides* emphasizes the new substantive specificity of that standard of behaviour. Cicero clarifies it as a specific duty of loyalty based on the older fiduciary relationships (*bene agere*)⁴¹ of the Roman citizen who acted carefully and prudently and who respected the interests of his contractual partner, i.e., who acted as *bonus vir*.⁴² In the early times, the *arbitrium boni viri* were seen to be an independent verdict of an arbitrator, which took into consideration the interests of both parties.⁴³ As Prof. Bruno Schmidlin noted, the latter point indicates that the *bonae fidei iudicia* were intended to provide the opportunity to weigh up both parties' interests when assessing an enforceable claim.⁴⁴ Therefore, the development of the *bonae fidei iudicia* was patterned from the three central elements of the classical *bona fides*:⁴⁵ (1) the substantive determination of the old fiduciary relationships (*bene agere*); (2) the binding nature of even an informal promise; (c) the officium of the judge who had to balance both parties' interests.⁴⁶ This reasoning helps us to detach evolved *bona fides* from source fides to overcome the spell of overly strict positivism.

The expansion of judicial discretion in assessing the merits of a case, which was based on the *bona fide* clause under the auspices of a general value system,⁴⁷ tamed the excessive procedural formalism.⁴⁸ Eventually, the *bona fides* itself was able to reconcile with *iudicia stricti iuris* through the formula clause known as "*exceptio doli*."⁴⁹ Cicero describes the standard of *bona fides* - the notion of *bene agere* - as the conceptual opposite of fraudulent behaviour (*dolus*).⁵⁰ In turn, any act of *dolus* would usually result in a judgment against the guilty party, irrespective of whether it occurred during the contracting process or was committed by means of instituting the proceedings. Conversely, the judge would not allow a contractual action to be brought forth by the fraudulent party to succeed.⁵¹ This located *dolus*, not so much in personal misconduct, but rather in inequity or injustice that would flow from the action being allowed to succeed.⁵² Therefore, the *exceptio doli* was inherent in the *bonae fidei iudicia*,⁵³ and the judge would always implicitly consider whether the plaintiff's claim, or the bringing of the action was based on *dolus*,⁵⁴ that is, tested by *bona fides* tools. This serves as a

³⁶ Cicero, *De officiis* 1, 23: "*credamus ... quia fiat, quod dictum est, appellatam fides*" (Dyck, 1996, at 115)

³⁷ Schermaier, 2000, at 78

³⁸ Cicero, *De officiis* 1, 23: "*Fundamentum autem est iustitiae fides, id est dictorum conventorumque constantia et veritas*" (Dyck, 1996, at 115)

³⁹ Schermaier, 2000, at 78

⁴⁰ Nörr, 1991, at 43

⁴¹ Cicero, *Topica* 42 (Reinhard, 2006, at 150)

⁴² Schmidlin, 1980, at 362

⁴³ Broggin, 1957, at 115

⁴⁴ Bruno Schmidlin, 1980, at 365

⁴⁵ Martin Josef Schermaier, 2000, at 82-83

⁴⁶ Magdelain, 1990, at 591-652

⁴⁷ In some late classical texts, *bona fides* is even linked to the moral category of the *boni mores* (The Digest of Justinian: D. 16, 3, 1, 7 and D. 22, 1, 5 – Watson, 1998, at 11 and 177); Mayer-Maly, 1986, at 151 and 158

⁴⁸ Schermaier, 2000, at 84

⁴⁹ Whittaker and Zimmermann, 2000, at 16

⁵⁰ Cicero, *De officiis* 3, 14 (Miller, 1913, at 330).

⁵¹ Schermaier, 2000, at 86

⁵² MacCormack, 1986, at 263

⁵³ Julian states "*quia hoc iudicium fidei bonae est et continet in se doli mali exceptionem*" (The Digest of Justinian: D. 30, 84, 5 - Watson, 1998, at 24)

⁵⁴ Schermaier, 2000, at 87

good guideline for modern justice to stop pitting imperative legal rules against the standard of good faith behaviour.

From the end of the classical period, the decline and eventual abolition of the formulary procedure gradually led to an absorption of the concept of *bona fides* into the broader notion of *aequitas* (equity)⁵⁵ which, among others, combined the two basic meanings of *fides*: keeping one's word and observing a certain standard of behaviour.⁵⁶ Along with *humanitas* and *benignitas*,⁵⁷ *aequitas* proved to be more flexible and comprehensive than the concept of *bona fides*, confined as it was to the ideas of loyalty and fair dealing between contracting parties.⁵⁸ At the same time, it had given rise to such finely nuanced considerations and shaped such legal institutions that became part and parcel of the civilian heritage on which the modern legal systems are based. Liability for latent defects, the rules relating to the implied warranty of peaceable possession, rescission of contracts on account of mistake, and *metus* inspired these and many other institutions of modern contract law to owe their appearance and development to conscientiousness the *iudicia bonae fidei* of Roman law.⁵⁹ *Per se*, the *bona fides* was completely reborn into substantive principle, thereby throwing off its procedural shell.

3. Medieval restoration and new meanings

Throughout the Middle Ages and in the early modern period, *aequitas* remained at the forefront of discussion as a counterpoise to the *ius strictum* (strict law)⁶⁰, but it was commonly identified with *bona fides*. The medieval jurists who wrote about Roman and Canon law used the terms 'good faith' or 'equity' to describe three types of conduct expected of the contracting parties: (1) each party should keep his word; (2) neither should take advantage of the other by misleading him or by driving too harsh a bargain; (3) each party should abide by the obligations that an honest person would recognize even if they were not expressly undertaken.⁶¹ However, instead of defining the essence and substance of the *bona fides* concept as a general lodestar for the legal regulation of contractual relationships, the jurists built a rudimentary schema for classifying their Roman legal texts to describe discrete situations in which good faith was required and how the parties should act in each case.⁶² In the field of contract law, then, good faith and equity remained amorphous concepts, while one might have expected a clear statement from the Canon lawyers in terms of what Christian morality required.

These "phantom pains" of the Middle Ages are still manifest today when modern jurists warn that one should not expect to find a clear rule of good faith,⁶³ but should be content only with listing various situations where the courts found good faith to be violated (according to German lawyers, so-called "*Fallgruppen*"⁶⁴). Similarly, the American lawyer Robert Summers described good faith as an "excluder," that is, "a concept that cannot be defined but excludes heterogeneous instances of bad faith."⁶⁵ Accordingly, even though good faith has long been elevated to the rank of the rule of law in many jurisdictions, modern lawyers continue to imitate their colleagues from the past, who explained what good faith is in every specific situation with systems or schemas that seem entirely independent from any general conception of good faith.⁶⁶

⁵⁵ Beck, 1955, at 24

⁵⁶ Waldstein, 1976, at 77

⁵⁷ Beck, 1955, at 29

⁵⁸ Schermaier, 2000, at 89

⁵⁹ Whittaker and Zimmermann, 2000, at 17

⁶⁰ Schröder, 1997, at 265

⁶¹ Gordley, 2000, at 94

⁶² Ibid.

⁶³ Roth, 2007, § 242

⁶⁴ Hesselink, 2011, at 289

⁶⁵ Summers, 1968, at 196

⁶⁶ Gordley, 2000, at 117

Similarly, the Canonists repeated the civilians' conclusion that in contracts of good faith, unlike those of strict law, the parties are bound to the unexpressed terms that good faith requires.⁶⁷ They said that the terms to be read into an agreement absent express provision came from the 'nature' of the contract.⁶⁸ Then, the jurists concluded that every kind of contract had its natural terms and that a party must observe them as a matter of good faith and equity and the *ius gentium*.⁶⁹ However, they never explained the relationship between the "nature" or "substance" of a contract on the one hand, and equity, good faith, and the *ius gentium* on the other.⁷⁰ Instead, they fitted the Roman texts into a different schema where good faith meant doing whatever else could be expected of an honest person engaged in a given type of transaction.⁷¹

Nevertheless, a way out of this deadlock was found at the end of the Middle Ages, when Baldus de Ubaldis, the last great medieval jurist, developed a coherent idea of good faith through equity.⁷² He seemed to have done so by drawing on the philosophical ideas he had borrowed from Aristotle and Thomas Aquinas.

Baldus identified good faith with equity⁷³ and conscience,⁷⁴ like the jurists who preceded him. But he gave special attention to one particular critical principle of good faith: the requirement that no one should be enriched at another's expense. This principle looks like the principle of equality, which, according to Aristotle⁷⁵ and Thomas Aquinas,⁷⁶ is the foundation of commutative justice defined as exchange. While distributive justice secured each citizen a fair share of whatever wealth and honour the society had to divide, commutative justice preserved each citizen's share.⁷⁷ Thus, according to Aristotle, each party in an exchange had to give something of equivalent value to what he received.⁷⁸ For Baldus, it is "the rule of rules in the life of conscience," which he called "natural" or "general" equity.⁷⁹

To avoid confusion when explaining the word "equity," Baldus used two definitions, which he called "generic" and "specific" equity (*aequitas in genere* and *aequitas in species*).⁸⁰ He defined "generic equity" as reaching a just result, that is, "correct judgment" taking account of "both substance and circumstances."⁸¹ This is achieved through an exchange that excludes enrichment at the expense of others. In discussing its remedy, Baldus maintained that generic equity or equality is to be served in contracts both when interpreting them and in justifying them.⁸² In contrast, "specific equity" meant deviating from the law when the circumstances required it.⁸³ As Thomas Aquinas reflected, since laws are framed generally, circumstances can always arise in which the lawmaker himself would not wish the law to be followed. Equity means that the law should not be applied under such circumstances.⁸⁴

At the same time, when violating equity by breaking one's word and through causal fraud, the violator does not always benefit from the victim's expense.⁸⁵ Therefore, Baldus distinguished several kinds of

⁶⁷ Ibid. at 105

⁶⁸ Ibid. at 103

⁶⁹ Ibid. at 104

⁷⁰ Ibid. at 105

⁷¹ Ibid. at 103

⁷² Ibid. at 106

⁷³ De Ubaldis, 1595. to X (*Liber Extra – Corpus Juris Canonici*) 1, 29, 3; De Ubaldis, 1577 to D. 16, 3, 31

⁷⁴ De Ubaldis, 1595 to X 1, 29, 3

⁷⁵ Aristotle, 1999, at 73-75

⁷⁶ Aquinas, 2012, II-II. gv.77

⁷⁷ Aristotle, 1999, at 73-75

⁷⁸ Ibid. at 77-81

⁷⁹ "*Regula regularum in via conscientie est, non locupletari cum aliena iactura*" (De Ubaldis, 1595 to X 1, 2, 8 no.1)

⁸⁰ Gordley, 2000, at 108

⁸¹ De Ubaldis, 1577 to D. 1, 1, 1 pr. no. 5.

⁸² Ibid. to C. 4, 44, 2 no. 48

⁸³ Gordley, 2000, at 108

⁸⁴ De Ubaldis, 1577 to D. 1, 1, 1 pr. no. 5

⁸⁵ Gordley, 2000, at 109

good contractual faith by the judge for two purposes: first, to know whether contracts are binding or not, and second, to know what the parties' obligations are and whether they have been fulfilled. For this second purpose, good faith had two meanings: it means the absence of *dolus*, and also the observation of that to which the parties are committed according to generic equity and the ordination of the law. Attention is to be paid to natural equity when doubt arises for those things that are not expressed in the law, and attention is to be paid to the law's ordination in things that it does express.⁸⁶

Thus, according to Baldus, generic (natural) equity is a type of good faith distinct from faithfulness to one's promises and the mere absence of *dolus*.⁸⁷ This allowed for the limiting of one's duty to keep one's word, only in a situation when there was a contractual *causa* to do it.⁸⁸ This *causa* could be only either 'liberality' or the receipt of something in return for what one gave.⁸⁹

As Aristotle said, liberality meant not merely giving wealth away, but giving "to the right people, the right amounts, and at the right time."⁹⁰ Indeed, Baldus presumes that if one gives wealth away, either it is an act of liberality or it is foolishness. It means the contract could be made from 'foolishness' rather than "liberality."⁹¹ For example, if an ignorant person has renounced the remedy for *laesio enormis*, the judge should assume he did so "more from stupidity than from liberality."⁹² Therefore, such a contractual word might not be kept for reasons of equity.

4. Settling to Latvia

Although until today, researchers have not directly touched upon the issue of the genesis and development of good faith in the Latvian legal system before the civil law codification of the Baltic Provinces in the second half of the 19th century (see below). Yet, a piece of general historical information invites one to draw some conclusions about this. As far as the Catholic church's Canon Law regulated Livonian clergy life in the 13th to 15th centuries,⁹³ the relations between the church, its servants, and laymen should have been influenced by the above medieval doctrine of good faith, including its development by Baldus under Aristotle's and Thomas Aquinas' philosophical ideas.

A somewhat more complicated discussion concerns the Town law (*Stadtrecht*) of Livonian towns, which was formed in the 13th century due to the reception of the law of northern German cities.⁹⁴ It is known that Riga adopted Hamburg laws, but from the 14th century, it had its independent law that later extended to other towns in the Latvian territory.⁹⁵ While some German towns' *Stadtrecht* was familiar to *Treu und Glauben*⁹⁶ (literally: fidelity and faith used in the context of commercial relations as a synonym for *bona fides*⁹⁷), we have no exact data on how this principle was applied by Hamburg *Stadtrecht* in 1270 and 1497. Riga's *Stadtrecht* also makes no direct reference to the "Treu und Glauben."⁹⁸ At the same time, since *bona fides* and *aequitas* dominated relations between merchants and became a fundamental principle of the medieval and early modern *lex mercatoria*,⁹⁹ there is no

⁸⁶ De Ubaldis, 1577 to C. 4, 10, 4 nos. 1-2; Gordley, 2000, at 109

⁸⁷ Gordley, 2000, at 110

⁸⁸ De Ubaldis, 1595 to X 1, 4, 11 no. 30.

⁸⁹ Gordley, 2000, at 114

⁹⁰ Aristotle, 1999, at 53-57

⁹¹ Gordley, 2000, at 113

⁹² De Ubaldis, 1577 to C. 4, 44, 2 no. 21.

⁹³ Blūzma, 2015, at 12

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ For example, with respect to Augsburg (Ofenbrüggen, 1860, at 329); regarding Nuremberg (Schultheiß, 1939, at x)

⁹⁷ Strätz, 1974

⁹⁸ Napiersky, 1876

⁹⁹ Meyer, 1994, at 61

reason to doubt that Hamburg's and Riga's merchants did not required the flexibility, convenience, and informality of this "prime mover and life-giving spirit of commerce"¹⁰⁰ (as *Casaregis* put it).

Conversely, there can be no doubt about the honoured place of *bona fides* in the Livonian knighthood law, which, during the 15th –18th centuries, was influenced by the reception of Roman law. Notably, the Livonian code of Knighthood law was called "Systematic or Revised Livonian Knighthood Law," which, in the 15th century, directly stated that when the rules of this code are not applicable, the Roman law must be applied.¹⁰¹ Besides, as a prominent researcher of Latvian legal history, Valdis Blūzma rightly noted¹⁰² that the prestige of Roman law had contributed and was declared an imperial law on which all civil cases must be appealed to the Imperial Chamber Court (Reichskammergericht). This court was established in the Holy Roman Empire in 1495. In its archive, 19th-century researchers opened 29 legal cases from Livonia during 1530 - 1564, confirming Roman law's use to govern legal relations that arose in the Livonian territory. Therefore, Livonia's civil turnover could not avoid the *bona fides* requirements to be implemented with legal regulation in the spirit described above.

Livonian War (1558 – 1583) and the Polish-Lithuanian Commonwealth's expansion somewhat weakened the systemic invocation of good faith rules in state formations on modern Latvia's territory, but did not eradicate it. While a legal source of both the 1611 Pilten Statutes and the 1617 Statutes of Courland was Roman Law¹⁰³ promoting *bona fides* in civil circulation, this principle has ceased to exist for all contractual relationships. The Statutes of Courland condensed it down to listing a few specific legal situations where good faith was still at the forefront. Particularly, *bona fides* was mentioned as a behaviour standard for the repayment of loans (§89)¹⁰⁴ and using another's property when lending (§92)¹⁰⁵. Perhaps the most important rule dealt with the obligations of the seller, who must, in good faith, reveal all the defects of the thing sold and may not conceal anything that the buyer would never attempt to buy if he knew at the beginning (§100).¹⁰⁶

The Swedish dominion of Livonia had quite an excellent potency to restore good faith to its former glory. Since the 17th century, Swedish-Finnish contract law¹⁰⁷ was deeply influenced by the European *ius commune*.¹⁰⁸ Their legal system was permeated by the Roman principle of *bona fides*,¹⁰⁹ in that most contracts under the old medieval codes were taken to be *contractus bonae fidei*.¹¹⁰ After the strengthening of the Swedish administration in Livonian province (now southern Estonia and central region of Latvia) in the twenties of 17th century, Swedish law was prescribed as a subsidiary source of law in Swedish Livonia.¹¹¹ However, as Finnish legal historian Heikki Pihlajamäki argued, because of the discrepancy between procedural law regulations of Swedish Livonia and the judicial practice of local courts, "Swedish statutory law gained only limited influence in Livonia."¹¹² Besides, both Livonia's nobility and its Landtag deputies tried to prevent the replacement of local law by the Swedish one.¹¹³ The last attempt at the unification of the law of the Livonian province with the law of Sweden was unsuccessful as well. During the Great Northern War, Charles XII issued a unique

¹⁰⁰ "*Bona fides est primum mobile ac spiritus vivificans commercii*", and in the same vein, Baldus stated, "*Bonam fidem valde requiri in his, qui plurimum negotiantur*" (good faith is much required of those who trade most). Both citations were taken from Meyer, 1994, at 62

¹⁰¹ Von Rahden, 1845, at 133

¹⁰² Blūzma, 2015, at 13

¹⁰³ Ibid. at 16

¹⁰⁴ Statuta Curlandica, 1804, at 70-02

¹⁰⁵ Ibid. at 74

¹⁰⁶ Ibid. at 80

¹⁰⁷ Finland and Sweden formed a union before 1809, so Swedish law prevailed in Finland.

¹⁰⁸ Whittaker and Zimmermann, 2000, at 55

¹⁰⁹ *Per contra*, a direct influence of Roman law and culture in Sweden for other issues was weak because historically, Romans were not interested in the expansion into the regions of northern Europe (Blūzma, 2015, at 18)

¹¹⁰ Whittaker and Zimmermann, 2000, at 56

¹¹¹ Blūzma, 2020, at 21

¹¹² Pihlajamäki, 2017, at 263

¹¹³ Blūzma, 2020, at 21-22

document on 12 June 1707 to stipulate that henceforth, only Swedish laws would be applied in Livonia. But this order could not be carried out, because almost all of Livonia's territory had been already occupied by Russian troops since 1705.¹¹⁴ Thus, the European *ius commune* was unable to penetrate the Livonian legal system via Swedish law to broaden the scope of the application of good faith requirements for contractual relations in this territory.

At first, the Russian Empire's arrival did not change the rules of the game for good faith on the Baltic field of civil circulation, since Russian emperors (Peter I and Catherine II) declared in the general confirmations of the newly obtained provinces (governorates of Livonia, Estonia, and Courland) that local laws would continue to be unbreakable in these provinces.¹¹⁵ It meant that *bona fides* from Justinian's *Corpus iuris civilis* kept its subsidiary administering in Latvian regions for many decades.¹¹⁶ However, no matter how surprising it may sound, the stalk of this legal principle as a general rule for contractual behaviour was cut by the codification of Ostsee Provinces' law in 1864, which some credited to the Roman law's triumph¹¹⁷ and called its second reception.¹¹⁸

In spite of the fact that almost 63% of all the rules (2882 articles of 4600) in the Code of Civil Laws of the Baltic Provinces (part III of the codification of the Baltic region's local laws) were accepted from Roman law,¹¹⁹ neither their content nor their historical sources quoted or referred to the *bona fides* notion *per se*. The 1864 Code, therefore, contained no general rule that subjective rights borders should be defined by good faith.¹²⁰ There was only Article 3444, which prohibited chicanery; that is, permitted actions with the direct intention of harm. Roman law rules about *exceptio doli generalis* were mentioned as historical sources.¹²¹

Of course, such an approach should not be surprising because, by the 19th century, Aristotelian notions of equality for the objective good faith concept had fallen out of fashion.¹²² For example, French Civil Code's commentators defined contracts in terms of only the parties' will. According to them, the judge should carefully refrain from interfering with the parties' decision in the name of equity. The will had become the source of all the parties' obligations, and there was no higher standard by which the will itself could be criticized or supplemented.¹²³ 19th century German jurists agreed with French colleagues, and when they placed a requirement of good faith in 1900 in § 242 of the German Civil Code (an obligor has a duty to perform according to the requirements of good faith, taking the customary practice into consideration), it seemed innocuous. They kept insisting that "Good faith no longer meant there were obligations of substantive fairness which the parties must respect."¹²⁴ Yet, the genie had already been out of the bottle.

While Latvia remained under the yoke of the Russian Empire, its academic legal circles, were not isolated from the law-making processes taking place in Europe. Apparently, this can account for the fact that in 1914, the judge of the Riga district court Vladimirs Bukovskis turned again to good faith to explain the Code of Civil Laws of the Baltic Provinces. His fundamental commentary collection on this codification of the Baltic region's local laws used references to good faith, among others, to clarify rules about unallowed acts of a borrower (Art.3760)¹²⁵ and a seller upon passing goods (Art.3861).¹²⁶ It was a yardstick for the contractor's obligation to consider the customer's interests

¹¹⁴ Ibid. at 23

¹¹⁵ Blūzma, 2015, at 19

¹¹⁶ Luts-Sootak, 2012, at 273

¹¹⁷ Ylander, 1918, at 441

¹¹⁸ Jegorov, 1989, at 104

¹¹⁹ Kalniņš, 1972, at 304

¹²⁰ Krons, 1937, at 286

¹²¹ Bukovskis, 1914, at 1398

¹²² Gordley, 2020, at 115

¹²³ Laurent 1878, §178 at 208 and §182 at 212

¹²⁴ Gordley, 2020, at 116

¹²⁵ Bukovskis, 1914, at 1607

¹²⁶ Ibid. at 1646

when executing the construction plan (Art.4228)¹²⁷ and for the holder's title concerning bearer securities (Art.3129).¹²⁸ The fundamentals of contractual good faith were to explain to the performer the non-existence of the obligation - otherwise, it is deception (Art.3689),¹²⁹ but *bona fides* accepted in commercial life were analysed in the context of consent in silence (Art.2941),¹³⁰ and so on (Arts.3016, 3290, 3854, 4220).

After proclaiming the independent Republic of Latvia on 18 November 1918, the Code of Civil Laws of the Baltic Provinces was retained in force on the grounds of legal continuity under the Law "On retaining in effect the former laws of Russia in Latvia" adopted on 5 December 1919 by the Pre-Parliament of the Republic of Latvia – People's Council.¹³¹ Therefore, the Latvian Senate (Supreme Court) was only able to resume practicing the prohibition of chicanery in the context of the above Article 3444, but could not test disputed contractual relationships from the viewpoint of good faith. However, the Senate's judgments started to observe that the narrow wording of Article 3444 turned out to be insufficient. As a result, in addition to the harmful purpose, the Senate mentioned a protected interest or a lack of legitimate interest as a characteristic of the chicanery. In one case, the Senate even acknowledged the liability under Article 3444, although the purpose of the chicanery was not established, but it was recognized that the defendant, although he had acted within the limits of the law, had infringed on the plaintiff's interests.¹³² Indeed, it was a forerunner for the restitution of good faith as a general legal principle.

5. Triumph and oblivion

While 1937 Latvian Civil Law was, to a greater extent, a creative revision of the Code of Civil Laws of the Baltic Provinces where the previous system of legal material was retained, but the number of articles was reduced from 4600 to 2400 by excluding certain rules,¹³³ there was one systemic breakthrough designed to change the civil circulation. It was our "bona fides," which had been unacknowledged by G.F. von Bunge,¹³⁴ but climbed the pedestal of new codification and took a prominent place. Of course, the number of articles in codification should not be a strict criterion to determine the hierarchical force of legal rules. Nevertheless, no one will forbid us from noting that the good faith principle became the first article of civil law to overtake its progenitor - Article 2 of the Swiss Civil Code (ZGB).¹³⁵ The well-known sworn advocate of the interwar period Mīrons Krons noted that "the legislator had given this rule great importance by placing it at the forefront of the other norms of the new law."¹³⁶

On the contrary, the substance of its wording is more significant since good faith (in Latvian: "laba ticība") has become a general requirement both for the exercise of any civil rights and for the performance of any civil duties ("Rights shall be exercised and duties performed in good faith"). As Bernhards Berents, former Latvian Minister of Justice, formulated, this principle should govern the entire application of the law and form the guide for the interpretation of the law as "the limit of all legal exercise." "It is a general requirement concerning the content of legal relationships. The reference to good faith is from thoroughly objective content and contains a supreme norm of conduct and the application of the law."¹³⁷ It assists with reconciling the law with justice as "the ultimate goal

¹²⁷ Ibid. at 1845-1846

¹²⁸ Ibid. at 1220-1224

¹²⁹ Ibid. at 1580

¹³⁰ Ibid. at 1117

¹³¹ Blūzma, 2015, at 22

¹³² Krons, 1937, at 287

¹³³ Blūzma, 2015, at 22

¹³⁴ Dr. jur. Friedrich Georg von Bunge was a codifier of the Code of Civil Laws of the Baltic Provinces (ibid. at 20).

¹³⁵ Krons, 1937, at 281

¹³⁶ Ibid. at 270.

¹³⁷ Berent, 1938, at 38-39

of all law" and should be used to combat the unfair use of formal rights when such rights are exercised according to the letter of the law or legal transaction, but contrary to their true goals.¹³⁸

At the same time, the boldness of the legislator's innovation so frightened the law enforcers during the very first days of the new Civil Law, that they attempted not only to limit the scope of its application, but also to distort the very essence of the good faith principle per se. Chairman of the Senate Civil Cassation Department Osvalds Ozoliņš gently hinted that Article 1 only commends or recommends that persons perform their duties and use their rights in good faith.¹³⁹ This assumed that there were no strict obligations of good faith behaviours in civil circulation. However, the wording of this article gave rise to such doubts, since unlike its original Swiss source ("In exercising his rights and in performing his duties everyone has to act by the good faith"), it did not verbatim indicate the person's obligation to conduct in good faith but described general behavioural standards. Mr. Krons identified this rule as dangerous from the viewpoint of its application and warned others against its wide invoking. It should not become a general cure for all diseases but could only offer solutions to the most common conflicts of interest.¹⁴⁰ Thus, contrary to the original idea of Civil Law, de facto, it was proposed to return to the above lists of Fallgruppen. Mr. Berents seemed the most vegetarian when he only argued that Article 1 should not form an independent legal source and not lead to an interpretation of *contra legem*¹⁴¹.

Indubitably, by then, Latvian jurists had a frightening illustration of using the good faith rules as a positivistic peg by their German counterparts that, of course, could explain their anxiety. When in November 1923, German inflation had reached hitherto unimaginable dimensions (one gold mark was traded for 522 billion paper marks), the Imperial Supreme Court judged that currency laws had to be disregarded, insofar as they could not be reconciled with the precepts of good faith. With reference to § 242 BGB, the Court refused to allow debtors to discharge obligations incurred before the First World War by paying the nominal value of the debts in paper marks. Moreover, the Court considered itself entitled to fix a new exchange rate.¹⁴² This gave rise to the thesis that the good faith provision could be "the source of the baneful plague gnawing in a most sinister manner at the inner core of our legal culture."¹⁴³ These misgivings were fully confirmed by what happened after 1933. The "unlimited interpretation" was an essential key to the insidious perversion of the legal system to imbue it with the spirit of the new, 'national' (volkisch) legal ideology.¹⁴⁴ The Latvian legal system was not exposed to such risks. Yet, the limited interpretation of its Civil Law Article 1 by its first commentators remains the ancestral curse for invoking the good faith requirements.

At that time, subsequent tragic historical events did not allow this collision to develop. From 26 November 1940, the Latvian legal system plunged into the occupation of Soviet law. The communist regime refused the Roman private law principles as individualistic, cosmopolitan, and selfish. Socialist legal theory tied the ancient principles with the "bourgeoisie" and its aim to oppress the working class. Along with those above, the concept of *aequitas* or *ius naturale* was also rejected, which was replaced by a "higher" form of justice: class justice.¹⁴⁵ The legal orders of occupied Latvia influenced by communist legal theory were therefore based on the principle of inequality before the law for several groups of people - enemies of the communist ideology.

6. Renaissance and growing pains

¹³⁸ Krons, 1937, at 270

¹³⁹ Ozoliņš, 1938, at 51

¹⁴⁰ Krons, 1937, at 298

¹⁴¹ Berent, 1938, at 40

¹⁴² Whittaker and Zimmermann, 2000, at 20-22

¹⁴³ Henle, 1912, at 3

¹⁴⁴ Rütters, 2022, at 64

¹⁴⁵ Ivančík, 2020, at 60

After the fall of the communist regime, Latvia wanted to re-establish its legal order by the tradition of Western legal culture. Turning back to Roman legal principles was required for these efforts to succeed.¹⁴⁶ Justice was the baseline, and good faith followed.¹⁴⁷ Unlike other Eastern European states, Latvia chose a more straightforward path to return to Western private legal values. The legal technique for this was the restoration of the 1937 Civil Law, including the first article, *ex altera parte*. Yet, our neighbours had a different approach that created new codifications of civil law after their independence restoration. The 2000 Civil Code of Lithuania literally exacts the subjects of civil relationships to act according to the good-faith principle (Art. 1.5(1)).¹⁴⁸ Moreover, it refers to the good-faith requirements a total of 103 times regarding various aspects of civil regulation. While Article 138(1) of the General Part of the 2002 Civil Code Act contains the same wording of the good faith as its Latvian sister, and Article 139 presumes it for all legal relations, the 2001 Estonian Law of Obligations Act's Article 6(1) directly requires that everyone act in good faith in their relations with one another. Moreover, the second part of this article prohibits applying legal rules, usages, and contractual provisions if they are contrary to good faith.¹⁴⁹

Indeed, the laconic brevity of the Latvian good faith rule's wording did not allow it to restart its own volition. It waited for the scientific doctrinal impulse, which came in the face of Prof. Kaspars Balodis, Dean of the Faculty of Law at the University of Latvia and later Latvian Constitutional and Supreme Courts judge. In 2002 he wrote a paper, "Labas ticības principa loma mūsdienu Latvijas civiltiesībās" (Role of the principle of good faith in modern Latvian civil law), published in the legal journal "Likums un Tiesības."¹⁵⁰ Subsequently, this research became a part of his textbook "Ievads civiltiesībās" (Introduction to Civil Law) in 2007.¹⁵¹ Even though there were several other studies and publications on the topic of good faith, Balodis' definition of this legal principle - "Everyone should exploit their subjective rights and fulfil their subjective duties by observing the lawful interests of others"¹⁵² - has become the most cited reference in the modern practice of Latvian courts concerning this issue.¹⁵³ Along with it, to motivate their legal conclusions regarding an application of good faith requirements, the judges also often refer to the above interwar jurists, notably, Mīrons Krons.

The Latvian case law usually deals with issues of good faith when disputes arise over excessive penalties, foreseeability of damages, excessive claims for damages in the lease or rent contracts, or cancellation of work performance contracts if the original calculation was too low,¹⁵⁴ as well as if they concern abuse during the process of insolvency and consumers rights' protection. As of today (14 April 2023), the database of the Supreme Court's judgments indicate 74 cases subjected to CL Article 1, which is significantly higher than this average for other legal rules.¹⁵⁵ A cursory analysis of court practice shows that, over the past two decades, judges have changed their approach to invoking the good faith principle from reasonably liberal to strictly positivist. For example, the Supreme Court's judgment of 9 February 2005 in case No.SKC-75 stated that the first CL Article dealt with all civil rights to limit formally exploiting these rights when they are used unjustly. Conversely, on 16 December 2020 for case No.SKC-231/2020, the Supreme Court already argued that this rule is not a

¹⁴⁶ Stein, 1999, at 129

¹⁴⁷ Ivančík, 2020, at 60

¹⁴⁸ Astromskis, 2017, at 486–492.

¹⁴⁹ Poola, 2017, at 116

¹⁵⁰ Balodis, 2002, at 279-286

¹⁵¹ Balodis, 2007, at 140-150

¹⁵² Ibid. at. 141

¹⁵³ For example, Latvian Supreme Court's judgments: SKC-5/2004 of 14 January 2004; SKC 292/2017 of 11 December 2017; SKC-1782/2018 of 18 December 2018; SKC-272/2019 of 31 October 2019; SKC-189/2020 of 12 March 2020; and others.

¹⁵⁴ Torgāns, Kārklīšs, Mantrovs and Rasnačs, 2020, §117

¹⁵⁵ <https://www.at.gov.lv/lv/tiesu-prakse/judikaturas-nolemumu-arhivs/tiesibu-aktu-raditajs>

general remedy and does not allow the judge to determine what constitutes "good faith" for each specific case.

7. Conclusions

Summarizing the above, inferring that good faith moves along a historical sinusoid in civil circulation is justified. It is both progressing to require total equity for legal relations, and also regressing due to a complete denial as a legally binding principle. As of today, the Latvian legal practice seems to be sliding into strict positivism, which turns good faith into a formal declaration without any practical meaning.

The laconic wording of Latvian CL Article 1 fuels such aspirations to not seek a clear rule of good faith but should be content only with listing various typical situations where it may be invoked. However, the given system-historical analysis shows that this is the wrong way. Per contra, we must look for a clear definition of good faith, including researching its genesis and development in time and space.

In the view of legal technic, there should be a system-historical interpretation of the good faith rule - that is, Article 1 of Latvian Civil Law - to identify the target essence of subjective rights and duties under each legal rule governing specific legal relationships. A worthy alternative to Fallgruppen would allow for the creation of objective criteria without undermining legal certainty.

In the context of de-banking, this should mean that adequate consumer protection requires limiting the literal interpretation of legal and contractual rules authorizing banks to unilaterally withdraw from payment account contracts in favour of clarifying the true purpose and mission of their subjective right through the good faith principle in order to respect the justified consumer's interests to retain payment services. In other words, courts should definitively abandon the excessive focus on *ius positivum* and put *aequitas* at the forefront. This could be effectively resolved by using *ius naturale* in the form of *bona fides*.

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LEGAL ACT FOR RECOGNISING THE INTEREST OF THE GROUP

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Abstract

There is legal fragmentation in Member States practices of recognition the interests of the group and at the EU level is needed enabling law. This research paper will look at the recognition of the interest of the group at the EU level. It will question which legal act should recognise the interest of the group at the EU level. The methodology used will be that of legal doctrinal and comparative research, legal theory method and reform agenda research. The research paper will conclude that a legal act for recognising the interest of the group at the EU level should be a Regulation.

Keywords: group of companies, recognition of the interest of the group, legal act for group of companies.

DOI: 10.37804/1691-6077-2023-14-112-122

INTRODUCTION

The cornerstone of the Internal Market is the company law. The Internal Market renders the national systems of company law of Member States to be coherent (Roth & Kindler, 2013: 211). However, the national company laws of Member States have great importance in that they structure the constitution of civil society and establish social justice (Manko, 2015: 1). Company law is characterised by a need of exercising sovereignty in this matter.

A corporation is a legal entity that is distinct from its member. In other words, a corporation has the separate legal personality from its shareholders. The legal entity can enjoy rights and being subject to duties. This premise is described as legal personality (Davies, 2008: 33). With the ability of a company to purchase or own the stock of other legal entity emerged the group of companies (Blumberg, 1987: 55). The interest of each member of the group is independent profitability and sustainability, while the interest of the group is the economic well-being of an organisation, which points to potential differences in concerns (Blumberg, 2001: 301).

In the European Union (EU) three types of models of the regulation of group of companies prevail. The French model regulates group of companies by case law and the interest of the group is recognised. The German model governs group of companies by establishing separate legal act and the interest of the group can be pursued only under certain conditions. The third model is to rely on presumption that each company has separate legal personality and must always act in its own best interests, therefore, there is no need to distinctly regulate group of companies and only independent interests of the company can be pursued. Member States have contrasting and even conflicting mechanisms of recognising the interest of the group. It creates islands of unified company law within the sea of differing approaches of national law on the issue of the recognition of the interest of the group. Despite of Member States legal framework of recognition of the interest of the group under the concept of control, which relates to majority voting rights and appointment or removal of members of the board of directors or the supervisory board, the subsidiary will find difficult bypass the parent company's influence.

RECOGNIZING THE INTEREST OF THE GROUP AT THE EUROPEAN UNION'S LEVEL

Being in line with the principle of conferral, the EU has competence to regulate only selected aspects of Member State private law (Manko, 2015: 1). An EU primary law protects the creation and recognition of a group of companies under the freedom of establishment. However, an EU secondary law does not address the management of cross-border groups, even though this is the core element of the functioning of such establishments. The principle of conferral governs the limits of competence, but the principle of subsidiarity restricts the use of competence. In areas, which do not fall within its exclusive competence, the principle of subsidiarity limits the regulating power of the EU to a circumstance, in which Member States cannot sufficiently accomplish the purpose of EU law and has “European added value” (Weatherill, 1996: 14)– the benefit of a legal act at the EU level has to outweigh the preference for the Member State’s action (Barber, 2005: 311). The principle of subsidiarity protects Member States’ national interests against EU interference, if common values are shared amongst Member States’ national and EU spheres (Bernard, 1996: 651). It is submitted that at least in some areas the effective legal framework can only be delivered at the EU level.

Member States’ stance of recognition of the interest of the group at the EU level can separate in two groups. The first group agrees that there is a need to recognise the interest of the group, but disagree about the nature of the legislation to be introduced at the EU level. The second group denies that legal fragmentation in respective field should be harmonised at all. Depending on the proposed type, content and scope of legal act Member States’ stance can differentiate and switch from one group to another.

The legal fragmentation in Member State practices of recognition of the interest of the group unduly increases the cost of doing cross-border business, creates ambiguity and uncertainty to which transactions or operation can be carried out in a group of companies’ structure and alters the freedom of choice between a branch and a subsidiary. Regulatory competition between Member States cannot correct these market failures because uniformity in cross-border conditions is needed. An effective corporate governance framework is crucial for sustainability and competitiveness of companies in the long term (EC, 2012: 3). Cross-border business would be enhanced, if at the EU level there were a framework of rules for a group of companies that specifically regulated the interest of the group, provided that creditors’, external shareholders’ and other stakeholders’ interests are protected (ECLE, 2012).

The interest of the parent company is to exercise the right to issue instructions to the subsidiary, while remaining the separation of liability (Fülbier & Gassen, 2020: 48). The parent company’s right to issue instructions should not be limited to the interests of the subsidiary, as well as to avoid the parent company’s duty to oversee the subsidiary’s affairs (unified group management duty) and group solidarity (offer support, e.g., financing). From creditors’ point of view the recognising the interest of the group are endangering solvency of each company (e.g. commingling of assets, risky activities), therefore, if the interest of the group does not coincide with the interest of a subsidiary then a parent company has to have the duty to care and the duty of loyalty to diminish the risk of economic failure (Krebs & Jung, 2021: 620 - 621). Minority shareholders opposed to creditors are exposed to the risk of detrimental shifts in subsidiaries without triggering insolvency (e.g., profit shifting) (Fülbier & Gassen, 2020: 49). Minority shareholders similar to creditors have the interest of imposing the parent company the duty to care and the duty of loyalty towards its subsidiary. The group solidarity is not in the interest of minority shareholders because the subsidiarity can be entangled with “other subsidiary’s” financial failures. However, it can go the opposite way, i.e., a minority shareholder’s subsidiary can receive the support from other subsidiaries. Respective notion of the group solidarity and its impact on minority shareholders can be also applied for creditors (Krebs & Jung, 2021: 624). Having regards to the foregoing, for drafting a legal framework, which recognises the interest of the

group, is to assure that the parent company's impact on subsidiary's performance increase exceeds benefits of control.

Those Member States, which regulate a group of companies either by a legal act or a case law, acknowledge that establishments of group of companies are common and rational, as well as create challenges for ensuring independent profitability and sustainability, therefore, main focus in respective jurisdictions has been governing creditors', external shareholders' and other stakeholders' interests. Member States, which do not regulate a group of companies, rely on the presumption that each company has separate legal personality and must always act in its own best interests, therefore, creditors, external shareholders and other stakeholders' interests are protected from abusive influence by the parent company. In both cases Member States have well – established mechanisms for protection of creditors', external shareholders' and other stakeholders' interests, e.g., rules of related party transactions and regulations of qualified approval requirements (Jung et al., 2019, 1953). It follows that Member States efficiently protect interests of creditors, external shareholders and other stakeholders in its jurisdiction, but are lacking a legal framework that installs efficiency and certainty in organising and managing the cross-border group of companies (Teichmann, 2016: 150 -151). Since centralised management cannot be prevented anyway, more efficient corporate governance of the functioning of cross–border groups of companies would also greatly benefit creditors, minority shareholders and other stakeholders (Chiappetta & Tombari, 2012: 271). The defence of public interests must be achieved by legislation that does not hinder and supports the development of economic activity, notably through the completion of the Internal Market (European Commission, 2005: 2). In the light of all foregoing, at the EU level is needed enabling law for pursuing the interest of the group rather than protective mechanisms for creditors', external shareholders' and other stakeholders' interests. The EU company law must not only make market operators suitable for the Internal Market, but also facilitate their global competitiveness. It is argued that the capacity of companies to transfer production, corporate identity and tax burden on a global scale pressures national jurisdictions to become increasingly standardised as they compete for investments (International and European) (Rhodes & Apeldoorn, 1998: 407).

Not only provisions of Treaties, but also the principle of mutual recognition founded in case law (CJEU, 1979, Case 120/78) has a decisive role in the harmonisation process. Initiatives to harmonise should be directed to matters, which are essential to approximate and other differences could be overcome by mutual recognition (EC, 1985: 19). In company law the mutual recognition is precondition of exercise of freedom of establishment for the particular reason that companies' legal status of other Member States is recognised (CJEU, 2002, C-208/00, paragraph 59). Mutual recognition permits for more flexibility and decentralisation by maintaining Member States' national regulations and standards (Van Den Brink, 2017: 219). In cases where centralisation and uniformity may be hard to achieve, the mutual recognition is the next best solution available (Scharpf, 1998: 170). However, companies under the EU law are creatures of national legislation and exist only by virtue of respective national law (CJEU, 2012, C-378/10, paragraph 27). Therefore, the recognition of the interest of the group is a substantial matter of the company law, but the mutual recognition exclusively removes technical barriers. Accordingly, that in the recognition of the interest of the group the mutual recognition does not require to member states to apply foreign laws in cross-border situations, thereupon, respective matter is essential to harmonise.

ATTEMPTS TO REGULATE GROUP OF COMPANIES AT THE EUROPEAN UNION'S LEVEL

In the 1970s the European Commission (EC) proposed 3 significant attempts for regulating the group of companies. The first attempt in 1972 was the proposed fifth directive on company law to govern joint – stock corporations. In 2001 the proposal was withdrawn. The second attempt in 1974 was a

draft for a ninth company law directive based on the German model. The ninth company law directive proposed an autonomous body of law specifically dealing with a group of companies. In the 1980s the ninth company law directive was dropped due to the lack of support. It was challenged that the ninth company law directive was out of the scope of removal of restrictions of the freedom of establishment (Lutter, 1979: 6), as well as there was no apparent necessity to harmonise group law (Immenga, 1978: 242) and it was not clear on which principles legal act should be based (Böhlhoff, K & Budde, 1984: 164). Furthermore, it was argued that German law for a group of companies was too rigid and not particularly effective (Conac, 2013: 196). The third attempt was to implement a chapter of a group of companies in a Regulation of *Societas Europaea* (*SE*), but was also dropped in the 1980s. Instead in 1983 the Directive on consolidated accounts was adopted. Member States' company laws are left to deal with recognition of the interest of the group at national level.

In 2008 the EC again attempted to regulate group of companies. The EC undertook the task to reach a compromise on the European Private Company (*Societas Privata Europaea*) as the "European" private limited liability company that can be suitable for establishing cross-border subsidiary. In 2012 the EC started to doubt the possibility of reaching the agreement on *Societas Privata Europaea* (*SPE*) regulation (EC, 2012: 13). In 2013 the *SPE* project was dropped (EC, 2013: 9) and as the alternative was proposed the *Societas Unius Personae* (*SUP*) directive, which remains in legislative process. Article 23 of the *SUP* directive proposal imply that the parent company has the right to give instructions to its subsidiary's management body under the *SUP* framework. However, the precondition for exercising respective right is that the parent company in a subsidiary is single-member (shareholder) (EC, 2014). Moreover, issuing instructions are not established as the supranational right, therefore, is restricted to applicable Member State's national law. Lastly, the scope of application is not defined because Article 22 paragraph 7 of the *SUP* directive proposal determines that the parent company, if it gives directions or instructions, which subsidiary is accustomed to follow, shall be considered a director of respective subsidiary. It raises a concern whether under the *SUP* framework the parent company will become automatically shadow director and liable for all subsidiary's debts and conducts of misbehaviour.

LEGAL ACT FOR RECOGNISING THE INTEREST OF THE GROUP

Approximation of legally fragmented Member States' practices of recognition of the interest of the group by establishing enabling law can be achieved only by harmonisation process. Harmonisation of laws eliminates disparities between Member States' national laws (CJEU, 1998, C-355/96, paragraph 24) and ensures that competition is not distorted (CJEU, 2007, T-35/06, paragraph 17). The positive harmonisation is entailed by legislative actions at the EU level by the Regulations (Scharpf, 1998: 157) and the negative harmonisation is driven by case law, prohibitions of policies at Member State's national law and means of Directives and Recommendations and Opinions (Evans, 1996: 231).

According to Article 288 of the Treaty on the Functioning of the European Union (TFEU) a Regulation, a Directive or Recommendations and Opinions can enact the EU's legislation. The Regulation is binding in its entirety and is directly applicable in all Member States. The Directive is binding only to the result achieved and national authorities choose the form and methods. However, recommendations and Opinions have no binding force. Article 50 of the TFEU prescribes that the European Parliament and the Council to attain freedom of the establishment shall act by means of Directives. Based on the Article 352 of the TFEU (the flexible clause), if the Treaties have not provided the needed powers, but actions by the EU is necessary to reach one of the objectives set out in the Treaties within the framework of the policies defined, appropriate measures shall be adopted by unanimity in the Council of the European Union (Council). Article 352 of the TFEU can be applied

for adoption of a Regulation of group of companies with cross-border activities. Consequently, there are legal grounds for enactment a Regulation, a Directive or Recommendations and Opinions in the European company law.

The positive harmonisation is criticized for creating a single legal system rather than a single market and does not consider diversity of legal traditions and civil societies, therefore, generating compelling tension between Member States and the EU (Kurcz, 2001: 288). The EU company law is intended to be a coherent system of different Member States' laws (Van Den Brink, 2017: 218). To reduce the tension between uniform rules and a differentiated normative landscape the policy of minimum harmonisation was intended to resolve by allowing Member State to take independent actions therein (Dogan, 2000: 856). In the light of all foregoing, harmonisation in company law has been largely carried out via Directives (Lutter, 1995: 299). A Regulation in company law has been introduced as the legal act only in the fields where new legal instruments are needed (Wymeersch, 2001: 13 and 19), e.g., *Societas Europaea (SE)* Regulation of a European Company, the European Economic Interest Grouping (EEIG) regulation. However, the harmonisation remains partial, especially in the context of a group of companies. Accomplished company law harmonisation has rendered the Internal Market more accessible (set up group of companies) but falls short of yielding the benefits from the whole scale of the economy (managing group of companies) (Wymeersch, 2001: 16), therefore, the cause of action should change the direction. In the beginning of the harmonisation process by Directives in the field of the company law only six Member States' legal systems had to be considered. Those Member States' legal systems were based in part on common European legal principles. The accession of new Member States has made consideration of legal systems for approximation significantly more complex.

The EU policy-making process has been described as negotiations of reaching agreements and even implementing policies once they are reached (Wallace, 1996: 32). The EU negotiations are determined by bargaining among Member States and generally reach the lowest common denominator (Marks et al, 1996: 345). The reason is that Member States are primarily concerned with their own interests and will accept policies that are close to their preferences (Scharpf, 1998: 264). Policies of groups of companies are no different and so far only rules on transparency and formation of supranational groups of companies has been achieved for the reason that these matters insubstantially affect Member State pre-established civil order. Moreover, the harmonisation of group of companies' legal framework transfers regulatory sovereignty to the supranational level, thus Member States cannot affect them unilaterally without negotiations at the EU level. However, in removal of alternative solutions to the same legal problem market operators do not face Member States' adaptation costs because harmonisation optimises their trade. The issues of the bargaining arena of the EU policy-making can be resolved by turning it to problem solving type of decision-making ((Scharpf, 1998: 161). As it is already established that the recognition of the interest of the group at the EU level would provide long-run efficiency of the Internal Market and diversity of Member States' practices are alternative solutions to the same regulatory issue, there is a strong incentive for application of a problem solving negotiations, which can result in unanimous or nearly unanimous agreement.

The benefit of choosing a Regulation as the legal act for recognising the interest of the group is that it does not require any form of transformation or implementation, thus limiting diverging approaches. The disadvantage of choosing a Directive as the legal act is that it can only provide minimum standards, which can be amended to the requirements of the national legal system, therefore, interfere with the operation of the enabling law. The issue with adopting a regulation is that it is directly innervated in Member States' legal order and due to the legal basis of Article 352 of the TFEU it is very unlikely that there will be unanimous consensus in the Council (Conac, 2013: 213). The requirement of unanimous vote in the Council is the reason why the attempt of *SPE* Regulation failed and as the alternative was proposed *SUP* Directive (Jung, 2015: 645). Once the harmonisation affects internal company structure opposition becomes more rigid (Wymeersch, 2001: 16). Nevertheless,

concerns of recognition of the interest of the group are alike in all Member States and there are not that many solutions; differences are more technical than fundamental. Accordingly, if recognition of the interest of the group is separated from other aspects of the group of companies' law, it can significantly increase the chance of the support from Member States. Company law must constantly evolve due to changes in statutes and new Directives and Regulations are enacted in other sectors, as well as altered business practices developed by the demand of capital markets (Wymeersch, 2001: 21). The EC has stated that replacing Directives with Regulations when politically acceptable and legally possible would reduce national divergence (legal fragmentation) and gold plating (EC, 2007: 5), in which Member States apply more stricter rules than the one foreseen at the EU level (Hatzopoulos, 2013: 110).

It is controversial that matters of transparency (notification, disclosure and accounting standards) are harmonised, but the recognition of the interest of the group remains legally fragmented. The EU law imposes unified measures of verifying that pursuit of the interest of the group can be achieved; though there is absence of rules on how to execute it cross-border. In a mixed economy such as that of the EU only positive harmonisation combined with negative harmonisation can reduce the impeding effects of legal fragmentation and improve conditions of cross-border activities (Kurcz, 2001: 288). The management of the group can be the aspect that is harmonised by a Regulation, while keeping harmonisation of transparency by Directives.

Previous experience of failures of the 1970s of regulating the group of companies can be considered as out of date. There has been steady expansion of the EU powers and now it covers not only broader range of economic matters (e.g., Monetary Union), but also social responsibilities (e.g., employment, consumers, public health), which means that company law harmonisation is currently performing a very different function than before (Dougan, 2000: 860). The Regulation of SE Articles 15-17 of the Preamble reference to Member States' group law is an incoordination method of indirect harmonisation, which does not unify the subject directly, but it points to the applicable rules. Same critique of negative harmonisation can be applied to indirect harmonisation. Moreover, to create a supranational body, harmonised group law is not needed. The SUP directive proposal provides an incomplete framework for pursuing the interest of the group (Hommelhoff, 2014: 1065). The boundaries of the right to give are not set in the SUP directive proposal, but the EU law should draw it (Teichmann, 2014: 3561 – 3564). General rights to give instructions without boundaries construct a major regulatory gap, which restricts functioning of enabling law. The SUP directive proposal is not the appropriate framework for tackling a group of companies' issues (Teichmann, 2015: 229). There is still urgency to deal with recognition of the interest of the group.

The consensus for adoption of a Directive could be reached easier than for a Regulation because, according to Article 50 of the TFEU and Article 294 of the TFEU, only qualified majority in the Council is required. A Directive could be a choice, if Member States' intervention is limited by intensive harmonisation. In such a case political opposition in the Council still must be expected. The political tension can be reduced by a well-targeted Directive that addresses merely recognition of the interest of the group. By total or maximum harmonisation Member States are deprived from the capacity to derogate from prescribed provisions, if a Directive states precisely which arrangements are allowed and which are not, as well as only application of specific measures is approved (Van Den Brink, 2017: 218). The CJEU has enabled the EU legislator in the view of the objective achievable to stipulate in Directives exact obligations to be transposed into national law to ensure the absolute identity of national provisions across all Member States (CJEU, 1977, Case 38-77, paragraph 12). The well-functioning of the enabling law of pursuit of the interest of the group depends on uniformity across all Member States. A Directive of partial harmonisation is also a choice, where certain aspects of activity are maximally harmonized, whereas in others Member States' interventions are allowed (Kurcz, 2001: 295). A Directive could also introduce options, whereby Member States may choose between several alternatives, but cannot derogate from options provided in a Directive or in an Annex to it. It is well known that options in a Directive are often a way to reconcile different

opinions ((Wymeersch, 2001: 8). For the purpose of the enabling law options and partial harmonisation should not be dedicated to features that directly affect cross border management such as the right to give instructions and its boundaries, direct liability of the parent company and exit rights of minority shareholders, but for technical questions such as the formation of a control option or partial harmonisation could be applied.

The establishment of a Recommendation rather than adoption of a Regulation or a Directive would be a more cautious approach in the recognition of the interest of the group (Conac, 2013: 213). Moreover, a recommendation is less burdensome to adopt than a Regulation and a Directive, since the European Commission (EC) does not need Member States' approval. A recommendation could create a whitelist and a blacklist of practices of recognition of the interest of the group. Non-constraining legal instruments tend to promote the evolutionary character of the rules (The Committee on Europe of the Club des Juristes, 2015: 21). For those Member States, which do not address the interest of the group, a recommendation would provide practices for completion of their legal system that are already recognised at the EU level. A less binding Recommendation not only gives Member States and market participants more time to adjust to reforms, but also gives preliminary options, which in turn reduce opposition to harmonisation (Hertig & McCahery, 2006: 345). If a recommendation of the recognising of the interest of the group is applied EU-wide and does not lead to unintended consequences, it could be tuned to a Regulation or a Directive. Non-binding force of a recommendation does not mean that it cannot be used efficiently for harmonisation purposes (Lenaerts et al., 1999: 233). Despite their lack of binding effect, they are not fully without any legal consequences because Recommendations must be taken into consideration when interpreting national law in light of binding EU legal acts (CJEU, 1989, C-322/8, paragraph 18). On the one hand, there are no binding EU legal acts in the field of recognition of the interest of the group. On the other hand, the failure of Recommendations to reduce legal fragmentation of the recognition of the interest of the group would cease to be the confirmation that Member States cannot sufficiently achieve the objective of uniformity of rules and proposed action be better achieved by the EU, as well as have cross-border effect.

CONCLUSIONS AND RECOMMENDATIONS

1. There is legal fragmentation in Member States practices of recognition the interests of the group and it is limiting the benefits from the whole scale of EU's economy, which negatively impact sustainability and competitiveness of companies in the long term. In the Internal Market is absence of a legal framework that establish efficiency and certainty in organising and managing the cross-border group of companies. However, at the EU level is needed enabling law for pursuing the interest of the group rather than protective mechanisms for creditors', minority shareholders' and other stakeholders' interests. The question of recognising the interest of the group has matured over last decades and at this point is overdue for already some time.

2. A legal act for recognising the interest of the group at the EU level should be a Regulation because this particular type of legislation would facilitate utmost uniformity across all Member States by confining diverging approaches. The unanimous consensus in the Council for the Regulation of recognising the interest of the group could be achieved, if respective concern is separated from other aspects group of companies' law.

3. A Directive is also an option for a legal act of recognising the interest of the group, if totally or maximally harmonised are substantial matters, e.g., the definition of the group of companies and its interests, the right to give instructions, and options and partial harmonisation are devoted to features of technical nature. Although qualified majority in the Council is required for adopting a Directive,

the opposition in the Council must be expected. Nevertheless, the political resistance can be diminished by drafting well – targeted Directive on the recognition of the interest of the group. For a legal act of recognising the interest of the group being the enabling law a Recommendation is better suited to be an intermediate legal instrument rather than final.

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HEATING FACILITIES TEMPERATURE CONTROL SYSTEM IN TURIBA UNIVERSITY

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Abstract

The paper presents results on design and implementation the monitoring system to control temperature of heating facilities in Turiba university. Key point of the project was implementation the internet of things ideas into proposed system. A design and prototyping of hardware circuits, including used sensors and hardware control and communication boards based on Raspberry PI Pico platform, is described. Developed software solution for the control board, implemented with the use of MicroPython programming language, and user interface with the use of JavaScript programming language, are presented. Results of experimental verification of developed solutions confirmed correctness of all anticipated results. Developed platform could be used for further investigation on microclimate control systems for buildings.

Keywords: IoT, microcomputers, software, hardware, control, sensors.

DOI: 10.37804/1691-6077-2023-14-123-128

Introduction

Heating facilities are a vital component of any building, and it is important to have a reliable temperature control system in place to ensure the comfort of occupants. Such temperature control systems help regulate the interior climate by controlling the amount of heat that is generated within the building. This ensures that temperatures remain comfortable and consistent throughout all parts of the building.

The most common type of heating facility temperature control systems are thermostats, which measure indoor air temperatures and adjust accordingly to maintain a desired level. In addition to this, some systems also include sensors that can detect changes in outdoor temperatures, allowing for further adjustment if needed. Other features may include timers or energy-saving settings to reduce energy consumption during off-peak hours or when there is less need for heat production.

When selecting a heating facility temperature control system, it's important to choose one with advanced features such as zone controls and programmable settings so you can customize its performance according to your own needs. Zone controls allow different areas of the building (e.g., classrooms) to be heated independently from other areas (e.g., office rooms). Programmable settings enable one to set up automatic adjustments based on daily schedules or occupancy levels; this way one doesn't have to worry about manually adjusting every time temperature changes indoors or outdoors.

It's also important to make sure user chosen the system that has adequate safety measures built in – such as smoke detectors, carbon monoxide alarms, fire extinguishers – to protect against potential hazards related to excessive heat generation inside enclosed spaces like attics and crawlspaces where combustible materials may be present. Additionally, it is preferable to make systems with remote monitoring capabilities so one can keep an eye on things even when away from the building via smartphone app or web portal access.

A quality of the heating facility temperature control system will not only help to keep property warm, but will also save money by reducing energy consumption over time due increased efficiency thanks to its advanced features. Ultimately, having an effective temperature regulation solution in place will provide peace mind knowing everyone staying inside the building stays safe comfortable year-round.

1. An analysis on advances in the heating facilities temperature control and monitoring systems

Currently, a number of researches related to temperature control inside the building were provided. Thus, there is known research which presents the design and implementation of a temperature control system for heating facilities based on an Arduino microcontroller board connected to a thermistor sensor, as well as its application in a real-life environment. The proposed system can be used to measure the temperature inside heated buildings or other structures and adjust accordingly the operation of different components such as thermostats and fans in order to maintain desired temperatures levels at any moment of time (Khaing K. K. et al., 2020).

Another paper discusses various aspects related to designing temperature control systems for industrial heating applications including selection of appropriate sensors, controller parameters setting methods, calibration techniques etc., with special emphasis on PID controllers which are widely used in this domain due to their robustness and ease of use compared to more complex alternatives like fuzzy logic controllers etc. (Fanjie Wei, 2017).

In recent years it became popular to develop so called “smart” solution for different purposes. For example, there is known work which describes development process undertaken in order to create smart home automation system that was capable controlling indoor temperature using Internet Protocol Network communication technologies between user's mobile device and server located at remote location within same network infrastructure. Results showed that when implemented correctly it could provide reliable accurate performance over long periods time (Fontes F. et al, 2021).

The typical design, modeling and simulation of temperature control systems for heating facilities also described in provided researcher. Thus, in (Bahramnia, Pouria et al, 2019) authors focused on the design, modeling, and simulation of a temperature control system for heating facilities. It begins with a brief overview of existing research in this area and highlights the need for further development. The authors then go on to describe their proposed system which includes sensors, controllers, actuators, and other components. They present several mathematical models that are used to simulate the behavior of the system under different conditions. The results show that their proposed model is able to accurately predict temperature changes within a certain range. Finally, they conclude by discussing some potential applications of such systems in various industrial settings. Overall, this paper presents an interesting approach to designing temperature control systems for heating facilities using modern engineering techniques such as mathematical modeling and simulation. Furthermore, its findings could have important implications for improving energy efficiency in these types of applications.

Another research (Khandare, Shilpa S., et al., 2013) presents the design of a temperature control system for an industrial heating facility using fuzzy logic controller. The authors propose a fuzzy logic-based controller which is built on linguistic variables, and demonstrate how it can be used to effectively regulate the temperature in the facility. Through simulations and experiments, they show that their proposed system outperforms traditional PID controllers in terms of precision and stability. They conclude that by incorporating linguistic variables into their model, they are able to improve upon the performance of existing systems. This research provides valuable insight into potential ways to improve upon current industrial heating facilities, making them more efficient and reliable.

Following research (Karamiyan, Amirhossein Zadeganhdari et al. 2018) provides a comprehensive overview of the challenges associated with controlling temperatures in heating systems. The authors propose a novel approach to this problem by combining traditional PID controllers and fuzzy logic with artificial neural networks (ANNs). This system is evaluated through simulations on two different case studies: an industrial hot water heater and a residential firewood stove. Results indicate that ANN-based fuzzy PID outperforms both conventional PID and non-fuzzy approaches in terms of accuracy, stability, and robustness. The authors also discuss potential applications for their proposed system as well as ways it could be improved or extended further. Overall, this paper presents an innovative solution to the challenge of accurately controlling temperatures in heating systems while offering insight into future directions for research in this area.

In (Li, Chun Cheng, et al, 2014) authors present a design of a temperature control system for industrial heating facilities. The authors propose an algorithm based on proportional-integral (PI) control, which is used to improve the accuracy and stability of the system. The proposed algorithm is tested using simulations and experiments in order to evaluate its performance. Results show that the PI controller offers better accuracy and stability than conventional methods when controlling temperatures in industrial heating facilities. Additionally, several parameters were optimized by applying mathematical optimization techniques such as genetic algorithms and particle swarm optimization, resulting in improved system performance. This paper provides valuable insight into how temperature control systems can be designed more accurately with improved stability using modern methods such as PI controllers and optimization techniques like genetic algorithms or particle swarm optimization.

One more research (Liu, Jingsong, et al., 2015) presents a novel temperature control system for an industrial heating facility. The proposed system is based on fuzzy logic controller and adaptive PID algorithm, which can effectively handle the nonlinearity and uncertainties of the heating process. The performance of the proposed system was evaluated through experiments, with results showing that it is more effective than conventional PID controllers in both static and dynamic conditions. This work provides valuable insight into improving temperature control processes in industrial settings by combining fuzzy logic controller with adaptive PID algorithms.

2. The use of Internet of Things technologies to control and monitor building heating system parameters

Research on the use of Internet of Things to control heating facilities temperature in a building has been conducted extensively over the past few years. The most common application is for smart thermostats, which allow users to remotely adjust their home or office's temperature using an app or web portal. Smart thermostats can be programmed to automatically turn off and on at certain times throughout the day, as well as respond to external factors such as outdoor temperatures. Other applications include energy monitoring systems that track usage data and provide feedback on how energy efficient a building is being operated; automated ventilation systems that open windows when it gets too hot inside; and remote-controlled heating valves that can be adjusted from anywhere with an internet connection. Research also indicates that IoT technology can help improve efficiency by reducing energy consumption, increasing comfort levels, and improving indoor air quality. Following we provide some analysis on recent publication upon the topic.

Survey presented in (Mengda Jia, et. Al, 2019) provides an overview of the Internet of Things (IoT) applications in smart buildings, focusing on heating facilities temperature control systems and examines various types of sensors used in

these systems as well as different protocols that can be adopted to achieve efficient communication between devices/sensors within a building network or across multiple buildings or networks.

In (Havard N. et al., 2018) authors present a smart building control system based on IoT technology which is designed to monitor and adjust the environment parameters such as temperature and humidity inside the building according to user requirements in order to provide comfortable living conditions for people inside the building with minimum energy consumption. The proposed system includes several subsystems: sensing subsystem, data processing subsystem, decision making subsystem, display and alarm subsystem, user interaction subsystem and actuator controlling subsystem which are connected together through internet connection so that information about indoor environment can be collected from remote locations in real-time manner for monitoring purpose or adjusting accordingly when needed by users remotely via mobile phone application or web browser interface from anywhere outside the premises.

Also, it should be mentioned research (Khaoula E. et al, 2022), where authors propose a low cost integrated IoT solution using Arduino boards along with cloud computing platform specifically tailored towards providing automatic temperature control facility at residential premises without requiring any human intervention while ensuring energy efficiency at same time; this will also provide additional security benefits due to presence of motion sensors within each room where temperatures need adjustment depending upon occupancy status detected automatically through motion sensor readings sent over wireless network directly into cloud server where all necessary adjustments are made accordingly without requiring any manual input from users side thus reducing overall costs associated with installation and maintenance while improving comfort levels at the same time.

Basing on provided analysis, it could be defined typical structure for heating pipes temperature control and monitoring in buildings. Such system should be composed of multiple components, taking into account recent advanced in technology and science.

Firstly, there are temperature sensors installed on the pipes that detect the current temperatures in real-time. These data will be sent to a central computer which can be accessed remotely by authorized personnel by means of IoT technology.

Secondly, this central computer will have software designed to process these readings and compare them with set parameters or limits. If any of the values exceed these limits an alarm will sound alerting personnel to take action.

Thirdly, if it is determined that additional heat needs to be applied then an actuator such as a solenoid valve or other device can be activated from the central unit in order to adjust the flow rate of hot water or steam into the pipe network as needed.

Finally, all data collected by sensors should also be stored so that personnel can review historical records for trends or patterns over time if necessary, for troubleshooting purposes.

3. Heating facilities temperature monitoring system in Turiba University

According to detected components for system under development, and taking into account currently available components, it was developed temperature monitoring system for Turiba University heating facilities.

Turiba University receives heating from its own heat generating plant, which supplies three buildings (building A, building B, and two supply branches for building C: C1 and C2). Also, this plant used to supply university buildings with hot water. General representation of heating and hot water supply is presented in Figure 1.

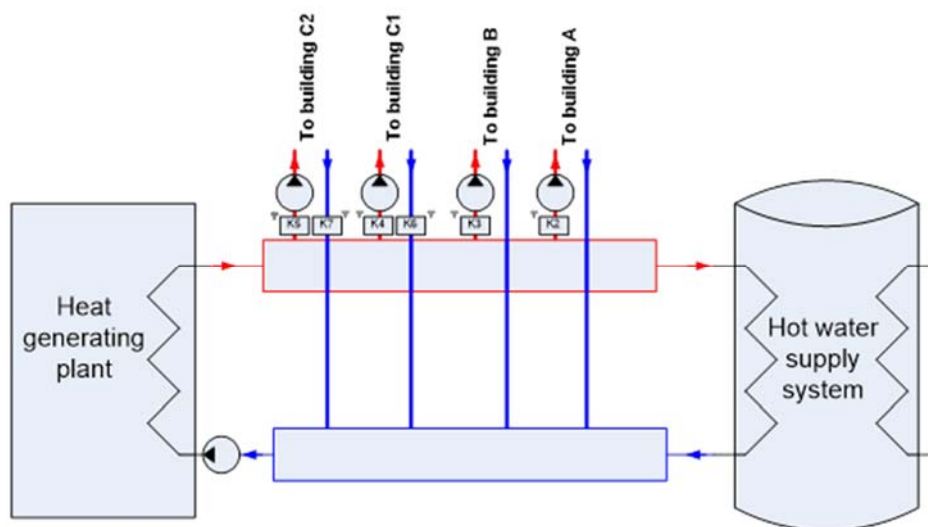


Figure 1. General representation of Turiba University heat and hot water supply system

The first stage of the project implementation includes installation temperature sensors on the input and output pipes into each university building. Later, temperature data should be transmitted to database server, where data should be stored and displayed for monitoring purposes. This task should be solved with the use of non-expensive components. For

this, it was decided to use Raspberry PI Pico W module. This module, on one hand, is relatively cheap, and on the other hand, it provides possibility to control relatively small processes by means of connecting a number of measuring and actuating devices, as well as to be connected in networks by means of preinstalled Wi-Fi module. Thus, problem of heating pipes temperature measurements is solved by using Raspberry PI Pico module as data acquisition device, which at the same time will be responsible for sending collected data to central database server by means of network connection. As measuring sensor, it was used two types of temperature sensors DS18B20: single unit, which needs additional case to be used as part of ready-to-use device, and one with a waterproof probe, which could be put in relatively hostile environment, and sensor itself is separated from control module.

As a first stage, it was created a prototype for measuring unit, basing on single DS18B20, and Raspberry PI Pico W module. Measuring circuit was created with the use of a breadboard, tested, and final ready-to-operation result was achieved (Figure 2). To transfer data, it was developed measuring and data transmission code with the use of MicroPython programming language.

At the next stage, it was developed case which contains Raspberry PI Pico W module, with all circuit components, as well as LED indicators used to show condition of the measuring module, and several types of developed cases were produced by printing with 3D printer (Figures 3 – 5). Cases were developed for both types of temperature sensors, with and without waterproof probe, and different design for cases also was tested.

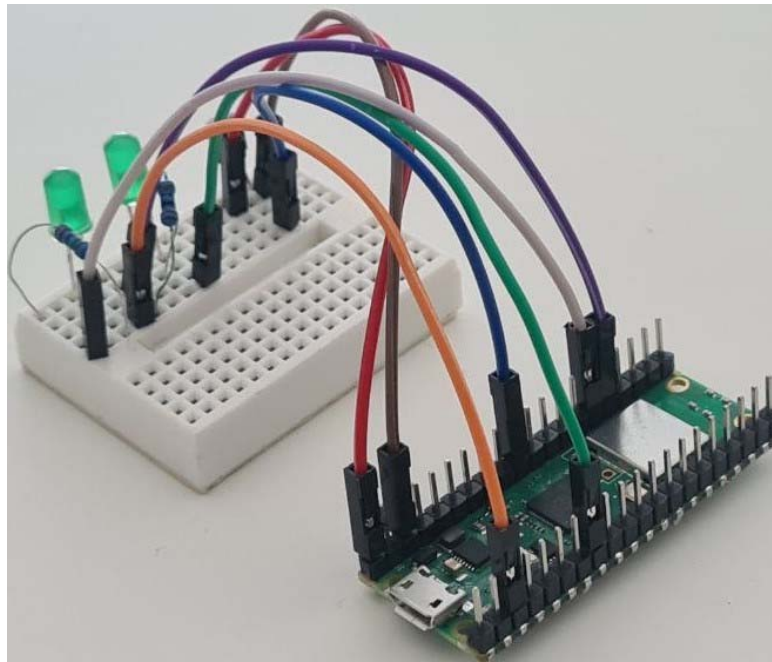


Figure 2. Prototype of developed measuring unit



Figure 3. Developed measuring unit within case with LED indicators to show Power is on, WiFi is connected and Server connection established



Figure 4. Developed measuring unit within case with the waterproof probe sensor



Figure 5. Developed measuring unit within case with alternative design

Next step in the project implementation was development of the server backend and frontend application. As database management system it was used MySQL. Also, API was developed to communicate with database and user interface. JavaScript program was developed to process data received from each temperature sensor and send it to database. Also, user interface, which shows archive temperature data for defined period of time, was developed (Figure 6).

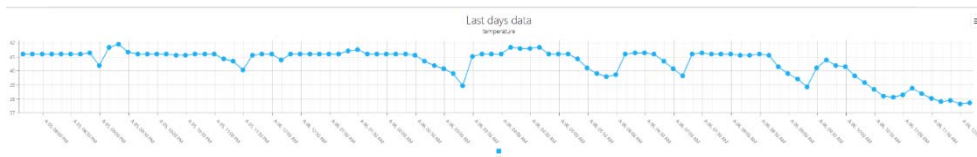


Figure 6. Example of developed user interface graph

So, this paper describes development, launching and testing measuring and data transfer and data storage modules for heating facilities temperature control and monitoring for Turiba University. Next steps will be related to research on heating facilities efficiency, which will be provided basing on developed system.

Conclusions

The paper presents an analysis on the existing systems used for temperature monitoring and control in the buildings. Provided analysis allowed one to design own solution for such as system, based on IoT components. Measuring module was designed and developed basing on low-cost components and modules, such as Raspberry PI Pico W. Data transfer solutions were implemented in appropriate software parts. Database to store collected temperature data was chosen, and software for temperature data collection and storing it to the database was developed. Finally, user interface was created for means of data monitoring. Developed solutions as well as installed hardware, will be further used to provide experiments on the quality of heating in Turiba University buildings.

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THE FEASIBILITY OF ACHIEVING OBJECTIVES OF THE EURO 7 STANDARDS IN THE BALTIC COUNTRIES

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Abstract

Today, the concept of sustainability covers an increasing number of business areas. The transport sector is one of the largest contributors to air pollution in the world today but still plays a fundamental role in Europe's economic growth. Finding the optimum balance between achieving sustainability objectives and boosting the performance of the transport sector is essential to avoid undermining Europe's economic activity and growth prospects. One of the main tools for promoting environmental, social and economic sustainability is the EURO 7 standards, which have the most significant impact on the transport sector, and which aim to minimise carbon emissions by phasing out the production of combustion-engined cars by 2035, set stricter emission standards and introduce various emission control mechanisms. Each EU country has ambitious carbon minimisation goals. However, the current vehicle fleet structure analysis of the EU countries shows negative past and future trends in terms of sustainability factors. The goal of the study is to evaluate the feasibility of achieving the carbon minimisation objectives of the EURO 7 standards in the Baltic countries within the timeframe set.

In order to achieve this goal, the structure of the Baltic countries vehicle fleets was analysed in terms of sustainability parameters and the transport sector expert forecasts of achieving the carbon minimisation objectives of the EURO 7 standards in the Baltic countries were collected.

Keywords: carbon emissions, economic activity, EURO 7 standards, sustainability, transport, vehicle fleet structure.

DOI: 10.37804/1691-6077-2023-14-129-143

Introduction

Today, the concept of sustainability is becoming increasingly prevalent. We are focusing on how to be sustainable in everyday life, for example, by recycling waste. Sustainability in a simplified sense has also been relevant for years at company level, for example, through the digitalization of printed materials. Introducing sustainability principles into business has previously been a voluntary choice. By embedding sustainability in business, a company could position itself as socially responsible, thereby gaining new customers for whom this aspect is important. In the context of a changing global situation, with rapid environmental change, social and economic inequalities, the issue of making sustainability a mandatory requirement for conducting business has been raised at international level. As the transport sector as a business is one of the largest contributors to air pollution in the world today with increasing tendency but still plays a fundamental role in Europe's economic growth, the evaluation of achieving the carbon minimization objectives of the EURO 7 standards, a complex legal instrument to achieve sustainability goals, is becoming more and more important for ensuring healthy environmental, social and economical system development.

The goal of the study is to assess different approaches of evaluating sustainability performance of the transport sector, to assess the trends in the development of the national vehicle fleet structures in the Baltic countries by data analysis and expert interviews in order to evaluate the feasibility of achieving the carbon minimisation objectives of the EURO 7 standards within the timeframe set.

The first chapter of the article will analyze and compare different approaches of evaluating sustainability performance of the transport sector in order to understand its essence in the data analysis of the development of the national vehicle fleet structures in terms of average age of vehicles, share

of electric cars and other sustainability related indicators in the Baltic countries performed in the second chapter. The third chapter will assess expert opinions related to the feasibility of achieving the carbon minimisation objectives of the EURO 7 standards within the timeframe set for the Baltic countries.

1. Literature review

Sustainability aspect assessment of the transport sector has been a challenging issue for many years. Many different approaches have been used but still no holistic and perfect in terms of applicability method is found. The biggest challenge of sustainability aspect assessment in the transport sector is the multifaceted nature of sustainability. Sustainability can be evaluated from three different angles – environmental, social and economical. Each of angle can be described with many indicators. Which indicators describes sustainability phenomena the best – that is the biggest challenge.

One of the most frequently used approaches in terms of sustainability aspect assessment of the transport sector is the aggregation of sub-indicators that describes research phenomena into a composite indicator. The biggest benefit of creating composite indicator is possibility to summarize, compare and track the performance of different countries [Gruetzmacher et al. 2022]. So, as the end result we have index that is comparable between countries with completely different social, environmental and economical development and which allows to identify areas for improvements. If we would compare big amount of separate indicators, it will not allow to capture complex and multifaceted aspects which sustainability contains.

The selection of sub-indicators is the fundament of reliable composite index creation. Indicator usage and selection in trend development analysis has been challenging in many business areas, especially the transport sector. Separate indicators can be analyzed but still they can show only some trends and cannot determine if some research unit is sustainable or not if there are no benchmarks to compare. When selecting indicators to evaluate sustainability, firstly we need to assess whether sub-indicators covers all sustainability aspects – economical, environmental and social. At the same time, indicators must be limited in number in order not to make research too complex and keep credibility. It is also very important that indicators correspond to underlying sustainability goals derived from the chosen definition of sustainability in transportation to assess progress towards sustainability and to serve policy purpose [Bongardt et al. 2011]. Interesting that some authors highlights that there is a need for additional qualitative information (sub-indicators) and interpretation while others argue that only quantitative sub-indicators can be used in composite index creation [Bongardt et al. 2011].

Sub-indicators can be selected according to previously made similar context researches [Gruetzmacher et al. 2022]. According to the authors' previously made researches, sub-indicators are also clearly defined in international sustainability regulation documents. In addition, another research claims that it is not enough to take sub-indicators from previously made researches or international sustainability regulation documents but critically important is to also attract expert group that could really evaluate if selected sub-indicators are describing good enough the research phenomena [Gudmundsson et al. 2017]. This even is stated as only way to get shortlisted amount of reliable and most appropriate indicators and categorize them in more specific and comparable sections. In addition, not only experts should be involved but also policymakers from all countries involved in research [Bongardt et al. 2011]. Another approach how to select best sub-indicators is scoring according to particular criteria, like:

- Definition and concept available in existing reports,
- Has been applied in practice in several cities,
- Data regularly available or readily produced,
- Clear interpretation possible,
- Scale to normalize indicator for the index can easily be defined,
- Relevant and actionable for cities [Gudmundsson et al. 2017].

After this scoring evaluation from experts can be performed to provide the best short-list of sub-indicators.

Another benefit of composite index is that it allows to compare also sub-indicators that have no common measurement unit [Gruetzmacher et al. 2022]. But other authors claim that the data need not only to be available but also comparable (based on similar methods) [Gudmundsson et al. 2017]. To make data comparable, normalization of data should be performed by using linear rescaling. So, the first step of analysis would be the selection of sub-indicators and validation prior aggregating them in composite indicator. Before aggregation, it is necessary to assign weight of each sub-indicator. This is a common approach how to reflect the significance of each sub-indicator and the application of weights might have significant impact on the composite index result. There are authors that argues that the usage of equal weights is very inaccurate option to choose as each of sub-indicators have different characteristics and preferences [Gruetzmacher et al. 2022]. Other authors argues that equal weights should be used of sustainability aspect assessment as economical, environmental and social aspect should be balanced when creating sustainability index [Gudmundsson et al. 2017]. Another way how to assign weights would be according to expert opinions but this from scientific point of view also would be subjective. So, in scientific researches most preferred methods are statistical.

One of most popular statistical sub-indicator weight assigning method is Data Envelopment Analysis which is a non-parametric method, that evaluates the relative efficiency of several decision-making units based on linear programming. This method measures the relative efficiency of each decision-making unit and gives observations on inputs and outputs values in a set of familiar entities, without specific knowledge on parametric production function [Gruetzmacher et al. 2022]. As a result, this method allows to select the weights that are the most appropriate for each decision-making unit. Each and every decision-making unit is evaluated – whether it is efficient or inefficient. The linear combination of most efficient decision-making units creates benchmark and all other decision making units are compared with benchmark and weights are assigned. It is important to take into account that sub-indicators can have different nature. When constructing a composite indicator, if a sub-indicator has a good relative performance it suggests that this country views this policy dimension as relatively important, so it deserves a higher weight. A sub-indicator with a low relative performance indicates lower importance attached by the country in that context, therefore it receives a lower weight [Gruetzmacher et al. 2022]. There can be situations when sub-indicators have a good relative performance and good effect on sustainability performance, like electro vehicle share and renewable energy proportion. But there also can be sub-indicators that have a good relative performance but bad effect on sustainability, like traffic accidents, emission of a pollutant and increasing trend of those sub-indicators are not desirable. To stabilize the effect of positive and negative trend sub-indicators, the Benefit of the Doubt Model is used which basically treats non desirable sub-indicators as reverse and assumes that the reverse sub-indicators values can decrease or increase independently from the values of good impact sub-indicators [Gruetzmacher et al. 2022]. Conceptual model according to authors' opinion of previously analyzed indicator analysis added in Appendix 1.

Data Enveloping Analysis method assign very high weights to factors for which the decision making units are particularly efficient and very low weights to all the other factors. As a result, the relative efficiency of a decision making unit may not really reflect its performance on the inputs and outputs taken as a whole. Another limitation of this method is that it classifies all decision making units into two groups, efficient and inefficient, while in most cases ranking efficient and inefficient decision making units are essential. The third limitation of this method is that, an inefficient decision making units with a smaller efficiency score does not necessarily mean poorer performance than one with a larger efficiency score because only the units under the same frontier facet are comparable [Marzieh et al. 2014]. It would be important to rank and compare efficient and non-efficient decision making units based on their sustainability by using Principle component analysis/Factor analysis by considering correlation between separate indicators and latent factors. Ranking would reflect the importance aspect, correlation the connection aspect. So, this method is more precise in terms of general applicability.

There are also two conflicting views of composite index usage. The opponents of composite index believe that composite index is not reliable because its construction is subjective. Moreover, no single index can answer all questions and there is a need for multiple indicators. On the other hand, some researchers believe that composite indices are valuable communication tools because they limit the number of presented information and allow for quick and easy comparisons [Marzieh et al. 2014]. Still, composite index method in terms of sustainability aspect assessment in the transport sector could be considered as the most precise if strong algorithm of the best suiting sub-indicators can be grounded as this is the fundament of composite index development.

It is also possible to integrate indicator-based approach in decision making model. By applying some particular analysis method, it can be evaluated from two perspectives – system level and decision making level. From system perspective applying a certain method can be considered as low if we look from one vehicle perspective, medium from transport or urban system perspective and high from society perspective. If we look from decision making perspective, low level can be considered as individual decision, medium level community or city decision and high level national or global decision. Indicator-based analysis approach is method that is classified as high from both – system and decision making perspective as can be better used at higher hierarchy [Nguyen et al. 2020]. By taking into account this model, it would be possible to develop a holistic decision-making tool for transport alternatives. By analyzing the framework of a holistic decision support, it is possible to separate first step - defining system level and decision-making level of the assessment and then to set the criteria for comparing the alternatives (in this particular case environmental, social, economical). After that it is necessary to decide which indicator based analysis approach to use and prepare data inputs for particular method. After that data processing and simulations have to be performed and alternatives from outcomes should be compared. In final stage, alternatives should be ranked according to certain criteria [Nguyen et al. 2020]. So, each and every analysis step consists of decision making process also if we analyze sustainability aspect of the transport sector. In other words could be said that decision making chain in this particular research consists of identification of the decision, information gathering, alternatives identifying, alternatives choosing, one particular alternative implementation and decision reviewing. Depending on alternative decisions made during all research process, final outcome can vary significantly, so all choices should be critically evaluated from different angles and choices well grounded to succeed.

2. Data analysis

The protection of air quality and reduction of greenhouse gas emissions is a first priority for the European Commission [European Commission, 2023]. From one side, we see challenging emission reduction targets for all three Baltic countries by 2030, especially in Estonia. From other side, we also see that only starting from 2020 we can notice some significant CO2 emission reductions in the Baltic countries. For Lithuania in the previous years we could even notice emission increases.

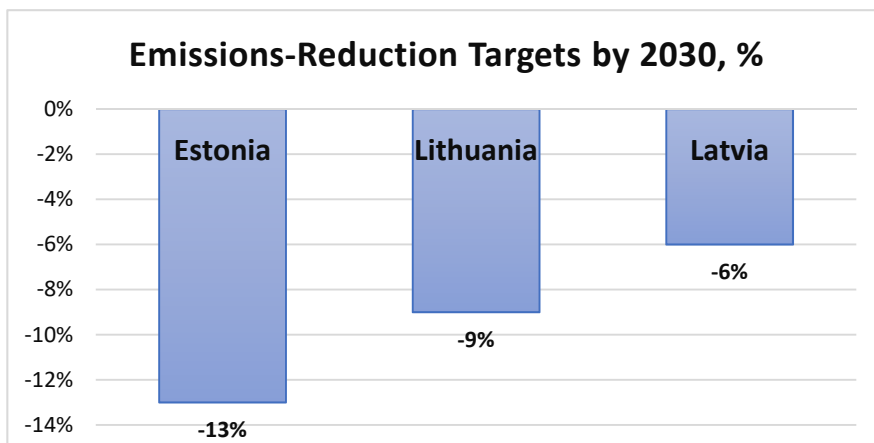


Figure 1. Emissions reduction targets for the Baltic countries by 2030, % [4.]

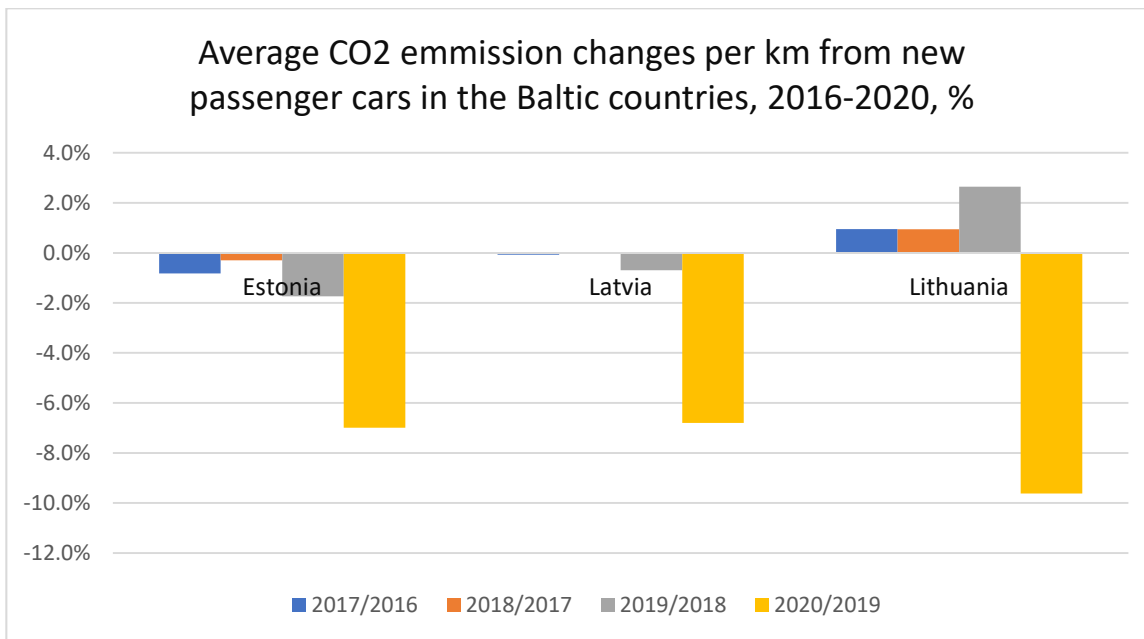


Figure 2. Average CO2 emission changes per km from new passenger cars in the Baltic countries, 2016-2020, % [10.]

We also see that the average age of the Baltic countries vehicle fleet (passenger cars) is very old. Lithuania has the second oldest passenger car vehicle fleet in the European Union countries, reaching 17 years. Also Estonia is close to this age, reaching 16.7 years. The average age of Latvian passenger car vehicle fleet is 14.3 years and is with tendency to increase year by year, so also is considered as old vehicle fleet. If the vehicle fleet is older, it causes bigger amount of emissions, so the aim is to change vehicle fleet mix to newer cars with already implemented emission reduction and control systems. Also not very good tendency from sustainability perspective is increasing proportion of older vehicles year by year and not so sharply or even decreasing tendency for new car proportion in total vehicle fleet structure, especially, in Lithuania and Estonia.

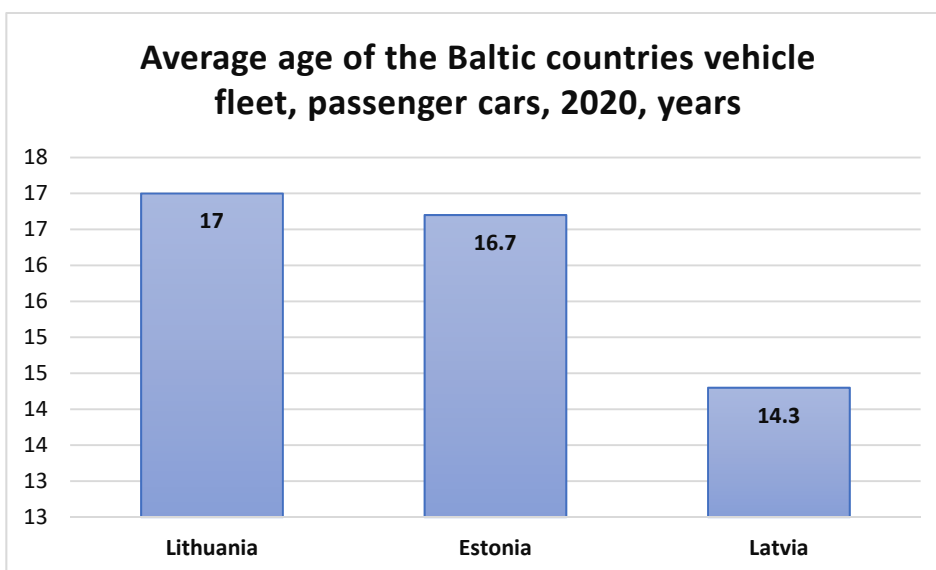


Figure 3. Average age of the Baltic countries vehicle fleet, passenger cars, 2020, years [9.]

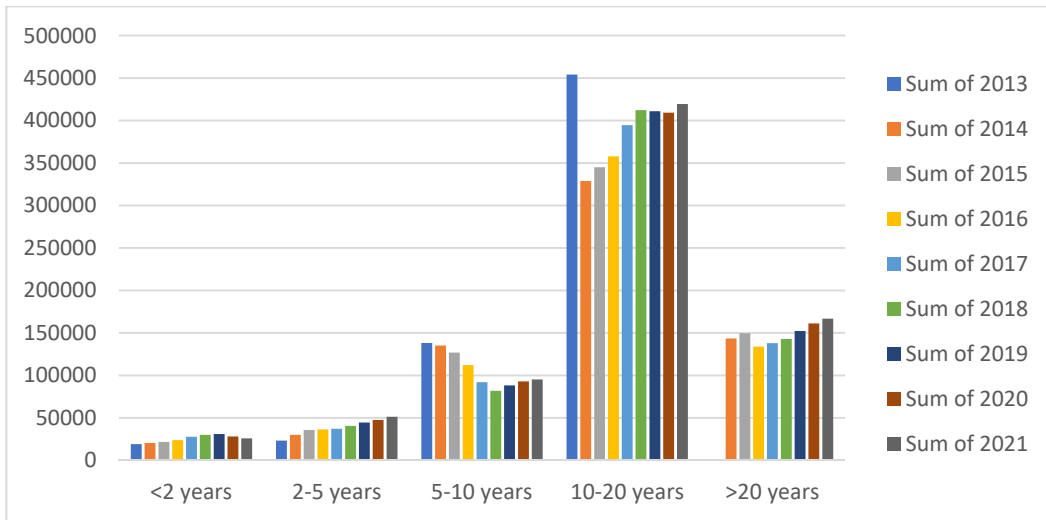


Figure 4. Average age of the vehicle fleet in Latvia, passenger cars, 2013-2021, years [12.]

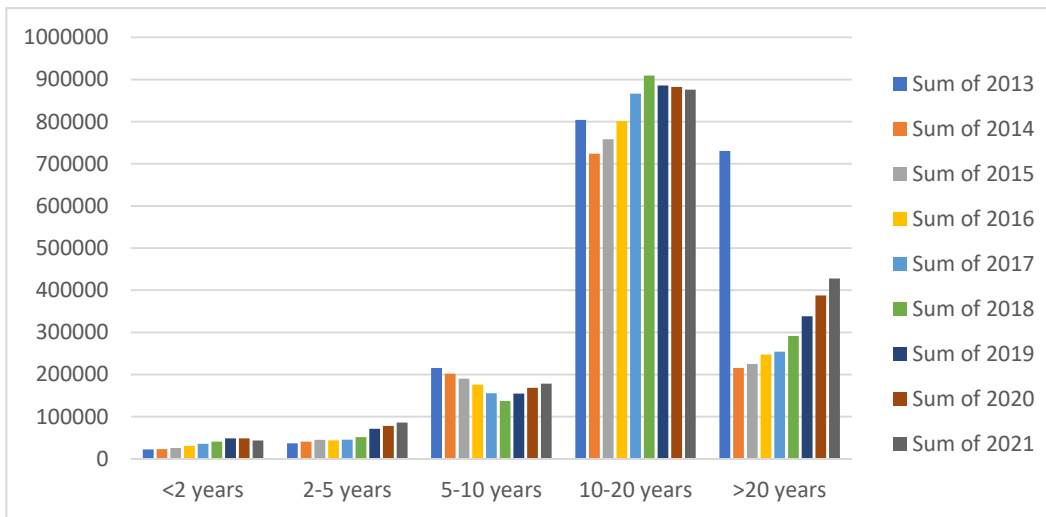


Figure 5. Average age of the vehicle fleet in Lithuania, passenger cars, 2013-2021, years [12.]

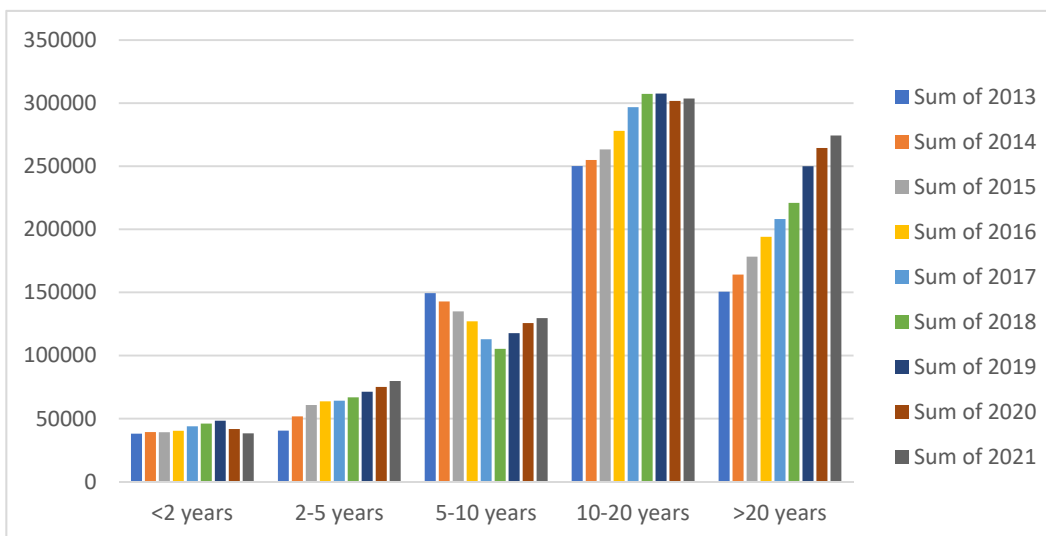


Figure 6. Average age of the vehicle fleet in Estonia, passenger cars, 2013-2021, years [12.]

Low-emission and zero-emission alternative fuel usage is important instrument to reduce emissions [European Commission, 2023]. If we look on zero emission vehicle proportion in newly registered passenger cars in 2020, we also see very low proportion, 1.1 % in Lithuania, 1.9% in Estonia and 2.1% in Latvia. To compare, this proportion in Norway which is the good practice of sustainability implementation in national vehicle fleet, is 51.6%. Green Deal related questions have been on European Union countries table for comparably long time but only starting from 2019 we can see some positive tendencies related to national vehicle fleet mix shifting to Green Deal compliant zero emission vehicles in newly registered passenger cars fleet. The Baltic countries newly registered passenger car fleet in terms of sustainability still has a long way to go to reach Norway results which can be considered as good practice example.

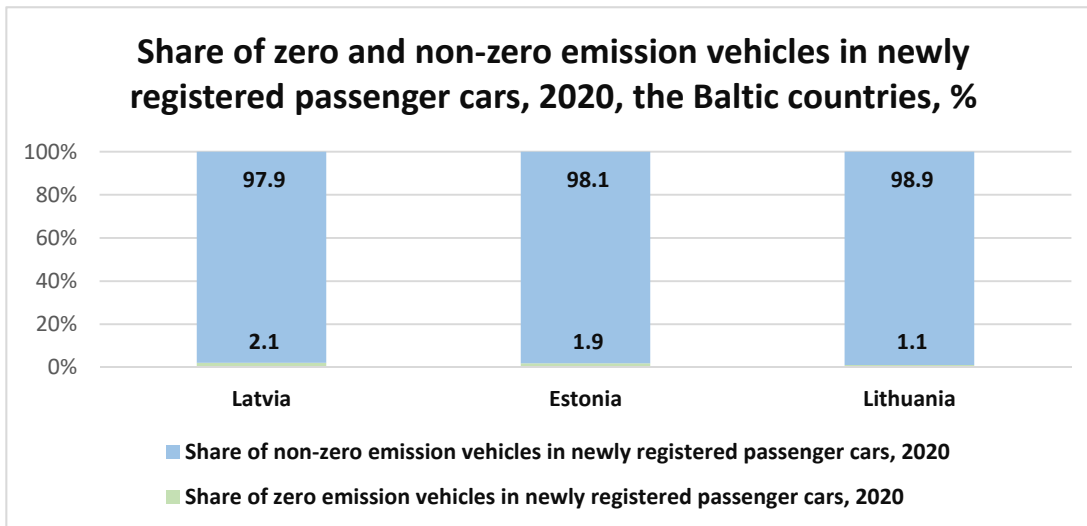


Figure 7. Share of zero and non-zero emission vehicles in newly registered passenger cars, 2020, the Baltic countries, % [14.]

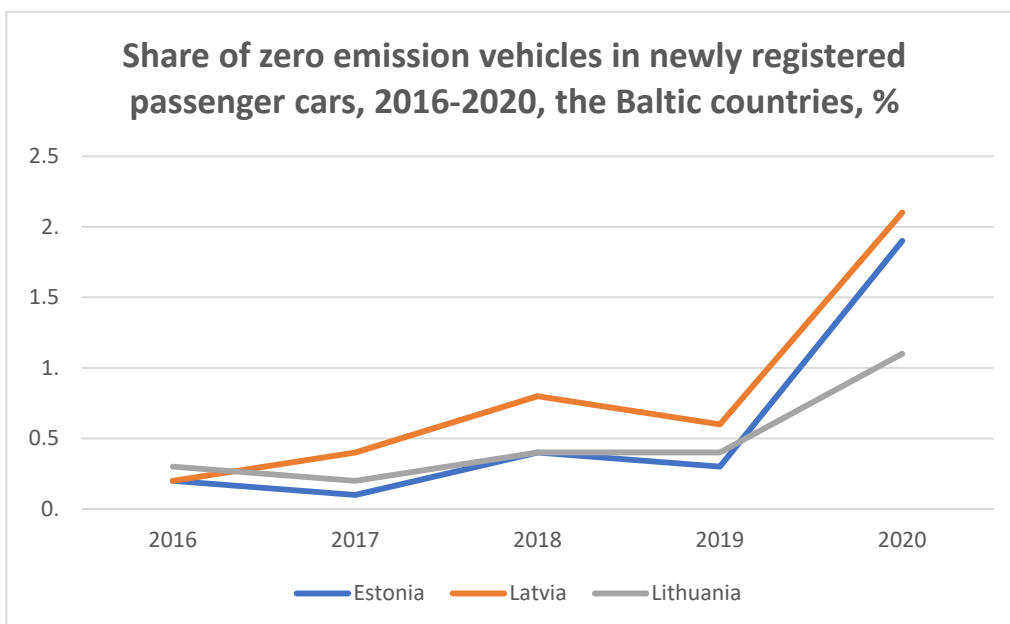


Figure 8. Share of zero emission vehicles in newly registered passenger cars, 2016-2020, the Baltic countries, % [14.]

Another way how to reduce emission amount in the national vehicle fleet is to increase share of electro vehicles, as they have very low amount of emissions. If we look at the Baltic countries national vehicle fleet structure, we see that electro vehicle share in passenger car fleet even in 2021 is very low, 0.28% in Latvia and 0.30% in Lithuania and Estonia. If we look on electro vehicle count development, we see positive increase year by year but still the total electro vehicle share is very low to compensate other vehicle caused emissions.

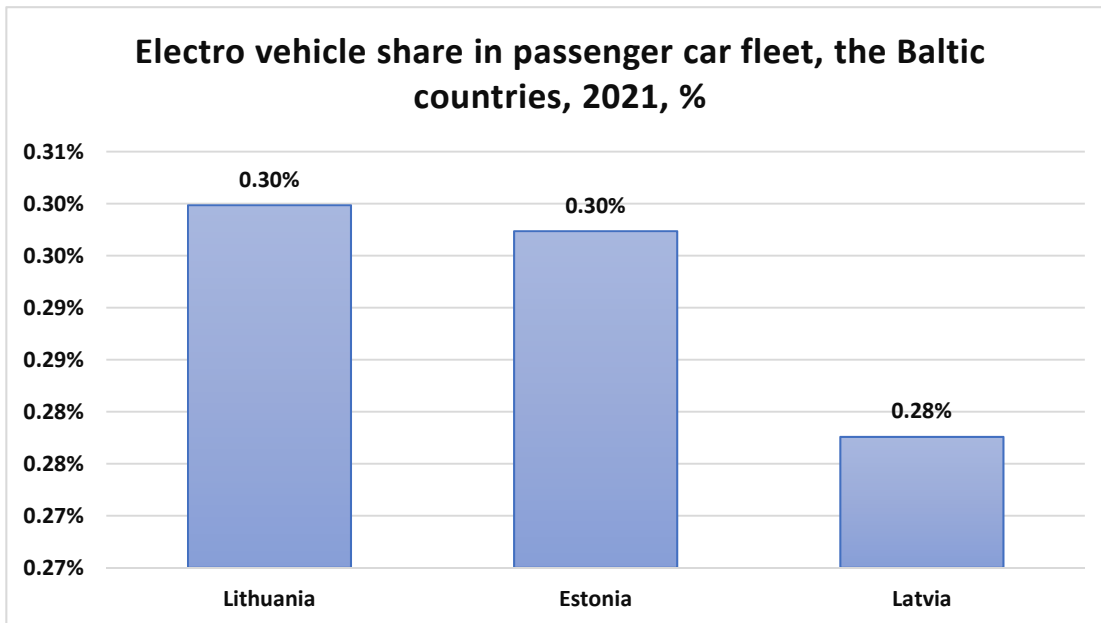


Figure 9. Electro vehicle share in passenger car fleet, the Baltic countries, 2021, % [13.]

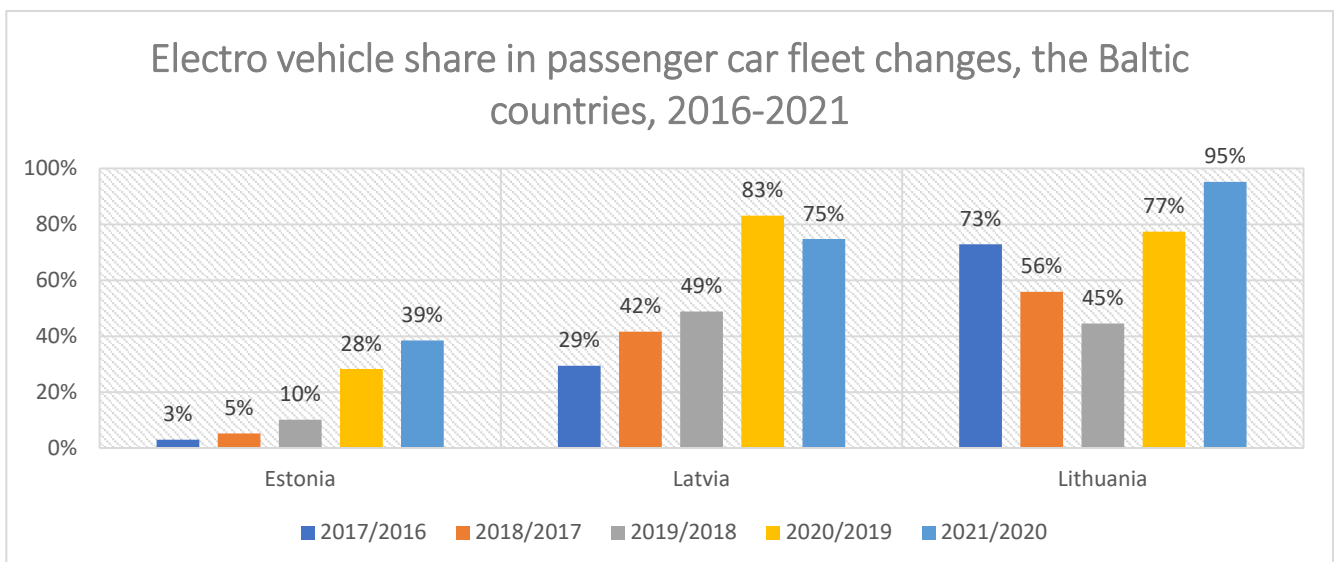


Figure 10. Electro vehicle share in passenger car fleet changes, the Baltic countries, 2016-2021 [13.]

Another way how to reduce emission amount in the national vehicle fleet is to increase share of other alternative vehicle types which causes lower amount of emissions. If we look at passenger car proportion change development in the Baltic countries versus air, sea and other inland transport, in 2020 passenger car share has even increased. This could be explained also by pandemic effect when we saw different restrictions related to public transport. But still this allows to make a conclusion that other vehicle types will not help to reduce total emission amount.

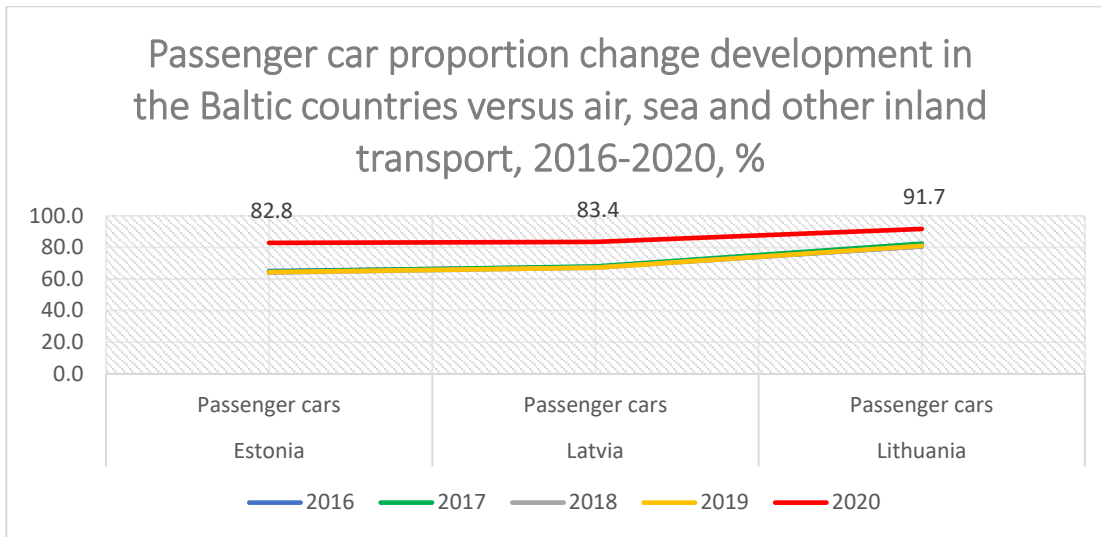


Figure 11. Passenger car proportion change development in the Baltic countries versus air, sea and other inland transport, 2016-2020, % [11.]

We see that even in the latest years national vehicle fleet structure in the Baltic countries in terms of sustainability is very challenging as it is not developing in environmental friendly way. Fast action plan is required to achieve emission minimization goals in particular terms for each Baltic country.

3. Expert interviews

Three interviews were held with the transport sector experts from Latvia, Lithuania and Estonia in order to evaluate the feasibility of achieving the carbon minimisation objectives of the EURO 7 standards in the Baltic countries and expert arguments summarized in four comparable sections in the Table 1. Experts from Lithuania and Estonia are related to vehicle insurance industry with experience in the transport sector evaluation for more than 10 years. Expert from Latvia is from Latvian Authorised Automobile Dealers Association with many years expertise in the transport sector, including sustainability related questions.

Table 1

Main challenges for the Baltic countries of achieving the carbon minimisation objectives of the EURO 7 standards [15., 16., 17.]

	Resident behaviour	Governmental & Regulatory	Infrastructure	Country specifics related background
Latvia	<ul style="list-style-type: none"> -The highest proportion of diesel vehicles in the Baltic countries; -Lack of resident education related to sustainability aspects; -Lack of motivation 	<ul style="list-style-type: none"> -Weak tax politics (lack of support instruments for electro vehicle purchase & cheap maintenance and low taxes for diesel vehicles); -No clear definition where 	<ul style="list-style-type: none"> -Lack of developed infrastructure (charging stations) to change vehicle fleet to more sustainable transport; 	<ul style="list-style-type: none"> -Almost all emissions come from transport sector, not possible to reduce emissions by restricting other sectors; -Lack of purchasing power towards sustainable transport; -Lack of institution responsible for Latvian

	<p>instruments why as next car to buy more sustainable transport;</p> <p>-Pay-back period for electro cars has increased due to heavily increased electricity prices;</p> <p>-Companies cannot write off electricity as fuel;</p> <p>-Electrification should start in Riga, regions – hybrids;</p> <p>-Increase of fuel prices could be a tool to stimulate more sustainable vehicle purchase.</p>	<p>Latvian transport sector has to go;</p> <p>-Lack of restrictions and alternative mobility in capital city which causes the biggest air pollution;</p> <p>-Lack of EU funding;</p> <p>-Lack of Public sector good example (Public procurements);</p> <p>-Lack of strict technical requirements for old diesel cars;</p> <p>-Lack of the policy of fuel development strategy;</p> <p>-Undercontrolled expansion of old diesel vehicles;</p> <p>-The representative threshold of 50k is not adequate for the corporate segment;</p> <p>-Lack of long-term plan/vision how transport sector should develop in Latvia;</p> <p>-Lack of unavoidable import barriers for old used cars;</p> <p>-Lack of old vehicle write-off mechanisms;</p> <p>-Transport should be considered as a</p>	<p>-Lack of charging points in microdistricts;</p> <p>-Lack of slow charging stations;</p> <p>-Lack of user friendliness of station using – tariffs, applications etc.;</p> <p>-Needed public transport development as alternative mobility tool;</p> <p>-Lack of investments for public transport;</p> <p>-Lack of specialized repair shop infrastructure for electro vehicles.</p>	<p>vehicle fleet development and setting strategic goals;</p> <p>-Increasing tendency year over year of old diesel vehicle import in Latvia;</p> <p>- GDP per capita is much lower than in EE (-29%), LT (-14%) and other EU member states. Therefore, businesses and residents cannot buy more sustainable vehicle. GDP per capita should be raised;</p> <p>- Average net salary is lower than in LT and EE. The ability to invest money in sustainable transport is also lower.</p>
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		part of electricity sector.		
Lithuania	<p>-Lack of motivation instruments why as next car to buy more sustainable transport (current government funding and conditions are not sufficient enough to motivate);</p> <p>-Main aim for residents – to drive cheaper (sustainability is not in focus), so electro vehicles are preferred by persons who owns solar panels and generates their own electricity;</p> <p>-New electro cars are too expensive and used electro cars are rarely available;</p> <p>-Capacity of electro vehicles are not sufficient for longer distances.</p>	<p>-Diesel fuel taxes are not high enough to motivate residents to pick more sustainable transport alternatives;</p> <p>-Sustainability actions related to national vehicle fleet started too late to comply with emission reduction goals;</p> <p>-Taxes for emissions when registering vehicle are not high enough to stimulate residents to pick more sustainable transport;</p> <p>-Lack of strict technical requirements for old diesel cars (was under consideration not to allow driving in city centers for old diesel cars but idea was not approved);</p> <p>-Transport sustainability topic is not very loudly promoted by government (lack of good example).</p>	<p>-Lack of charging points in rural areas;</p> <p>-Lack of developed infrastructure (charging stations) to change vehicle fleet to more sustainable transport;</p> <p>-Lack of charging points in microdistricts.</p>	<p>-Heavy proportion of used old car import from Western Europe.</p>
Estonia	<p>-Lack of motivation instruments why as next car to buy more sustainable transport</p>	<p>-Weak tax politics (lack of support instruments for electro vehicle purchase&cheap maintenance and</p>	<p>-Lack of developed infrastructure (charging stations) to change vehicle</p>	<p>-Public transport promoted instead of personal cars but this will not allow to reduce emissions significantly;</p>

	<p>(governmental support with strict limitations in terms of vehicle value and mileage);</p> <p>-Pay-back period for electro cars has increased due to heavily increased electricity prices (due to challenging electricity pricing residents don't want to buy electro cars, only if the price of electricity could be stabilized, electro vehicle usage would become more attractive for residents);</p> <p>-Residents feel sceptical about purchase of electric cars as they don't see value/benefits of it;</p> <p>-Available electro vehicle model range is not wide enough to motivate residents to buy electro vehicle.</p>	<p>low taxes for diesel vehicles);</p> <p>-No clear action plan how Estonia will reach emission minimization goals in particular timeframe set;</p> <p>-Lack of strict technical requirements for old diesel cars;</p> <p>-Lack of unavoidable import barriers for old used cars;</p> <p>-Lack of Public sector good example – authorities also sceptical about electro vehicles as normal practice due to their high prices;</p> <p>-Higher fuel taxes and fuel prices should be considered to reduce fuel consumption.</p>	<p>fleet to more sustainable transport;</p> <p>-Lack of charging points in microdistricts;</p> <p>-Electro vehicles are too expensive for the ordinary resident even if excellent charging infrastructure would be developed.</p>	<p>-Due to weather conditions, climate, temperature in winter period it is very challenging to maintain electro vehicle;</p> <p>-A lot of houses in the city without possibility to charge electro vehicle;</p> <p>-Lack of purchasing power towards sustainable transport, especially for residents from rural areas;</p> <p>-Already existing challenges with power transmission infrastructure, power lines (investments should be done to avoid some areas going without power due to snowstorms);</p> <p>-Lack of alternative mobility options in rural areas;</p> <p>-Biggest part of emissions caused in bigger cities where electro vehicles should be used more, in rural areas less challenges as less vehicles per square kilometer.</p>
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We see that common challenges for the Baltic countries can be found, like lack of motivation instruments why as next car to buy more sustainable transport, pay-back period for electro cars has increased due to heavily increased electricity prices, weak tax politics (lack of support instruments for electro vehicle purchase&cheap maintenance and low taxes for diesel vehicles), lack of strict technical requirements for old diesel cars, lack of developed infrastructure (charging stations) to change vehicle fleet to more sustainable transport, lack of charging points in microdistricts and many other issues. At the same time we also see that there are many other country specific and effect enhancing issues, like almost all emissions come from transport sector, not possible to reduce emissions by restricting other sectors, lack of institution responsible for national vehicle fleet

development and setting strategic goals in Latvia, transport sustainability topic is not very loudly promoted by government (lack of good example), heavy proportion of used old car import from Western Europe in Lithuania, due to weather conditions, climate, temperature in winter period it is very challenging to maintain electro vehicle, already existing challenges with power transmission infrastructure, power lines (investments should be done to avoid some areas going without power due to snowstorms) in Estonia.

Conclusions and recommendations

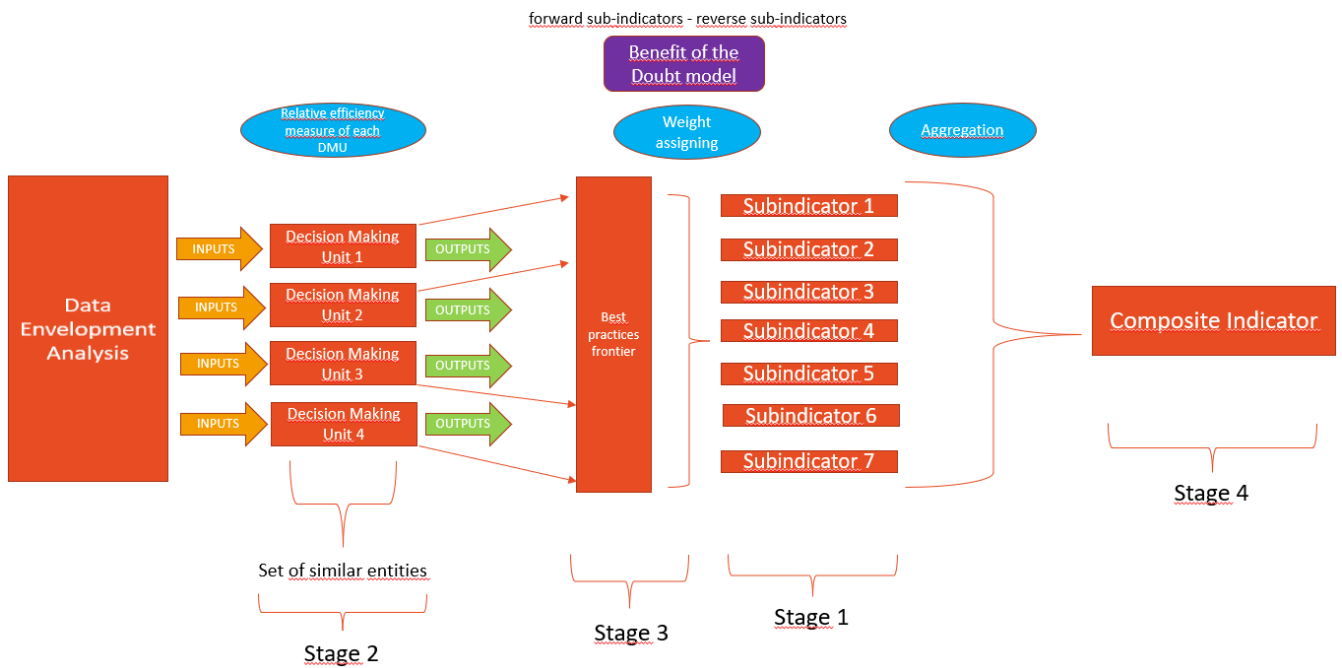
1. Sustainability is a very complex thinking transformation process and many approaches can be used to evaluate the transport sector sustainability with different even contradicting points of views
2. The data availability and sub-indicator selection is the key success factor to reliable composite indicator research. During decision making process each and every alternative choice should be well analyzed and grounded to succeed.
3. There are pros and cons to different transport sector sustainability evaluation methods so more than one method could be used and results compared. It is possible that some average lines of multiple methods could be combined and adjusted to reach the best and most precise result.
4. With the current Baltic countries national vehicle fleet structure development it is not possible to reach emission minimization goals in particular terms.
5. All three Baltic countries have many common challenges in terms of reaching sustainability goals but also country specific issues are important and have to be taken into account.
6. This is very important and urgent topic to research further and make possible national vehicle fleet development scenarios, fast action plans and long-term national vehicle fleet development strategy in the Baltic countries to reach set goals for each country.

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15. The transport sector expert interview from Estonia
16. The transport sector expert interview from Latvia
17. The transport sector expert interview from Lithuania

Appendix 1
Composite indicator process analysis



Source: Author made model based on scientific article analysis

THE UNIVERSITY EDUCATION QUALITY IMPROVEMENT MODEL (UEQIMODEL): A 21ST CENTURY DESIGN FOR UNIVERSITY EDUCATION QUALITY IMPROVEMENT IN DEVELOPING COUNTRIES.

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Abstract

From every dimension of measurement, education is seen as a pivot on which other facets of national development rotate. It is considerably important to refer to the quality of university education as a paramount indicator for growth and development of nations, including the developing countries. University managers apply diverse strategies to improve the quality of University Education, however, the current state of university education in most developing countries is becoming a source of worry, as major stakeholders globally expect improvement of outcomes in line with the Sustainable Development Goals (SDG's). This study therefore aims to introduce a standardized guiding principle in the form of an Educational Model that would aid in the reformation of the existing system. The model, named the University Education Quality Improvement Model (UEQIModel) is a modern-era scientifically designed innovation in the field of educational management. It basically identifies the loopholes associated with the existing university management practices as applicable to developing countries and tries to bridge the gap by incorporating necessary tools needed to augment the status quo. The principles of the model are sub-categorized into five steps, which include management practice, activities, expectations, evaluation, and outcome. The paper concludes that UEQIModel should be implemented holistically by universities in developing countries for the restoration of a fast-declining dignity and overall improvement of university education quality.

Keywords: Model, UEQIModel, University Education, Quality of Education.

DOI: 10.37804/1691-6077-2023-14-144-154

Introduction

According to Alemu, (2018, pp.210-218), a university is an institution for higher learning that brings learners to a high-level of intellectual development to promote research and innovation. A university can be viewed from two either theoretical or practical perspectives. The theoretical concept believes that university is designed for pure pursuit of knowledge, in this regard, (Goetze, 2019, pp.61-68 cited Hamlyn, (1996, p. 205-218), postulating that the university is primarily concerned with producing new knowledge in specialized areas as well as training of future researchers. The practical concept suggests that the university is conceived basically in terms of its economic importance, by empowering students to become productive members of society, producing cutting-edge technologies, nurturing creative and entrepreneurial projects, and making scientific advancements that are beneficial to both government and industry (Goetze, 2019 , pp.61-68).

It is imperative to understand the peculiar roles that university education plays in sustaining national growth and development globally. In this modern time, institutions of higher learning play an important role in shaping the culture of our society (Teague, 2015, p.1). A country without good education spanning among the citizenry cannot significantly compete among nations as it is critical to socio-economic strengths and well-being (Teague, 2015, p.1).

However, it is sad to note that the quality of university education, especially in developing countries, has continued to decline. The type and quality of education in any country is an important factor to their national development, but the declining state in the quality and standard of education in Nigeria is becoming quite alarming (Olawale, 2017). In the same line of view, Eziokwu and Amah, (2019, p.1) observed that the Nigerian university system is consistently faced with many critical challenges, as it has been observed that the standard of education as well as the much-cherished morals are

gradually declining. The reasons for such decline are not far-fetched, as corruption, poor funding, inadequate teaching and learning facilities, brain drain in the educational sector, poor implementation of educational policies, poor management practices, poor management of the Academic Staff Union of Universities (ASUU), high level of indiscipline in the education sector, lack of accountability and transparency in the system etc. The issue of quality in university education in third countries suffer from several challenges, including poor funding, inadequate classrooms, and teaching aids, a "paucity of quality teachers, and a not-conducive learning environment" (Odia & Omofonmwan, 2007). However, it is right to emphasize that corruption is instrumental to the declining quality of university education in developing countries. According to Ignatius and Umotong, 2022, p.9-14), the hallmark for education problems in Nigeria is anchored on corruption and bad governance as Nigerian society is generally enveloped by insecurity and near absence of freedom and democracy (Ignatius & Umotong, 2022, p.9-14). On the other hand, UNDP, (2004, p.2), believes that lack of institutional capacity and inability to manage society through a system of social, judicial, political, and economic checks and balances are the main attributes of corruption.

As the quality of university education in developing countries continues to decline, there is an urgent need for concerned authorities to delve into actions on how best to improve the narrative. For a developing country like Nigeria to attain the required height in economic and political development, education should be one of the core services delivered by the government. According to the then Secretary-General of the United Nations, Ban Ki-Moon, (2012), "Education must fully assume its central role in helping people to be more just, peaceful, and tolerant in societies".

Having stated the problems associated with the declining standard of quality of university education in developing countries, it is imperative that this study recommend a strategy that would augment the present state of the educational system . Therefore, the University Education Quality Improvement Model (UEQIModel) has been identified by this study to play a mediatory role between university education and declining quality of university education being obtained by students in developing countries. The model highlights key prerequisites to achieving the best maximum output needed to restore dignity as well as improving the quality of university education in developing countries. The UEQIModel covers the application of a broad range of scientific principles with the concept of checkmating the management practices and implementation of guidelines by educational managers and university administrators.

Objective

The objective of the study is to introduce the University Education Quality Improvement Model (UEQIModel) as a modern-era approach to restoring the dignity and quality of University Education in Developing countries.

Research question

How does the University Education Quality Improvement Model (UEQIModel) improve the quality of university Education in developing countries?

Theoretical Background

As part of the University Education Quality Improvement Model (UEQIModel) development process, it was necessary to preview the Multi Models of Quality Education (MMQE) designed by Cheng and Tam, (1997, p.22-31). The Process Model (PM) as part of the MMQE was adopted by this study because of its operational indicators on leadership, communication, planning, social interactions, and other essentials that makes learning experiences worthwhile (Cheng & Tam, 1997, p.26). The Process Model of Quality Education opines that rational internal processes and worthy learning experiences determine the quality of output (Tam and Cheng, 1996, p.20). According to Kwek, Lau & Yan, (2010, p.155), the Process Model of Education Quality is relevant to the management of education due to its clear association between process and educational outcomes. It further emphasizes that with a hitch-free internal institutional process, teaching and learning would be effectively done to enable students to understand the learning processes better (Cheng and Tam, 1997).

Definitions of Model

An abstraction that provides a conceptual framework for system analysis is known as a model. A model provides a logical and systematic approach to a problem by fixing the limitation and scope of an activity (Farzana & Khalid, 2010). According to the American Heritage Science Dictionary, (2011) a model is a systematic description of an object or phenomenon that shares important characteristics with the object or phenomenon. Models are like scientific concepts, capable of making generalized ideas more comprehensible to learners (Huddle, White & Rogers, 2000, pp.104-110).

Models are useful learning tools that can facilitate explanations, generate discussion, make predictions, provide visual representations of abstract concepts and generate mental models (Chittleborough et al., 2005, pp.195-212). The models that are used in the educational science area are known as Educational models and are specifically designed as guides in determining how schools operate, the curriculum being focused on, and the pedagogy in general (Ackerman, 2022). Models are effective representations of natural processes and our only tool for assuming vast spatial scales or making future predictions. Examples of models include conceptual models, statistical and mathematical models, teaching and demonstration models, and models for teaching using visualization.

Importance of Quality in Education

Quality education is crucial for promoting tolerance and peaceful societies, it helps people to escape the chain of poverty. As well as impacting people with the skills to critically reflect on reality and make wise decisions about life. Quality Education entails identifying the required changes the university intends to make on students (Rashid, (2019, p.1). According to Nelson Mandela, “Education is the most powerful weapon needed to change the world”. The United Nations Sustainable Development Goals, SDG4 (Quality Education) strives to ensure inclusive and equitable quality education and promotes lifelong learning opportunities for all. Achieving many of the Sustainable Development Goals (SDGs) requires education. Achieving gender equality, reducing inequality, and enabling people to have healthier, more sustainable lives are all made possible by quality education. Quality Education is also necessary for promoting tolerance and peaceful co-existence among people as well as helping people to escape the ‘chain of poverty and upward socio-economic movement’.

In the developing countries, especially in the sub-Saharan areas, quality education is needed to improve people’s consciousness about things happening within and around them, by doing so they are aware of their social and political responsibilities. Quality education helps people to realize the need to participate in political activities like voting or vying for political positions. People gain the capacity to reflect critically on reality, and the ability to make wise decisions are often an offshoot of high-quality education.

Furthermore, Rashid, (2019, p.1), opines that quality education provides the outcome needed for individuals, communities, and societies to progress. By this, it means that universities should be allowed to collaborate freely with their host-communities to access services across sectors designed to support the educational development of the students (Rashid, (2019, p.1). By doing so, University Education Quality provides the basis for equity in society which helps to reduce class distinction that seems to control the social fabrics of our society. It is worthy to note that quality education is supported by three key pillars which include (a) Ensuring access to quality teachers. (b) Provision of quality learning tools and professional development. (c) Establishment of safe and supportive quality learning environments (Rashid, 2019,p.1).

In summary, the importance of University Education Quality should not be over-emphasized as it is a human right and a public good. It provides the opportunity for each student to participate, learn and adopt a healthy lifestyle (Rashid, 2019,p.1). The high rate at which students from developing

countries migrate to western countries in search of quality education is enough evidence to show that there is a problem.

Causes of Poor-quality University Education in Developing countries

Despite the important role that education plays in the modern-day world, the quality of education in most developing countries remains regrettably low. However, it should be noted that failing to quickly improve the quality of education in developing countries would be one of the greatest moral disasters of our lifetime. In order to break the jinx, it is important to highlight some of the causes of poor-quality university education. They include- corruption, unsuitable management styles/practices, poor educational policy implementation, weak leadership structure, lack of discipline/disciplinary measures, inadequate learning environment, ethnic and religious considerations in appointments, examination malpractices etc.

Considering all the odds (*as highlighted in the above paragraph*) associated with obtaining quality education in developing countries, most students from Sub-Saharan Africa massively migrate to Europe and other Western countries for studies simply to obtain quality education.



Figure 1: Showing the study motivations of African and Middle Eastern undergraduate prospects.
Source: Adapted from 2018 QS Applicant Survey

Figure 1 indicates the motivation behind students' interest in studying abroad. 71% indicate interest to progress to higher level qualification, while 45% want to progress in their current career path. These, of course, are offshoots of the poor quality of university education associated with home universities.

Methodology

The framework of the research design is descriptive, as information was systematically obtained to describe a created educational model known as the University Education Quality Improvement Model (UEQIModel), which is a modern-era scientifically designed innovation in the field of Educational Management.

Process of UEQIModel Creation.

1. The creation of UEQIModel went through various stages of development before a final model was validated. The theoretical background adopted the Process Model (Cheng & Tam, 1997, p.26) due to its operational indicators on leadership, communication, planning, social

interactions, as well as consideration of rational internal process and learning experiences to determine the quality of output (Tam and Cheng, 1996, p.20).

2. Think aloud approach, which involves articulation of thinking was applied (Tompkins, Campbell & Green, 2012).
3. Expert consultation and expert interviews: Five experts drawn from different fields of specialization were consulted for advice and feedback on the subject matter.
4. Expert's feedback: On the basis of the presented works, constructive feedback was received.
5. Experts Validation: Validation represents the action to verify that any process, procedure, activity, material, system, or equipment can achieve the desired results. (Rachna et al., 2012, pp.60-64). After creating the model, experts were consulted, before the validation.

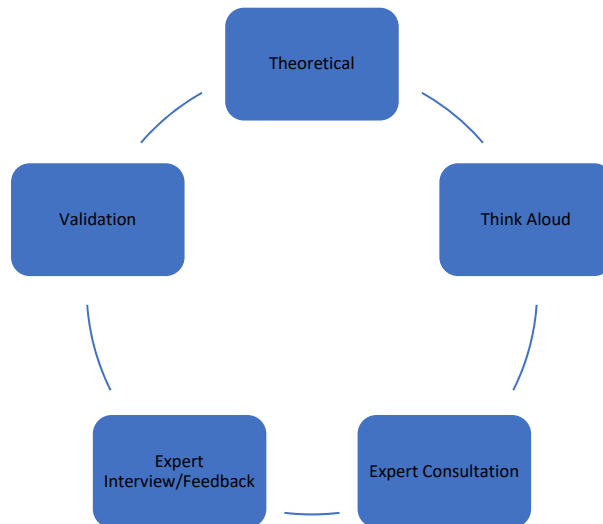


Figure 2: Showing the stages of model creation. *Source: Figure illustrated by the author*

Introducing the University Education Quality Improvement Model (UEQIModel)

The University Education Quality Improvement Model (UEQIModel) which is the core-content of this study is intended to provide the best management guidelines for university management in developing countries. This could be made possible by restructuring the modalities for planning, organizing, implementation and evaluation of university management practices towards the achievement of the best possible quality of university education. Poor University Education Quality (UEQ) found in developing countries is associated with poor management practices in the university system. Therefore, university managers and other stakeholders saddled with the responsibility of university management should apply the principles of UEQIModel in accordance to set-out rules and regulations governing their respective universities.

The UEQIModel principles (distributed under five steps)



Figure 1: Showing the five steps of UEQIModel. *Source: Author's illustration).*

Step 1: (Management Practices)

The first step highlights the importance of adopting the best management practice that could help improve the management potential of universities. This is because the type of management practice applied by the university management system determines her management strength. The UEQIModel, based on literature, opined that democratic management style which entails that other members of the group should take a more participative role in the decision-making process, is the best management practice recommended for universities in developing countries. Democratic management style denotes that staff and other members of the university management body are given the opportunity to contribute their free ideas towards the day-to-day running of universities. Teachers who also use this management approach instill the values of collaboration, communication, and teamwork among students.

Step 2: (Activities)

This step includes the overall activities which take place within the university environment that helps to shape the university. This stage has three concepts, namely-

Accountability refers to accepting responsibility for one's actions. It is the state of being accountable to educational stakeholders for educational resources used. This, however, implies that accountability is a measure of the extent to which all available resources in a productive system are used for greater efficiency and productivity (Usman, 2016, p.266). According to NOUN, (2008), accountability in Education is usually linked to the management of the scarce resources of education to ensure efficient utilization of resources (human and material) for the accomplishment of goals of education. When staff are accountable for their actions, cases of corruption, embezzlement or misappropriation of public funds, abuse of office etc are reduced.

Social Justice: As part of guidelines outlined by UEQIModel to achieve quality education, certain principles of social justice should be met. According to Alvarez, (2019, p.1), social justice is about fair distribution of resources, treating all students and staff equitably so that they feel safe and secure (physically and psychologically). This would help create rooms for fairness and equal representation. Social justice could also refer to a fair and equitable division of resources, opportunities, and privileges in society (Mollenkamp, 2022, p.1). In a university setting, the process by which employees are hired, promoted and deployed within the university departments should be clearly stated and adhered to. Academic staff members (ASUU) should be diplomatically tolerated, their demands should be given due attention within a considerable time frame. A set of ethical principles for a just society must be met, these *include*- access, equity, diversity, human rights, and participation (Mollenkamp, 2022, p.2).

Learning Environment: Includes spaces where students feel free, safe, and supported in their pursuit of knowledge as inspired by their immediate surroundings, in all cases, conducive. Research into what makes schools effective finds that learning requires an orderly and co-operative environment, both in and outside the classroom (Jennings & Greenberg, 2009, pp.491-525). There should be an acceptable level of relationship between the university and its host community as both influence one another. Students and schools perform better when classrooms are well-disciplined and relations between students and teachers are amiable and supportive (OECD,2010, p.88). Learning environment encompasses three categories, namely, the physical, psychological, and emotional environments. The UEQIModel admits that the learning environment should be conducive as well as enticing to enable the user the confidence to operate maximumly.

Step 3 (Expectations)

This step deals with the expectations of the universities resulting from the application of the recommended management practice. The three identified concepts are:

Teaching and learning: These are processes that enable thought and behavior change, and can be done formally or informally, inside or outside the classroom. Teaching and learning is a process whereby the teacher identifies the learning objectives, develops teaching materials, designs the teaching method and puts the teaching and learning approach into action. The UEQIModel sees teaching and learning as a key function in university activities. Students should be provided with the best qualified teachers, teaching, and learning resources, functional libraries, up-to-date ICT hubs, and other opportunities capable of promoting learning. The Pat Basset 5C's (Critical thinking, Creativity, Communication, Collaboration, and Character) of 21st century learning, (POWHATAN school blog, 2019, p.1) was structured into the UEQIModel.

Discipline in the university: An organized enforcement of standards to reduce disruptions and maximize learning. Universities use discipline strategies to control staff and student behavior and promote self-discipline. All forms of discipline, whether preventive, supportive, or corrective, aim to create a welcoming environment at school for all students. Students' involvement in anti-social activities are frowned upon by the UEQIModel.

ASUU Management: Some activities of the Academic staff union of universities, (an umbrella body of all teaching members of universities in Nigeria) is capable of affecting the students' academic performance. The overall quality of university education in Nigeria is on the verge of collapse partly due to incessant labour actions engaged by ASUU. The UEQIModel believes that if an appropriate management style (democratic) is applied, then the excesses of ASUU/government face-off could be cut-off or drastically reduced.

Step 4 (Evaluation)

This step assesses the success or failure of the entire process. Evaluation is the process of judging something's quality, importance, or value, or a report that includes this information. According to Manichander, (2016, p.15), the purpose of evaluation is to give shape to educational objectives so as to make teaching methods simple and effective for a successful completion of the teaching-learning process. A successful evaluation provides valid and credible results, providing direction and action for development. The evaluation of UEQIModel should be done through assessment of students' academic performance to determine if there is improvement or not.

Step 5 (Outcome)

This step highlights the result of the whole process. A successful implementation of the highlighted principles of UEQIModel should amount to improved students' academic performance. According

to Tadese, et al. (2022, p. 2), academic performance/ achievement is the extent to which a student, teacher, or institution has attained their short or long-term educational goals and is measured either by continuous assessment or cumulative grade point average (CGPA). This would lead to an improved quality of University Education as it provides all learners with capacities required to become economically productive, develop sustainable livelihoods, and contribute to peaceful co-existence within society. This study submits that university education quality could be improved by implementing the UEQIModel.

UEQIModel Validation

Model creation is regarded as an efficient research strategy because it helps researchers and scientists to relate to reality more accurately and it also helps to explain, predict, test complex systems (Farzana & Khalid, 2010, p.4). The development of a model in research is an abstract means of decoding a complex situation (Farzana & Khalid, 2010,p.10). It is important that models should be validated and verified to represent that which it ought to represent. On that principle, this study applied the validation approach to authenticate the created University Education Quality Improvement Model (UEQIModel).

An expert interview was conducted, four international experts gave constructive feedback on the model development process, in addition to strict adherence to standard scientific principles and procedures, a final version of the model was created.

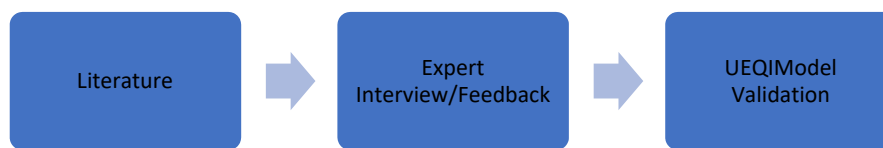


Figure 2: Showing the UEQIModel validation process. (Source: Author's illustration)

UEQIModel Implementation

The UEQI Model is meant for the university managers and administrators, policy makers, curriculum developers, the government, Federal and State Ministries of Education, the University Commission, researchers, Academic Staff Union of Universities, students, and other relevant stakeholders to implement the model. The model should be seen as a focal point to assemble all relevant stakeholders on board for a joint action to improve and restore the quality of university education in developing countries. Every aspect of the model should be implemented without compromise.

Results and Discussion

The implication of the declining quality of education at all levels has a far-reaching negative impact on a nation's moral, civic, cultural, and economic sustainability (Orji and Job, 2013, p.312). The University Education Quality Improvement Model (UEQIModel) has a positive impact on the improvement of university education quality in Nigeria. However, this should be possible if the principles of the model are appropriately implemented. Stakeholders including experts, researchers, policy makers, governments, the Academic Staff Union of Universities (ASUU), curriculum developers, university managers and administrators, NGO's, students, parents, community leaders and host communities should realize the importance of individual and group efforts towards achieving

the goal of improved university education quality. The interest of providing a quality education should be in the general interest rather than individual interest.

The importance of quality university education should be over emphasized, considering its impact on national development. According to Thom-otuya1 & Inko-tariah, (2016,p. 106), quality education is a veritable tool for scientific discoveries, national development, and transformation of a greater society to a greater height. In the same development, Afolabi and Loto (2012, p.330) affirms this idea when he suggests that a developed or educated polity is the one that has enough manpower, and each person occupies his or her rightful position to enhance the growth of the society.

Conclusion

The UEQIModel is a management structure for organizing, planning, implementation and evaluation of university policies to achieve the best possible quality of university education in developing countries. This study concludes that complete adherence and implementation of the principles as enshrined in the UEQIModel should significantly improve the quality of University Education in developing countries. The management style applied by the universities could have a correlation with the students' learning outcomes. This shows that the ways and manners in which those entrusted with management positions discharge their responsibilities can directly or indirectly influence students' learning outcomes, owing to the fact that students' academic performance is an assessment platform for determining the effectiveness of university policies. The relationship between education management practices and quality of university education is a process that propels students' achievement. Efficient management practices will lead to an improved academic performance by the students thereby transcending to a quality university education (QUE).

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DOES THE DEPENDENCE OF BRAND VOICE ON AI RESTRICT FREEDOM OF EXPRESSION IN SOCIAL MEDIA?

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Abstract

With the advent of social media and a unique brand voice, brand communications frequently employ artificial intelligence (AI) to facilitate timely interactions across the many channels of communication, and often integrate communications. This research seeks to investigate the influence of an AI-regulated brand voice on the freedom of expression (FOE) when communicating on social media.

A qualitative research design is implemented based on content analysis. The research gap was identified by reviewing the role of brand voice using AI, the application of AI to monitor freedom of expression, and the study of integrating FOE in brand voice generation using AI. Various case studies were used to conclude that AI-regulated brand voice has a substantial impact on the freedom of expression on social media, which is frequently governed by privacy rules.

This study establishes that a brand's communication in its social media portfolio is governed by national and international laws that regulate freedom of expression and thus have legal implications. This study suggests that AI must be fed information to prevent content such as hate speech, bullying, and so on, and produce a brand voice with checkpoints for human validation and verification to maintain general societal decorum.

Keywords: Artificial Intelligence (AI), Brand Voice, Freedom of Expression (FOE), Brand Communications, Social Media Human Rights

DOI: 10.37804/1691-6077-2023-14-155-165

Introduction

In today's world, AI affects how individuals access information, use devices, share personal data, and even learn foreign languages (Article19 et al., 2018, p. 2). Although AI has the potential to positively improve societies, it also has a wide range of consequences, the most serious of which are privacy, FOE, and information (Article19 et al., 2018, p. 2). AI-driven tools for media production and distribution also changes markets like European media market structures and its control (Eskens, 2020, p. 5). Technology, skills, and training data become new competitive assets, favouring new, international organisations like social networks and search engines, and creating possible barriers for smaller, less affluent newsrooms, media in developing nations, and local news media (Eskens, 2020, p. 5).

The media's role in a democracy as a source of information, platform for discourse, and critical watchdog makes FOE a key human right to consider when using AI-driven technologies in the media, along with privacy and discrimination (Eskens, 2020, p. 5). Thus, even when utilizing AI-powered tools, brand communications must adhere to human rights guidelines for FOE and privacy.

With the evolution of brand communication and the rise of social media in brand awareness, brand voice is more crucial than ever as a method to stand out in an ocean of digital noise (Chen, 2020). AI now plays a crucial role in the evolution, development, prediction, and analysis of brand voice in social media (Surikova et al., 2022, p. 74). Branding with AI in brand communication is no longer limited to dialogues or sales; rather, data is used to generate real-time solutions utilizing AI technology and predictive intelligence (Reimherr, 2018). Similarly, AI is used to forecast and analyse brand voice, which assists organizations in selecting a tone and voice that will engage users (Surikova et al., 2022, p. 87).

Sometimes, once the brand voice has been defined, AI is deployed to retain the voice across all platforms or emails when communicating. For example, Phrasee's AI optimizes email marketing subject line text to enhance not only opens, clicks, and ROI for their clients but also to maintain their brands' distinct voice and identities (Phrasee, 2018).

AI increasingly plays a crucial role in preserving brand voice. On the other hand, brand voice is an essential component of brand communications and is typically a set of marketing, linguistic, and stylistic factors that influence brand communication on social media (Surikova et al., 2022, p. 86).

Individual rights cannot be secured without the freedom to seek, receive, and transmit information or ideas, regardless of the media utilized, and this has long been regarded as a critical component in guaranteeing fundamental human rights (Slutskiy, 2020, p. 53). Access to information is increasingly related to information freedom (Slutskiy, 2020, p. 54). With social media becoming the default communicative infrastructure, the question of whether their content models support public access to information and fundamental freedoms is becoming more significant (Slutskiy, 2020, p. 54). For instance, Facebook, Instagram, Tumblr, Twitter, and others have been criticized for censoring user-generated content quite often (Slutskiy, 2020, p. 54). As a result, social media platforms frequently struggle with content moderation. Marketing professionals, on the other hand, struggle to understand privacy regulations and copyright infringement, making it difficult to maintain a brand voice during sensitive situations. Furthermore, not much systematic research on bibliometric analysis of brand voice in branding using AI exists yet. However, the concept of using AI to maintain brand voice while integrating FOE principles into brand communications remains unexplored.

To ensure the protection of FOE on AI-powered social media platforms, brand voice frameworks need to be developed. Understanding how to use AI in harmony with FOE for branding purposes is crucial. This study is significant as it demonstrates AI's potential in enhancing social media and helping brands create compelling brand identities on digital platforms while upholding fundamental human rights, such as FOE.

The study covers the role of brand voice using AI, the application of AI to monitor FOE, and the study of integrating FOE in Brand Voice Generation using AI. After reviewing their prior work, which only demonstrated the two-way integration model for using AI on social media platforms, the authors developed a two-way integration model with integrated human analysis. This new inference-based model includes human intervention and analysis at the entry and exit points, which is a novel method in academia.

AI helps brands understand how their voice is perceived by audiences, but it requires a deliberate strategy that balances the benefits of AI with the necessity for a human-like brand voice (Surikova et al., p. 75) based on the human rights principle of FOE. This indicates a research gap as very little study has been conducted on how brands should integrate FOE in brand communications using AI that adheres to FOE principles. However, there is far less literary assistance available on brand voice that corresponds to FOE standards.

Conceptual Background

Brand voice using AI

Consumer brand engagement is an individual's psychological state when they engage in an ongoing, dynamic engagement process that involves cognitive, emotional, and behavioural aspects during brand-related activities. As automated customer-to-machine brand-related interactions increase, brands may benefit from a new channel to boost customer brand experience (McLean et al., 2021). The omnipresent smartphone allows consumers to engage with AI technology differently from other technologies (Guzman, 2019). The new mobile and in-home virtual assistants use natural language processing (NLP) to let people talk to and get responses from the technology like they would with an individual (McLean et al., 2021). These days, AI analyzes data from communication channels, curates

ideas based on brand and customer behaviors, determines effective branding strategies, identifies target customers, and suggests an appropriate tone of voice for consistent brand messaging across platforms (Surikova et al., 2022, p. 85). AI simplifies strategy prediction by allowing marketers to strategically monitor users (Reimherr, 2018), and helps brands retain users by forecasting and analyzing an appropriate brand voice and tone (Surikova et al., 2022, p. 87).

Application of AI to monitor FOE

Most gadgets now have built-in, free capabilities for recording and editing material, and content creators can reach a larger audience through social media (Dias Oliva, 2020, p. 607-608). Web applications, including social media, enable users to create, publish, and distribute diverse content, enhancing FOE and access to information (Dias Oliva, 2020, p. 608). As content production and access have increased, new challenges like the spread of defamatory content, hate speech, false news, and copyright violations have emerged, putting pressure on internet platforms to improve content moderation, among other issues (Dias Oliva, 2020, p. 609). Internet platforms have turned to AI to automate the content moderation process due to the immense workload. During his testimony before the US Congress, Facebook CEO Mark Zuckerberg stated that AI could one day remove harmful content, including violent extremism and fake news (Allan, 2017). Today, algorithms based on AI manage social media interactions (Boyd & Ellison, 2007, p. 211), functioning as "content curators" for each user (Dias Oliva, 2020, p. 609). AI algorithms not only help users find information, but also facilitate their engagement in social and political discourse, acquaint us with our publics, and enhance our knowledge and understanding of various subjects (Gillespie, 2014, p.167).

Traditional law enforcement entails detection, prosecution, adjudication, and punishment carried out by distinct individuals, whereas algorithmic content policing incorporates these functions simultaneously, with an emphasis on early detection and prevention in a less transparent manner (Perel et al., 2016, p. 481). Most platforms reserve broad authority to remove user-posted content in their terms of service, stating that they may do so at their sole discretion or belief that it violates their policies (Perel et al., 2016, p. 483). This is done using AI algorithms to honor the FOE ethics. Sometimes, content that differs in opinion or perspective, even if it does not violate any laws or policies, can be removed, limiting FOE on the platform. It is worth noting that the categories of content that online platforms try to ban are usually related to the "legitimate aims" listed in Article 19(3) of UN (Dias Oliva, 2020, p. 618). For instance, the protection of national security or public order would be a legitimate aim to act against content that facilitates criminal activities, glorifies, or supports terrorism or organized criminal activity, and content that is part of wider disinformation campaigns aimed at destabilizing elections (Bradley & Wingfield, 2018).

La Rue identifies several categories of content that may be legitimately restricted, such as child pornography (to protect children's rights), hate speech (to protect affected communities), defamation (to protect individuals' rights and reputation), direct and public incitement to commit genocide (to protect the rights of others), and advocacy of national, racial, or religious hatred that amounts to incitement to discrimination, hostility, or violence (La Rue, 2011, para 25).

Platforms that choose to adopt Article 19's standards must apply the necessity test to any content restrictions (Sander, 2020, p. 988). This means that they must balance conflicting rights and provide a justification for their decisions based on the analysis they have conducted (Sander, 2020, p. 988). The normative guidance of Article 19 could also assist platforms in navigating other complex issues, such as how to match local laws with their own Terms of Service and even commercial demands (Bambauer et al., 2013, p. 453). For example, European countries and the United States have vastly different perspectives on issues related to hate speech, which could pose significant challenges for platforms operating in both markets (Dias Oliva, 2020, p. 619). In the US, the Supreme Court has interpreted any potential exception to the First Amendment's speech clause (Congress.gov, n.d.) narrowly, thus, free speech restrictions aim to maintain peace and public order, and the Supreme Court requires a high threshold of speech violence before the state can interfere with expression of

hate (Dias Oliva, 2020, p. 620). Conversely, in the EU, restrictions to free speech aim to fight discrimination against minorities, and the threshold of speech violence for state interference is lower (Dias Oliva, 2020, p. 620). Although legislation varies between EU countries, they must all comply with the Council Framework Decision 2008/913/JHA, which establishes rules for combatting racism and xenophobia through criminal law (Dias Oliva, 2020, p. 620). Article 3 of the Framework Decision requires Member States to ensure that the behaviors listed in Article 1 are punishable by criminal penalties (Dias Oliva, 2020, p. 620). Many social media platforms have aligned their content policies with international human rights law due to the diversity in law and its enforcement (*A/HRC/38/35*, 2018). This puts them in a better position to discuss the implementation of content policies with governments, which often request that they censor speech (*A/HRC/38/35*, 2018). It is important to note that even after using content moderation AI technologies on social media platforms, organizations continue to face challenges in accurately comprehending human conversation. This often results in false flags despite recent improvements.

While AI is playing a crucial role in monitoring FOE on the internet, maintaining a brand voice that complies with FOE standards through AI presents a challenge for practitioners. Due to the lack of academic research in this area, exploring the combined impact of AI and FOE on brand voice presents significant potential. Understanding the interaction between AI and FOE in shaping brand voice is important because it could inform the development of effective strategies for maintaining brand identity while adhering to fundamental human rights. As AI becomes more prevalent in brand communications, it is critical to explore how it can be leveraged to promote FOE using brand voice rather than compromise it.

Applied Methodology

There is currently no framework for synchronizing AI-generated brand voice across digital platforms while complying with FOE. This study focuses on whether AI-dependent brand voice can adhere to FOE guidelines across social media channels or not. The following research question is addressed:

How can FOE be integrated for generating brand voice using AI in social media?

The purpose of this study is to investigate the reliance of branding communications on AI to sustain brand voice while keeping in mind the fundamentals of human rights, such as FOE. It aims to research how to produce a suitable brand voice to avoid legal consequences. Therefore, this study is exploratory in nature, employing a qualitative research approach based on content analysis. Initially, the role of brand voice using AI, the application of AI to monitor FOE, and the study of integrating FOE in Brand Voice Generation using AI were reviewed. Several case studies were used to conclude that AI-regulated brand voice has a significant impact on social media FOE, which is typically limited by privacy restrictions. By imposing the drawn inferences from revealing the common research areas, this study's main conclusion has been the dependency of AI, brand voice, and social media with the coupling of their combined scopes in establishing the FOE principles.

Results

Integrating FOE in Brand Voice Generation using AI

When using AI to generate a brand voice on social media, it is important to integrate FOE while also maintaining a safe and respectful online community. Achieving this balance can be challenging, but it is possible by using properly trained and transparent AI algorithms to monitor content for harmful or offensive language. However, it is crucial to ensure that these algorithms do not accidentally suppress legitimate expressions of FOE. Thus, integrating FOE in generating brand voice using AI in social media requires a deliberate strategy that balances the benefits of AI with the necessity for human-like brand voice. Here are some ways FOE can be integrated:

1. Use of transparent and ethical AI algorithms: AI algorithms must be transparent, and the methods used in their development and application must be ethical. This ensures that brand voice generated by AI adheres to FOE principles.
2. Use of natural language processing (NLP) technology: Current technology employs NLP and sentiment analysis to detect toxic text without depending on a predefined list of banned words or phrases (Dias Oliva, 2020, p. 628). NLP technology thus can be used to analyse and interpret user-generated content, which can then be used to generate brand voice that resonates with the target audience.
3. Monitoring of FOE: AI can be used to monitor social media platforms to identify instances of FOE violations. This helps brands to avoid such instances and maintain a positive image. Also, for better monitoring, several major social media companies have started implementing the United Nations Guiding Principles (UNGP) when faced with governmental demands that do not comply with international human rights law standards (Global Network Initiative, n.d.). These companies are members of the Global Network Initiative (GNI), a multi-stakeholder platform that offers an adaptable framework for responsible business decision-making in support of freedom of speech and privacy rights (Dias Oliva, 2020, p. 622).
4. Use of human oversight: AI-generated brand voice must be reviewed and approved by humans to ensure that it adheres to FOE principles and aligns with the brand's overall communication strategy. The use of AI tools to manage 'toxic' textual content online without human oversight may pose a threat to the exercise of FOE, as enshrined in Article 19 of the International Covenant on Civil and Political Rights (ICCPR), putting socially vulnerable groups, such as LGBTQ individuals, at risk (Dias Oliva, 2020, p. 636). People who identify as LGBTQ may face 'limitations' when sharing content online based on their sexual orientation or gender identity, which fall under the UN Human Rights Council's umbrella term of 'other status' (Dias Oliva, 2020, p. 637).

By incorporating principles of FOE into the development and implementation of AI-generated brand voice, brands can ensure that their communication efforts on social media align with fundamental human rights. This can be further illustrated using below case studies.

Case Study 1: Facebook's 2018 algorithmic content moderation system aimed to remove objectionable content, but it was flawed and removed legitimate content that didn't violate community standards (Hern, 2018). This highlights the impact of AI-regulated brand voice on FOE, as it can limit users' rights to express their opinions and ideas. It is essential to develop AI systems for brand voice and content moderation with an understanding of FOE principles to prevent inadvertently restricting users' rights.

Case Study 2: Twitter has been using AI algorithms to identify and flag potentially problematic content for human review (Hatmaker, 2021). However, the algorithms have raised concerns about the impact on FOE. For example, the algorithms may inadvertently censor political discourse as they may not be able to distinguish between hate speech and legitimate political speech thereby affecting the latter's brand voice. Moreover, AI systems are only as unbiased as the data they are trained on, and if the training data is biased or incomplete, the algorithms may perpetuate existing biases and inaccuracies. To address these issues, Twitter has been working on improving the accuracy and fairness of its AI algorithms. They are also increasing transparency and user control over content moderation. This includes providing users with more information about why certain content is flagged and allowing them to appeal decisions. In this way, Twitter is trying to balance the promotion of FOE on its platform while combating harmful speech and misinformation.

Case Study 3: In 2020, Twitter removed several posts from the account of popular Indian actress Kangana Ranaut for violating its policies on hate speech (BBC News, 2021). While some users applauded Twitter's action, others criticized it for suppressing FOE and censoring political speech. The controversy raised questions about the role of AI in content moderation and whether its use could potentially limit FOE. It may be argued that being a machine-based technology, AI may lack the nuance and context needed to make accurate decisions about content moderation, leading to potential

errors and overreach. This case highlights the need for brands to carefully consider the implications of using AI to regulate brand voice and its potential impact on FOE on social media.

Case Study 4: TikTok Australia faced criticism for limiting FOE during the Black Lives Matter (BLM) movement (Gillezeau, 2020). Users reported posts related to BLM were being flagged and removed, even if they followed community guidelines. This affected the movement's particular brand voice and led to accusations of censorship and a violation of free speech. TikTok Australia responded by pledging to support the movement and combat hate speech and misinformation. This case highlights the challenges of balancing FOE and a safe online community, and the need for transparency and accountability in the use of AI for content regulation.

Case Study 5: Twitter limited a political leader's FOE by deleting his tweet in January 2021, after permanently suspending former US President Donald Trump's account (Conger & Isaac, 2021). The suspension came after Trump made tweets claiming the 2020 presidential election was stolen and inciting his supporters to challenge the results. Initially, Twitter labeled some of Trump's tweets as containing disputed or misleading information. The suspension of his Twitter account and the deletion of his tweet limited former President Trump's ability to communicate his brand voice on the platform. However, after the January 6th Capitol insurrection, Twitter permanently suspended Trump's account due to the risk of further violence. This sparked controversy, with some arguing it constituted censorship and FOE, while others claimed Twitter had a responsibility to prevent the spread of harmful misinformation and limit the potential for real-world harm.

Thus, the reliance of brand voice on AI does not necessarily limit FOE. However, it is important to ensure that the AI-generated brand voice adheres to FOE principles. This can be achieved by designing AI systems that consider FOE principles, such as allowing for diverse perspectives and opinions and avoiding censorship. Additionally, it is important to have human oversight and intervention to ensure that the AI-generated brand voice is not violating FOE principles. Therefore, while AI may play a crucial role in maintaining brand voice, it should not be solely relied upon, and there should be a balance between AI and human involvement to ensure that the brand voice aligns with FOE principles.

Surikova (2022) defined brand voice and proposed a brand voice life cycle that aligns with the brand's marketing needs. AI is used in several phases to develop the brand voice according to her proposed life cycle. Additionally, Surikova's co-author, Siroda, provided an example of a two-way integration model for using AI on social media platforms. This model can be improved by incorporating human intervention and analysis at the model's entry and exit points. This model can be improved by incorporating human intervention and analysis at the model's entry and exit points. Prior to being fed into the automated AI systems, the initial data is cross-checked and analyzed by a business data analyst. After the system has been run, the output is then sent to an analyst for final human validation and verification. Once the field expert approves the output, it is considered finalized and ready to be used.

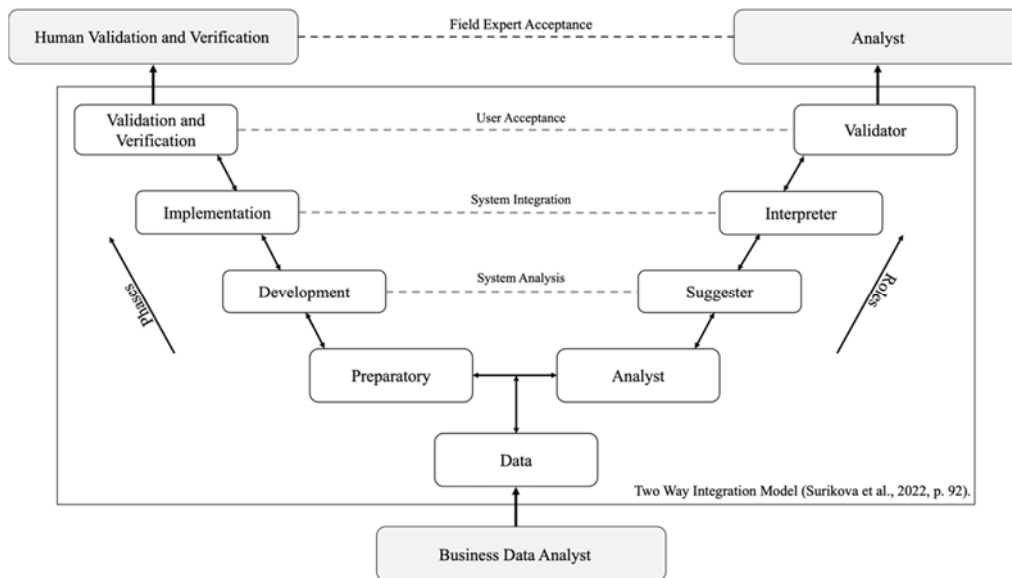


Figure 1: Two-Way Integration Model with integrated Human Analysis

This incorporation of human expertise into the model facilitates the incorporation of FOE at the outset of the model while managing the data, resulting in the development of a FOE-integrated brand voice using AI across all social media platforms.

Discussions, Contributions and Future Scope

Theoretical Discussions

This research used FOE to examine brand voice recognition and positioning using AI in social media. Similarly, the findings are centred on brand voice parameters that use AI to evaluate current competitive scenarios and FOE-based strategic planning. AI advancements enable social media platforms to provide stakeholders with customised brand identities and services based on the products they choose (Surikova et.al, 2022, p. 94). By incorporating FOE into the brand voice development process, the brand's reputation can be designed to align with and encourage values such as free expression, open discussion, and inclusiveness. This can be especially significant on social media platforms, where a variety of opinions and perspectives exist, and where the effective administration of FOE using AI can promote healthy and constructive engagement. Also, while taking measures to protect the community of users, the organizations must ensure that the removal of unlawful content does not violate users' right to FOE, thus, any automated measures must be tailored and proportionate (Jørgensen & Zuleta, 2020, p. 62). Additionally, governments should avoid delegating responsibility to organizations as content adjudicators, which empowers corporate judgement over human rights values at the expense of users (Jørgensen & Zuleta, 2020, p. 62).

Thus, integrating FOE in brand communications using AI can be a complex task, but there are several steps that brands can take to adhere to FOE principles:

1. Establishing a clear brand voice: The brand voice should be established based on the principles of FOE, ensuring that it does not violate any human rights standards.
2. Use AI tools for monitoring FOE: AI can help brands monitor social media channels to identify and respond to any issues that might arise regarding FOE.
3. Develop a policy for content moderation: This policy should clearly outline the type of content that will be allowed on social media channels and how any issues related to FOE will be addressed.

4. Train employees on FOE: It is essential to educate employees on the principles of FOE and the importance of adhering to these principles in all brand communications.
5. Collaborate with FOE experts: Brands can collaborate with FOE experts to ensure that their brand voice aligns with FOE principles and this can also provide valuable insights into how to integrate FOE into brand communications.

Once the brands have confirmed that the FOE standards are in place, they can use AI to create brand voice across various social media platforms. This paper shows how AI can be used to monitor the FOE using bibliometric analysis and case studies, as well as how non-compliance with the FOE affects brand voice. To the best of our knowledge, this is the first effort to develop a two-way integration model of brand voice using AI with legitimate human checkpoints for data validation and verification.

One aspect of human rights due diligence is ensuring that the platform's content rules are enforced in accordance with international FOE standards (O'Flaherty & Heffernan, 1995; Article 19). Thus, AI becomes an integral part of evolving, developing, predicting, and analysing brand voice in social media (Surikova et al., 2022, p. 95) with the incorporation of human assessments.

Managerial Contributions

The contribution of the correlation between brand voice, AI, and FOE in social media has several managerial implications:

1. Organisations must recognize the importance of brand voice in social media and the role of AI in shaping and maintaining it. This requires investment in AI technologies and the hiring of professionals skilled in AI and marketing to create effective and consistent brand messaging across various social media channels.
2. Organisations must also understand the importance of FOE in social media and the potential risks associated with infringing on these fundamental rights. AI can assist in monitoring and analyzing FOE-related content and provide companies with insights into how to maintain a brand voice that respects these principles.
3. Organisations must balance the benefits of AI in brand voice development with the need for human-like communication that resonates with their target audience. This requires a strategic approach that considers the nuances of each social media platform and the preferences of the audience.

Overall, the correlation between brand voice, AI, and FOE in social media highlights the need to adopt a thoughtful and intentional approach to their social media communications. There is no one-size-fits-all approach to brand voice, and practitioners must consider their brand's unique values, goals, and target audience when developing and implementing a brand voice strategy.

Limitations and Directions for Future Research

While AI tools can be helpful in modifying brand voice based on FOE principles, there are some limitations to keep in mind:

1. AI tools are not perfect and can make mistakes in their analysis and recommendations;
2. AI tools do not always take into account the nuances and cultural contexts of different social media platforms and their users;
3. Relying too heavily on AI tools to modify brand voice can result in a loss of authenticity and uniqueness. It is important to strike a balance between utilizing AI for data analysis and insights and maintaining a human touch in the brand voice;
4. When using AI tools for brand voice adaptation, updated privacy and data security factors must be considered on a regular basis.

Future research in this field may focus on creating AI tools and algorithms that not only retain brand voice but also adhere to FOE principles by staying up to date with the government's policy website. This could involve exploring the development of AI models that are trained on data sets that are

specifically designed to incorporate FOE principles. Additionally, research could also focus on the development of more sophisticated natural language processing tools that can better understand the nuances of language use and ensure that brand voice is appropriate for different contexts.

Another area of future research could be exploring the impact of AI-regulated brand voice on consumer perception and behavior. While the use of AI tools may help maintain brand consistency and adherence to FOE principles, it is important to understand how consumers perceive such communication and whether it influences their purchase behavior or brand loyalty.

Finally, research could also explore the ethical considerations surrounding the use of AI in brand communications. This could involve examining issues such as data privacy, bias in algorithmic decision-making, and the potential for AI to perpetuate harmful stereotypes or discriminatory practices. By exploring these issues, researchers can develop guidelines and best practices for the use of AI in brand communications that prioritize both brand consistency and the protection of fundamental human rights such as FOE.

Conclusions

According to the findings of this study, brand voice is an important aspect of brand communication, and maintaining it consistently is crucial for developing brand identity and loyalty. However, with the increasing use of AI in brand communication, it is critical to consider FOE as a basic human right when designing and implementing brand voice strategies. The use of AI can be used effectively to monitor and alter brand voice to align with FOE principles. However, the incorporation of AI must be balanced with human intervention to ensure that the brand voice retains the necessary emotional connection with the audience and adheres to the actual FOE principles. This study's main conclusion has been the dependency of AI, brand voice, and social media with the coupling of their combined scopes in establishing the FOE principles. Furthermore, this study helps academics and practitioners recognize that in today's world, these concepts have a significant impact on branding in light of human rights conventions. Thus, the novel research encourages organisations to align technological and theoretical advances with the strong recommendation of FOE principles that adhere to both national and international laws. This study aims to raise awareness and encourage scholars to begin investigating the future reliance of brand voice on AI across various social media platforms while keeping FOE and the human element in mind.

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KNOWLEDGE OF RISK AND CRISIS MANAGEMENT FOR MANAGERS OF COMPANIES AND ORGANIZATIONS

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Abstract

In today's conditions of globalization and digitalization, in the conditions of rapid change, it is important to be flexible and adapt to new challenges. In order, for companies and organizations to be able to successfully manage crises, it is important that people who take leading positions in organizations and companies, have an understanding of risk and crisis management. Some of the current students will later take leading positions in various organizations and companies. Purpose of the paper is to find out trends, how safe students feel in Europe, as well as how important they think understanding crisis management is, as well as whether they have studied subjects related to risk management and crisis management during their studies. The main finding is that insufficient attention has been paid to risk management and crisis management, subjects, people don't realize the devastating effect of the crisis, as well as the fact that the crisis is not only a threat but also an opportunity.

Keywords: crisis management, crisis situation, risk management, safety, companies and organizations.

DOI: 10.37804/1691-6077-2023-14-166-171

Introduction

In today's changing environment, which also includes various unplanned events and things, it is very important to be flexible and able to make the right decisions and be ready to react. The current time, the century of digitalization, gives us the opportunity to be mobile and opportunities to access information much faster and more operatively than it was before. What has happened in recent years, supply chain delays, the covid 19 pandemic and now the war in Ukraine, makes us think more and more about how to prepare and how to minimize the impact of various unexpected events on the existence of both companies and organizations. In order to manage an emerging crisis more effectively, it is important that the organization or company has previously done its homework and analyzed possible risks, as well as made preventive actions to reduce them, and an action plan has been developed in case of a crisis situation. Also, in the Latvian standard of the profession of company and organization managers adopted in 2019, in addition to the skills and attitudes, professional knowledge and competences necessary for the performance of the basic tasks and duties of the professional activity, it is defined that the managers of companies and organizations must be able to analyze risks and manage crisis situations in the organization (Profesionālās izglītības un nodarbinātības trīspusējās sadarbības apakšpadomes 2019. gada 18. septembra sēdē, protokols Nr.6). Risk management and crisis management are very specific, and they require specific skills, which can be very expensive for organizations and companies to acquire through self-learning. The author of this paper using the opportunity through ERASMUS+ Strategic partnership "Digital education tools for security risk management" project, tried to find out whether students, from six countries (Latvia, Spain, Lithuania, Finland, Norway and the Netherlands) have learned subjects related to crisis management, risk management and security. Since university students are potential managers of various levels in organizations and companies, the author wanted to find out what is their attitude towards crisis management, how they think whether managers of companies and organizations should pay significant attention to crisis management as such.

Theoretical review

The author of the paper studies crisis management and risk management in depth. If you compare crisis management and risk management, everything is much more simple with risk management because it is defined in the international ISO standard - ISO 31000. Risk management is coordinated activities to direct and control an organization regarding risks. Risk management process is systematic application of management policies, procedures and practices to the activities of communicating, consulting, establishing the context, and identifying, analyzing, evaluating, treating, monitoring and reviewing risks (ISO 31073:2022(en), 2022).

As for crisis management, many scientists have studied and are still studying crisis management, there is also a wide range of theory books available. By studying more deeply the issues of crises itself and crises management, the author concludes that crises can be discussed in different contexts and crises tend to be different. Practically all people use the word crisis in their everyday conversations. This word is used to describe both personal events in a person's everyday life and mutual relationships, as well as surrounding, mostly unfavorable events, related to the processes taking place in companies and organizations, as well as in the description of national and international processes. Although the word crisis is widely used, in the author's opinion, a clear and unequivocal definition of crisis is missing, which allows this term to be interpreted according to people's understanding and needs. In the framework of this study, the author believes that the most accurate definition that characterizes the crisis in the broadest way - a crisis - is a turning point for good or bad (Fink S., 2000). A crisis is a decisive moment, or a critical time, when an organization or a company must make the right decisions, take the right actions in order to continue operating, exist and, possibly, using the opportunities provided by the crisis, reach new stages of development. A crisis is simultaneously characterized by both negative consequences (disruption, deregulation, conflict, confusion and intense stress leading to reckless behavior) and positive consequences (mobilization, solidarity, cooperation, improved adaptation, experiential learning). Crises call into question the basic values of the social system and the methods of performing the tasks defined in it, as well as the systematic rules of the organization, which may prove to be useful in overcoming the current or future crisis, or, on the contrary, may be completely useless and contribute to the crisis (Fink S., 2000). In the author's opinion, as time changes, under the influence of globalization and digitization, more and more events which are happening around the world, starting with supply chain delays, the COVID-19 pandemic, the war in Ukraine can unexpectedly cause crisis situations in any company or organization.

Methods

In the author's research on " KNOWLEDGE OF RISK AND CRISIS MANAGEMENT FOR MANAGERS OF COMPANIES AND ORGANIZATIONS ", the questionnaire method was used to collect primary data. According to S. Kristapsone, the survey method means two possible survey techniques: questionnaire and interview in the form of survey techniques. A survey is a method of gathering information, which involves asking questions to a researched group, as well as analyzing the answers obtained. Most often, using the survey method, researchers obtain information about interests, motives, plans, feelings, priorities, relationship structure, and the like. (Kristapsone, 2014) A survey is a method of gathering information using appropriate questions from a sample of people with the aim of understanding the thoughts of the population. Surveys provide a critical source of data and insights for everyone from different groups of society.

In his research, the author chose to take the opportunity through the ERASMUS+ Strategic partnership "Digital education tools for security risk management" international project to collect

more information from respondents from several European countries, and to get a broader view of people's knowledge of crisis management and risk management, as well as their feeling of importance of this topics in business. All data obtained are used in an aggregated form to analyze overall trends. In this paper author analyzes only a part of the whole data that was obtained through the ERASMUS+ Strategic partnership “Digital education tools for security risk management” survey conducted by project team.

Results

The author of this paper took part in the research of Turība University and five partner universities of ERASMUS+ SECUREU project, where they asked their students and teachers different questions related to security, risk management and crisis management in autumn 2022.

281 students and teachers from 6 partner Universities from Latvia, Finland, Norway, Spain, Lithuania and the Netherlands took part in the survey. Although Europe in general and project partner countries can be considered safe places for living, the survey shows that only 12.8% of the students evaluated safety with the highest mark – 10 points (viewable Figure 1.). 23.9% of the students on a scale from 1 to 10 chose 9 and the highest percentage of students 33.2% chose 8. 30.1% of all students evaluated their safety feeling under 8 points (ERASMUS+ Project number: 2021-1-LV01-KA220-HED-000023056, 2023). According to the research, the average grade is 7,98. The statistical mode in this question, or the most used answer, was 8 and in general, respondents feel safe in their country, living place, university.

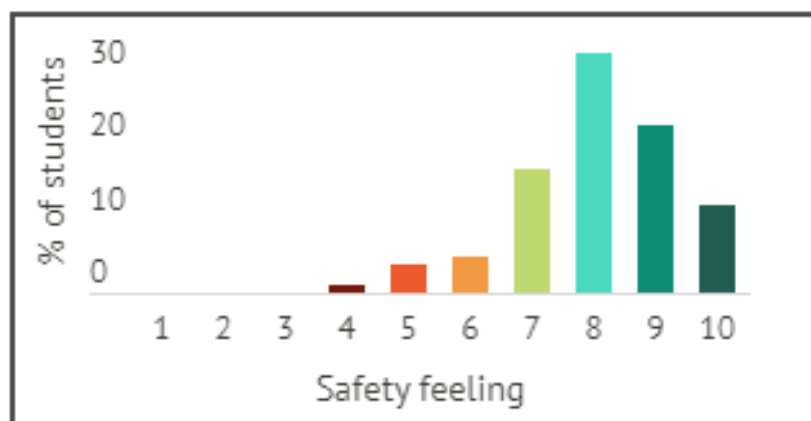


Figure 1. How secure in their country, living place, university feel respondents (ERASMUS+ Project number: 2021-1-LV01-KA220-HED-000023056, 2023)

The main reasons mentioned for not feeling safe were the war in Ukraine, unstable political situation, intolerance towards minorities, financial uncertainty, rising crime rate, growing social uncertainty, media and information uncertainty, cyber-attacks, increased polarisation and badly handled immigration situation. This all issues can cause crises both in organized and in companies.

Answering the question- Do you feel that the security situation in your region has grown worse during the past year? (viewable Figure 2.) biggest part or 58% of respondents noted that in recent years, the security situation in the region has deteriorated. 23 % of all the respondents strongly answered that the security situation has deteriorated and 35% of respondents answered that more deteriorated, than no.

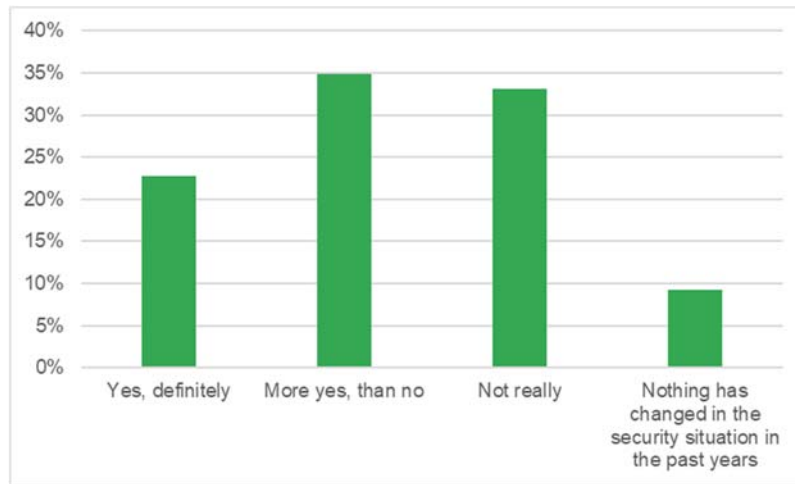


Figure 2. Respondents' feeling about the security situation in the region (the author himself, 2023)

Only 9% of all respondents answered that the security situation has not changed at all, which reflects that, more or less 91% of respondents feel that the security situation is deteriorating or changing for the worse.

All the above-mentioned conditions of security deterioration, as well as the respondents' feeling that the overall security situation is deteriorating, lead to the question of whether people see risks and whether they have learned how to work with risks at all. The answers to the question - Have you studied any courses in your university related to risk management? (viewable Figure 3.) - were distributed as follows – 68% have learned risk management and 32% haven't learned risk management, and 4% don't even remember or have studied risk management, which proves that even if they had studied, they have no memories of this subject.

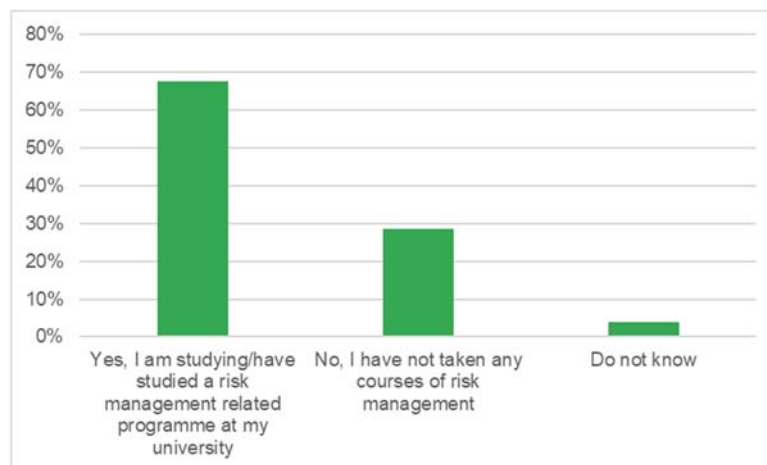


Figure 3. Respondents' answers to the question whether they have studied risk management (the author himself, 2023)

Appropriate risk management can reduce the occurrence of crisis situations. However, if a crisis situation occurs, it is necessary to understand how to manage it and how to manage a company or organization in crisis situation. For the survey question - In your opinion how much attention should

companies and organizations pay to crisis management nowadays? (viewable Figure 4.) the responses were fairly evenly distributed.

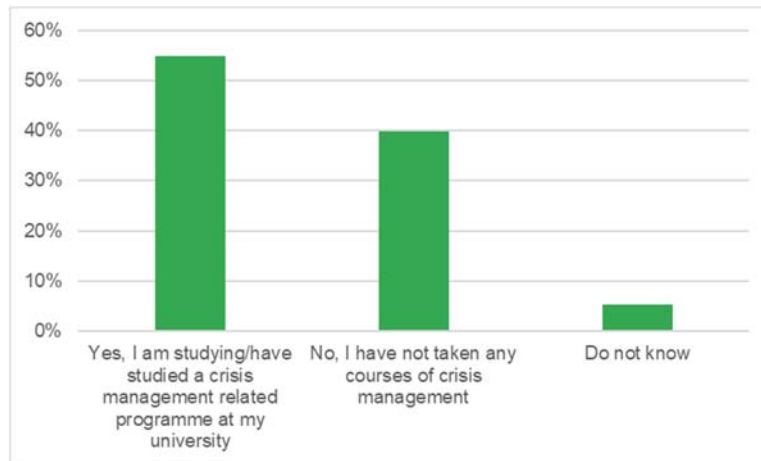


Figure 4. Respondents' answers to the question whether they have studied crisis management (the author himself, 2023)

A slightly larger share, or 55% of the respondents answered that they studying/have studied a crisis management related program at their university and 45% of the respondents haven't studied or don't remember having studied subjects related to crisis management. The results of the research show that almost half of the respondents haven't learned crisis management, and it is very likely that when they get into a leadership position in a company or organization, if the company or organization faces a crisis, they will not have sufficient knowledge of how to manage the crisis.

After gathering information about whether the respondents have learned risk management and crisis management, it was important for the author to understand how the respondents evaluate the need for companies and organizations to pay attention to crisis management (viewable Figure 5.). In this question value 1 means that companies and organization management don't need pay attention to crisis management – 5 means that companies and organization management need pay attention to crisis management very much.

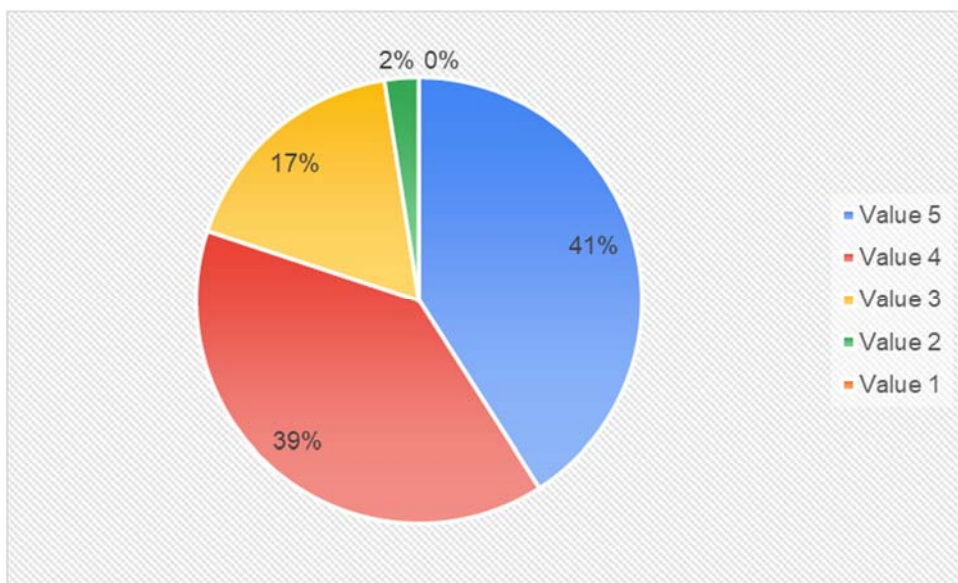


Figure 5. Respondents' evaluation how much attention should companies and organizations pay to crisis management nowadays (the author himself, 2023)

After collecting the results, the author was surprised that only 41% rated with the highest mark – 5 - the fact that company and organization managers should pay attention to crisis management and related issues. Almost 20% of respondents gave a score of 3 or less on this question, which means that, in their opinion, managers of companies and organizations do not need to pay much attention to issues related to crisis management, despite the fact that almost 3 times as many people, or 58% answered that security risks have increased over the past year.

Conclusions

After the research work done, the author concludes that European people are worried due to global events, but in general they feel safe. Most of the respondents are aware of the importance of risk management and crisis management in the operation of organizations and companies. Despite the need for knowledge of risk management and crisis management, only 68% of respondents have learned risk management and 55% of respondents have learned crisis management during their studies. The author believes that insufficient attention has been paid to these, risk management and crisis management, subjects, people don't realize the devastating effect of the crisis, as well as the fact that the crisis is not only a threat but also an opportunity. Likewise, without learning these subjects and facing a crisis, people will not be able to recognize crisis in early stage and make effective decisions to manage the crisis.

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INNOVATION MANAGEMENT MODEL FOR SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs): GEORGIA

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Abstract

The present article explores the internal and external factors that enable the implementation of innovative practices within Georgian SMEs and the successful management of innovation and growth. We posit that a well-functioning and effective innovation management model is a prerequisite for growth and sustainability. The research aims to propose a conceptual model of innovation management and assess whether the application of innovation practices impacts the company's growth in the targeted sample. The interpretation of results is based on examining the phenomenon and synthesis of theoretical information and data obtained from the online questionnaire and focus group. The data reported here appear to support the assumption that innovation management and a good combination of human and financial resources shall be the basis upon which the growth is implemented. As there is still a scarcity of research on innovation management practices in SMEs in developing countries, notably in Georgia, the present study shall contribute to the business and innovation management literature and shall develop recommendations and suggestions for start-up managers, entrepreneurs, policymakers or other interested parties. Consequently, the present research shall attempt to combine theoretical and empirical substantiations and create practical implications.

Keywords: Small and Medium-Sized Enterprises; Innovation Management Model, Growth strategies; Entrepreneurship, Innovation management; Business Sector.

DOI: 10.37804/1691-6077-2023-14-172-185

Introduction

The swift evaluation of technological alteration can endanger traditional industries and weaken prevailing business models. Consequently, companies are on the quest to open up novel markets and respond to changing customers' demands by effectively harnessing innovation. However, rapid digitalization, rising commodities & energy prices and an ageing population are the challenges that SMEs have to overcome. Facing these challenges is problematic, and the only way to tackle the is by introducing innovative products and services.

Innovation capabilities are strongly affected by obsolete technologies and low human and financial capital (Yang, 2004). Notwithstanding the pros of innovation, numerous companies are evading and sidestepping it. Nonetheless, the innovation management process can be learnt and mastered progressively and steadily (Košmrlj, Širok and others, 2015). There is a scarcity of research on innovation management in developing countries, disdain the indisputable significance of this topic and its popularity among researchers. Hence, the current study attempts to identify the internal and external growth factors in Georgian SMEs and to scrutinize the linkage between growth and innovation practices. It should also be noted that state development agencies allocate a lot of financial resources to foster innovation. Yet, there are few kinds of research into monitoring the impact of innovation practices on a firm's growth and profitability.

From that perspective, the present study can be beneficial as it shall explore how various innovation practices and proper management affect a firm's growth and income generation and can contribute to the existing literature. Additionally, the research recommends an innovation management model and offers a reasonable connection between innovation practices and a firm's growth.

1. Materials and methods

The thematic scrutinizing technology, SMEs and innovation tend to be tremendously prevalent and vastly explored by researchers (Pashley and others, 2020; Schumacher, 2019; Volberda and others, 2013). Though, there is a few researches that address small and medium sized firms and the majority of studies cover large enterprises with sound financial capital and innovation management tools. As the evidence derived from those studies reveal, small and medium sized enterprises play a significant role in national and international economy by generating job opportunities, by enhancing entrepreneurial skills and by decreasing unemployment. In addition to that, small businesses need funds and external financial support (Abesadze and Kakulia, 2009). Among the problems prevalent in SME business sector in Georgia the following challenges are highlighted: lack of entrepreneurial skills, lack of finances, inadequate institutional environment, limited undertakings towards innovation, and limited spending on research and development activities (Shaburishvili and Kadagishvili, 2018). As evidence suggest, the innovation rate is higher in large firms than in lower firms (Kuriakose, 2013). In addition, the development of entrepreneurship for developing country is very important as its creation ensures the creation of equal opportunities for small and large-sized enterprises and a legislative environment that guarantees the growth and development of SMEs (Papava and Chikovani, 1997). Moreover, the foremost encounter for start-ups is the non-availability of business plans, marketing research and financial projections. In addition to that, as bank loan is the key tool of financing the business, in case of business failure, these entrepreneurs abandon their business activities and risk losing a property, a house or other fixed asset ensured during the loan issuance (Bagaturia, Ciloglu and others, 2015).

Previous studies in the field. Concerning innovation management and growth strategies, in January 2021, another study was conducted in Georgia to scrutinize Georgian SMEs' functioning in the COVID-19 crisis. The study's main aim was to obtain real-time data and identify the major obstacles that obstructed the growth process of SMEs. As the study findings reveal, the significant problems caused by the pandemic were decreased sales, logistical disruptions and fluctuation of exchange rates. The most prominent result from the analysis is that the crisis might cause a significant shift towards digitalization. Some SMEs might be difficult to implement digital initiatives and employee training in digital education due to a lack of finances. The most prominent finding from the research is that the increase in online-platform use was remarkable in technologically-advanced countries. According to study results, most respondents deem that financial aid, deferred taxes and support from the government are the most efficient support for SMEs. During the crisis, the repayment of loans was the significant obstacle that Georgian SMEs faced. When it comes to a firm's growth, the employees and staff have a crucial impact. However, during the crisis, the firm cut Human Resource costs for budget optimization. It was no surprise when the study findings revealed that most SMEs had no well-defined strategy in the context of a layoff. Focus group discussions in this study also found that online platforms played an essential role in the reduction of adverse effects and that they can guarantee continuousness in production and market exchanges.

The present research paper explores and investigates the internal and external factors that enable the implementation of innovative practices within SMEs and the successful management of innovation. The thesis aims to propose a conceptual model of innovation management and assess whether the application of innovation practices impacts the company's growth in the targeted sample, namely within the selected small and medium-sized firms in the emerging market of Georgia. The present research addresses the following research question:

RQ1: What impact shall the innovation practices have on growth?

Given the above discussion following hypotheses have been developed with relation to research question:

- *Hypothesis 1:* Innovation practices shall have a positive effect on SME's growth

- *Hypothesis 2:* The higher is the availability of human and technological resources the positive effect it has on enterprises innovation practices and firm's growth

The objective of this research is to identify the key external and internal factors which affect SMEs' growth strategies and to propose a novel innovation management model that could be helpful to entrepreneurs and SME managers. The following are specific research objectives:

- To overview and get more information about the business environment in Georgia;
- To identify internal and external factors that limit or promote business growth;
- To find out the impact of innovation practices on the business growth performance of SMEs;
- To develop an innovation management model;
- To develop recommendations and suggestions for start-up managers, entrepreneurs, policymakers or other interested parties.

The purpose of the research is exploratory type and the research process is mixed: quantitative and qualitative. The outcome of the study is applied and the logic of the analysis is deductive. Whereas, while conducting deductive and inductive research two types of reasoning is operated: the theories that predict possible outcomes are identified and current explanations that generalize how particular things work are formulated. Deductive reasoning starts by identifying the broad truth, that truth is then employed to a particular case, and some specific conclusions regarding precise instances are developed from evidence. The outcome of the research is pure as it describes a study designed to contribute to general knowledge and theoretical understanding. The logic of the research is deductive as it describes a study in which a conceptual and theoretical structure is developed which is then tested by empirical observation. The data is interpreted and analyzed via the SPSS program (Quantitative) and MAXQDA (Qualitative). The interpretation of results is based on examining the phenomenon and synthesis of theoretical information, leading to the development of a conceptual model for adding new aspects to the existing knowledge around the topic. The hypotheses are tested by distributing a questionnaire to the selected sample and organizing a focus group.

This research appeals to a sample of SMEs from diverse industrial and service businesses to generalize beyond particular industries to the population of SMEs and serve the study's exploratory nature. A total of 200 respondents were selected to answer the questionnaires, and SPSS was used for the quantitative data analysis. Focus group discussion was used for data collection of qualitative research data. A total of 12 participants were selected for participation in a focus group.

This research makes a significant contribution from conceptual and theoretical perspectives, it is the continuation and responds to the previous investigations of other scholars, namely:

- The scarcity of research on the scrutinizing external and internal growth factors in SMEs and thus underlying the importance of financial resources and availability of funds (Enterprise surveys, 2020).
- Lack of research on proposing the solutions to the problems that the SME business sector in Georgia faces: lack of entrepreneurial skills, lack of finances, inadequate institutional environment, limited undertakings towards innovation, and trimmed spending on research and development activities (Shaburishvili and Kadagishvili, 2018)
- Lack of research that addresses innovation management models from a regional perspective and compares the neighboring countries of Georgia, Azerbaijan and Armenia (Kuriakose, 2013).

The following study limitations are acknowledged within the present research:

- The study focuses on a particular geographic region, it utilizes a specific methodology and assumptions within the present research framework. It cannot be thus generalized.
- The role of policymakers, national agencies, or other agencies is not highly emphasized.
- The questionnaires are answered by a single informant in each firm, limiting the study's diverse insights.
- The research cannot eradicate a like-hood of method bias, data loss, and information loss.

The conceptual model developed through research shall contribute to the business and innovation management literature as it shall illustrate the best practices of innovation management and reveal external and internal factors that impede business growth. As research is scarce within SMEs in Georgia, the mixture of academic and practical implications shall be valuable insight for the business and innovation management literature. This research's findings shall expand the literature on SMEs' innovation practices and business growth by exploring management practices, innovation management tactics and business growth performance in Georgia. In addition, factual information that could be useful to scholars, policymakers, and practitioners shall be illustrated.

The research findings attempt to encourage policymakers to support SMEs and their innovation practices, increase the linkage between business groups, educational and research centers and enhance general knowledge sharing about innovation.

The central theoretical contribution of the research is elaboration of innovation management model. Managers and directors of SMEs should remember that responding swiftly to the needs of fast-moving markets requires an innovative approach to developing skills, experience and competence. The present research could create a base upon which future research is developed. Though the creative management patterns differ across counties, some common characteristics could be identified and studied further for constructing considerable-scale research. Those who are likely to be interested in or to benefit from the proposed research are the following target audience:

- Entrepreneurs, owners of SMEs and other interested parties can benefit from the research findings and novelty models to understand the relative importance of innovation management towards a firm's growth
- The study is beneficial for policy makers, management consulting groups, independent researchers and for investors giving more insights and understanding of a national market and market functioning.

2. Research and discussion

Quantitative data used in the research was collected via questionnaire distributed among 200 respondents representing small and medium sized enterprises operating in various fields in Georgia. The first set of questions of questionnaire were related to identifying the internal and external factors that promotes growth in SMEs. It aimed elaborating the hypothesis that the higher the availability of human and technical resources, the more advantageous it is for enterprises and more it leads to growth. The majority of respondents, 47.5%, consider that human and technological resources are pivotal factor when it comes to internal growth and it could lead to further firm's growth. The other important factor identified by 23.5% of participants is organizational structures and systems. Financial means and funds are also deemed essential by 12.5% of respondents. The results are illustrated in table 1:

Table 1. Internal factors promoting growth

Description		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Funds and financial means	25	12.5	12.5	12.5
	innovation practices	15	7.5	7.5	20.0
	Human and technological resources	95	47.5	47.5	67.5
	organizational structures and systems	47	23.5	23.5	91.0
	culture	18	9.0	9.0	100.0
	Total	200	100.0	100.0	

When it comes to factors impeding the growth, it was argued that lack of finance limits business growth opportunities. This was backed up by the responses received from questionnaire, whereas 32.5% of respondents noted that lack of finance to pursue R&D is the hindering factor to growth that is than followed by the lack of skills (30%), the lack of innovation (23%) and the lack of desire to do R&D (14%). The results are illustrated in table 2:

Table 2. Factors limiting business growth

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Lack of skills	60	30.0	30.2	30.2
	Lack of innovation	46	23.0	23.1	53.3
	Lack of desire to do R&D	28	14.0	14.1	67.3
	Lack of finance to pursue R&D	65	32.5	32.7	100.0
	Total	199	99.5	100.0	
Missing	System	1	.5		
Total		200	100.0		

The question related to the identification of the most crucial external factor that could promote business growth, was answered by 200 respondents. The majority of respondents, up to 63.5%, consider that access to finances is the most crucial factor, and 21.5% of respondents deem that legislation plays a pivotal role in promoting business growth, followed by competitors (15%). The results are illustrated in table 3.

Table 3. External factors promoting business growth

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Competitors	30	15.0	15.0	15.0
	Access to finances	127	63.5	63.5	78.5
	Legislation	43	21.5	21.5	100.0
	Total	200	100.0	100.0	

The question regarding the innovation development process and identifying the critical factors in the process was answered by 198 respondents. The results reveal that most respondents (22%) consider identifying new market niches as the most crucial to innovation development. It is then followed by responding quickly to new market opportunities (20.5%), new product development (18.5%), distribution arrangements and diversifying exports (14%), adding innovative features to existing products and services (8.5%) and identifying new customers for existing products (1.5%) respectively. The results are illustrated in below table:

Table 4. Areas of importance in the innovation development

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Identifying new customers for existing products	3	1.5	1.5	1.5
	Responding quickly to new market opportunities	41	20.5	20.7	22.2
	Identifying new market niches	44	22.0	22.2	44.4
	Diversifying export	28	14.0	14.1	58.6
	Distribution arrangements	28	14.0	14.1	72.7
	New product development	37	18.5	18.7	91.4

	Adding innovative features to existing products and services	17	8.5	8.6	100.0
	Total	198	99.0	100.0	
Missing	System	2	1.0		
Total		200	100.0		

Qualitative data used in the research was collected via focus group discussions. The purpose of the focus group was to get practical information from people working in SMEs in Georgia and, through their involvement, identify internal and external success factors to SMEs' growth and examine how innovation is managed, developed and leads development. The total number of people participating in the focus group discussion was 12 adding one moderator. The focus group session was held online, and the discussion was held remotely in January 2022, and the target population was employees of SMEs operating in Georgia. Participants worked in various fields: finance, information technologies, healthcare and tourism. Focus group participants were given freedom and were allowed to express their ideas clearly and share feelings. The focus group was divided into several sections. One section addressed general questions about participants' skills and areas of knowledge and their firm's size. Another part focused on identifying internal and external factors that, as per their experience, limit or promote SMEs' growth. In addition, they addressed the platforms that they were referring to when driving their innovation practices. Also, the process of new product development was scrutinized. The final section was related to obtaining more insights about recommendations and suggestions for effective innovation management. Potential participants were reached out via utilizing multiple tools of social media platforms, namely: Facebook and LinkedIn, including e-mails and invited to participate in the discussions. During focus group discussions, using simple language without intensive technical terms or abbreviations and posing relevant questions was utterly essential. Questions were posed merely, and complicated sentence structures or unusual words were avoided. Participation in the focus group was voluntary, and no monetary compensation was proposed to the participants. Qualitative data were analyzed by utilizing the computer-assisted software MAXQDA. As illustrated in figure 1, 5 respondents participating in the focus group discussions represented small firms, whereas seven were working in medium-sized enterprises.

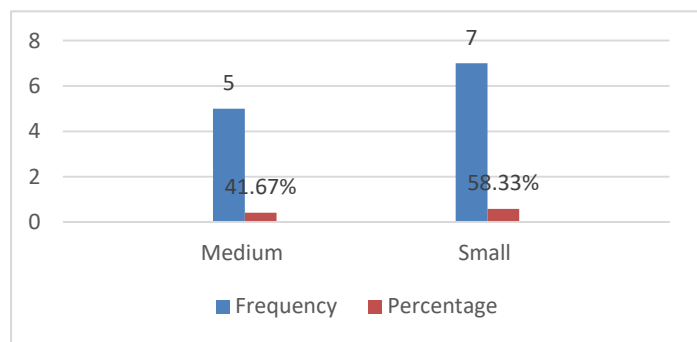


Figure 1. Firm's size

The discussion of the focus group covered five significant areas. The 1st section enclosed a general section identifying participants' skills and areas of knowledge and the firm's size. As per analysis, we do see that small firms and females are in the majority and the most frequently mentioned skills possessed by participants were: project management (5%), innovation management (6%), and statistical and analytical skills (2%). Out of 12 people, 5 had experience in project management. Whereas, 2nd section of the discussion addressed the main research areas, explicitly identifying factors that are internal to the organization and that promote the firm's growth. Per focus group discussions, growth is significant for any business. One participant mentioned that growth requires strategic thinking, planning, innovative approach and creativity. According to another participant, evolution plays a very critical role in SMEs. The essential internal factors that could promote SMEs' growth are employees' motivation, creativity, and innovation. The other participant mentioned the importance of solid human and technological resources. Most participants shared that the HR base, skills and professionalism of staff and employees are prerequisites to business growth, especially for small firms. The other participant mentioned the importance of effective organizational structure, culture and other internal systems. In particular, a decentralized management structure where freedom is given to employees to share their creative and original ideas freely. Notably, according to figure 2, 6 people consider human and technological resources to be a crucial internal factor that could lead to SMEs growth, followed by organizational structure and systems (4 people) and innovation (2 people).

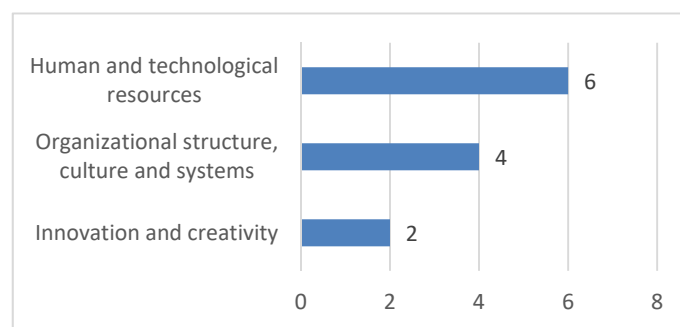


Figure 2. Internal organizational factors promoting SME growth

The 3rd section of the discussion concentrated on spotting external factors promoting the firm's growth. According to respondent's responses, as illustrated in figure 3, the most important external factors encouraging SMEs growth are: access to finances (3 responses), collaboration with suppliers (2 responses) and legislative environment (5 responses).

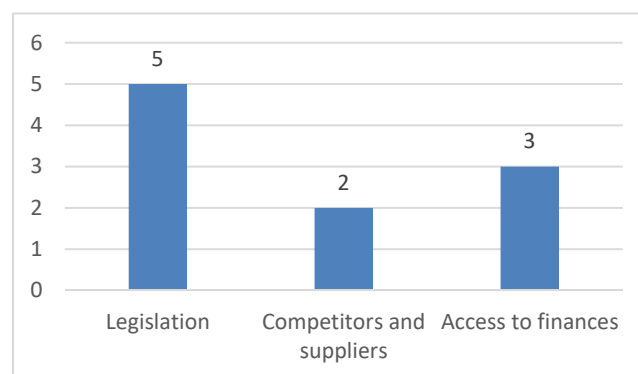


Figure 3. External factors that promote SME growth

The 4th section of the focus group discussion scrutinized external factors that hamper a firm's growth. What can be seen in figure 4 is that these external factors : lack of skills (6%), lack of innovation

(2%), and lack of finance to pursue R&D (4%), have a vast influence on growth and non-availability of this could limit and endanger firm's growth.

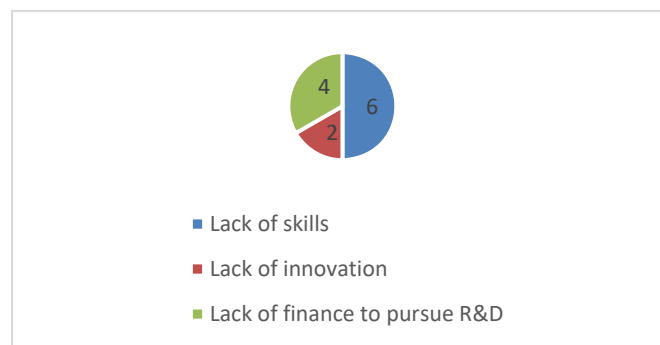


Figure 4. Issues limiting business growth opportunities

Identifying issues that limit business growth opportunities became extremely interesting to participants. When it comes to effective innovation management, the majority of focus group participants mentioned that innovation strategy and management are important, as illustrated in figure 5.

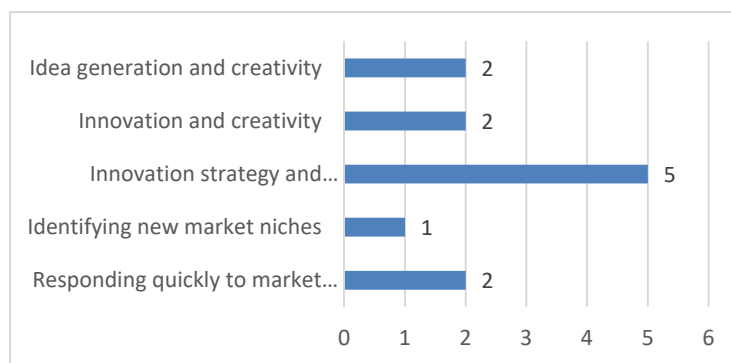


Figure 5. Essential factors in the process of innovation management

On the basis of the literature study and current research results, the authors offer a framework of SMEs innovation management model

3. Framework of SMEs innovation management model

Pursuant to quantitative and qualitative data, present research attempted to construct an innovation management model that could be a practical guideline for SMEs in managing innovation processes within organization. To ensure sustainability and continuous development, firms should drive innovation in a combined manner. The model considers internal and external factors and ranks them as per their importance. The present model addresses all aspects and actors that could potentially be involved in the innovation management process. There might be traditional innovation management linear mode, however, this model shall present the systemized tool and integrated method that would be practical for SME owners, managers and entrepreneurs to follow. According to the present model, in innovation management, there are 2 phases. The 1st phase is scrutinizing internal and external factors leading to firm's growth. In the internal factors, the firm needs to conduct a SWOT analysis, which focuses on evaluating its microenvironment and identifies its inner strength and weakness and external opportunities and threats. Firms can access the availability of human and technological resources alongside financial resources and, in case of necessity, concentrate on acquiring additional resources. As for external factors, a strategic framework in the form of Political, Economic, Social,

Technological, Environmental and Legal factors (PESTEL) analysis could be helpful for the firm to assess the business environment in which a firm operates and to monitor the macro-environmental factors.

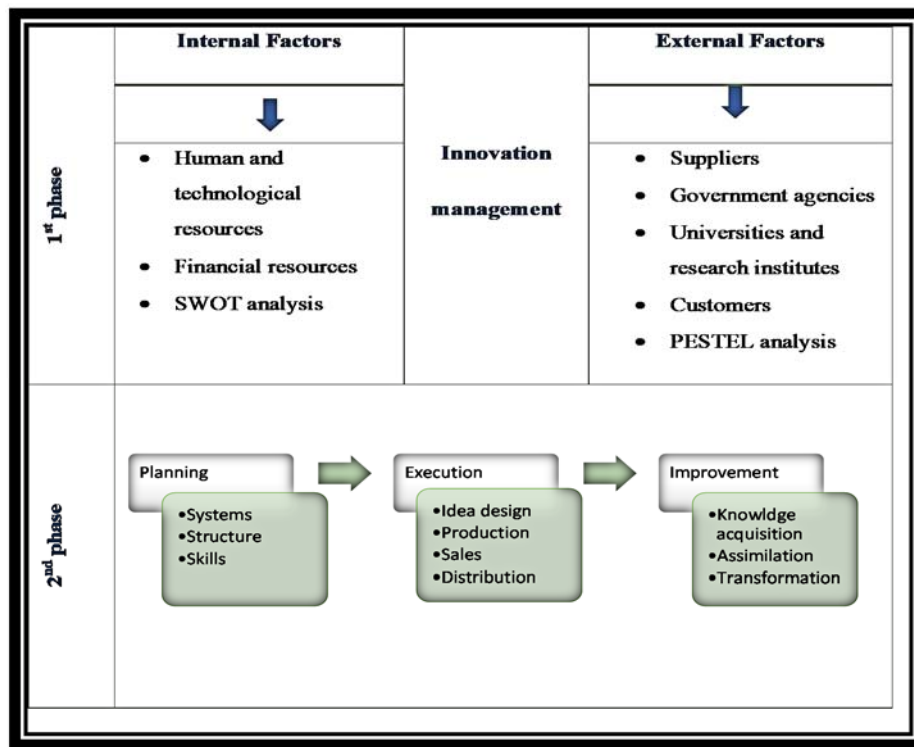


Figure 8. Innovation management model

As the previous studies revealed, innovative ideas could come from various sources. However, the role of the customer is pivotal when it comes to private companies and profit-oriented SMEs. Customers play an essential role in innovation management, as they are critical for proposing innovative ideas and generating knowledge creation. Private firms generate revenues by responding well to customers' demands (Jackson and Strange, 2008:19). Once they identify the needs, small firms can acquire more information about customers' needs and thus integrate their needs into new-fangled technological developments. The solid bond between firms and customers enables SMEs to accommodate needs swiftly and effectively compared to competitors. However, the tacit knowledge gained from customers is not sufficient. The distribution and selection of suppliers are also important not to endanger the created bond and trust.

Several studies indicate that comprehensive partnership with suppliers ensures that new technologies of components and systems can be introduced and suppliers are deeply involved and focused on product design and development in collaboration with the firm (Lipparini and Sobrero, 1994). Numerous studies have attempted to explain the importance of supplier relationship management (SRM), innovation-related relationships and having a systematic approach to evaluating vendors that supply goods, materials or services. Several lines of evidence suggest that an open environment where small firms are concentrating on collaborative processes and are moving from internal innovation processes and pursuing strategic partnerships reap the competitive benefits and grow. Previous research has established that a firm's competitive advantage is enhanced when relationships with its suppliers are well-managed, and suppliers are the essential pillars for ensuring competitive advantage. It has been argued that firms cannot purely focus on their internal resources to achieve success and that manufacturing companies strongly suggest concentrating on SRM (Al-Abdallah, Abdallah, and Hamdan, 2014). In addition, as resources and capabilities are scarce in SMEs, networking and

collaborating with various actors could benefit small and medium-sized firms. In particular, collaboration with governmental agencies for obtaining more information about current policies, political support and financial support or subsidy. In addition, industry associations could provide assistance and counsel on policies, legislation and financial aid, tapping their know-how and innovative approaches. Close ties with institutional bodies can benefit SMEs as there might be funds available to small companies related to innovation. Many small firms might lack the information or know-how to obtain the funds or access external finances. It is also vital for SMEs to search for alternative sources of funding (Jansen, Bosch and Volberda, 2005). Therefore, SMEs need to be part of networks for innovation and special competence development for technology transfer. According to previous study's results, SMEs membership in networks encourages specific collaboration with High Education Institutions (Mohannak, 2007).

The second phase in the innovation management model is related to planning, implementation and improvement. It implies that organizational systems, structures and skills are developed to respond to the firm's growth objectives. The most crucial stage in innovation management is improvement, where knowledge is acquired and transformed. Traditionally, it has been argued that knowledge is central to successful innovation (Tidd and Bessant, 2020). Several studies have postulated that there is a solid link between the ability to attain new knowledge and innovation and that companies need to integrate new technologies in their strategic process and to have a methodology for developing the strategy related to future technology (Birchall and Tovstiga, 2005).

Conclusions and recommendations

In the following research, it is argued that growth is associated with innovation management, as that innovation is the driving force of growth for SMEs operating in Georgia. The results are in line with prior studies. Robert B. Tucker describes innovation as the critical skill of the 21st century, as it conveys novel ideas to life and drives growth, cost-effectiveness and competitive advantage (Tucker, 2008). These findings suggest and enrich the prior research regarding the necessity of qualified employees and adequate finance to undertake study and extend operations internationally (Davidson and Delmar, 2006). The present research has distinguished internal and external growth factors from aligning with the argument that SMEs that follow an organic growth strategy are characterized by long-term survival. Also, firms that grow organically are highly dependent on technological resources, which allows them to react quickly to alterations in the market (Pasanen, 2007). Consistent with the literature, this research found that institutional factors play a pivotal role. Financial support from the government could benefit SMEs that intend to grow. There are similarities between the attitudes expressed in this study and those described by prior studies that found that human capital formation and training increase not only specific enterprises but influence territorial economic performance in general, thus contributing to the economy (Capelleras et al., 2016). The present study demonstrated that human and technological resources are essential in promoting SME growth and tend to be the internal factor upon which most firms focus. As for the external factors, access to finances is the most pivotal factor as it ensures the sustainability and growth of small and medium-sized companies. This study found that innovative production plays a pivotal role in product development. The other significant finding was that firms that intend to enhance their capabilities and improve their competitive position somehow lack the resources and thus borrow from other firms through acquisition or mergers, or borrow finances from financial institutions.

Usually, the growth process is hampered by a lack of innovation and finance to pursue R&D alongside a lack of skills. In addition, for many small firms, innovation depends upon informality and incremental, thus lacking global overview and strategic vision. Ensuring a firm's competitive advantage in this rapidly changing global market is now well-established from various studies that internal and external innovation structures should be operational and functional (Bessant and Tidd, 2007).

The research proposed a model of innovation management that is a framework that is systematic and

organized and is an integrated approach to managing innovation. The proposed innovation management model includes all areas and aspects of the internal and external environment and illustrates and integrates various elements. The model suggests that the entire innovation management model should be systematic and organized. The distinction between internal and external factors is better targeted to illustrate the distinction between different elements or actors. The two-phase management process visualizes it as more practical and gives managers flexibility in applying it in various business, high-tech or market circumstances. As the model includes various elements, it requires synergy between them and reveals that innovation management is fluctuating, cooperative and complex process. One of the limitations of this model is that it is not a ready model, and every firm should tailor and adapt the model based on their situation and available resources. To attain success, firms should address innovation from a strategic approach and tactically, and the process should naturally be integrated into the firm's systems and structures.

To ensure sustainability and continuous development, it is proposed to drive innovation in a combined manner and to consider internal and external factors and rank them as per their importance. In addition, it is recommended to address all aspects and actors that could potentially be involved in the innovation management process. It is highly suggested to follow an innovation management process that consists of 2 phases: the 1st phase is scrutinizing internal and external factors of the organization. In the internal factors, the firm needs to conduct a SWOT analysis, which focuses on evaluating its microenvironment and identifies its inner strength and weakness and external opportunities and threats. Firms can access the availability of human and technological resources alongside financial resources and, in case of necessity, concentrate on acquiring additional resources. As for external factors, a strategic framework in the form of Political, Economic, Social, Technological, Environmental and Legal factors (PESTEL) analysis could be helpful for the firm to assess the business environment in which a firm operates and to monitor the macro-environmental factors. Whereas, the 2nd phase consists of planning, implementation and improvement of processes. This is where, the structure and system of the organization should be reviewed and modified if needed, and idea design, production, sales and distribution should be well arranged. In addition to improving the processes by eternal knowledge acquisition, assimilation and transformation. Consequently, to access additional human and technological resources it is highly recommended to establish a close collaboration with suppliers & customers, as well as strategic partnerships with cross-industrial innovators. It should also be noted, that due to size-related issues, networking gives SMEs a chance to benefit from various networks of suppliers, government agencies, research institutes and customs and to increase their innovative competencies. The success depends upon the firm's aptitude to categories, cooperate, and embrace innovative sources of knowledge. When SMEs possess limited resources and cooperation, it is required to enhance their capabilities and build supportive networks for better innovation management and development. Collaboration can assist SMEs in reaping the benefits of economies of scale by sharing risks, expanding market shares and reducing costs. For economies of scale, technical efficiency is emphasized, and for managerial aspects, logistic and administrative processes are addressed. SMEs need to be part of networks for innovation and special competence development for technology transfer. Government plays a crucial role in encouraging innovation-related projects by offering small grants and funds to SMEs. However, in most cases, small firms may lack information and clear guidance on properly obtaining and utilizing financial means. SMEs should exploit not only institutional opportunities but also access multiple funding sources.

It is pivotal for SMEs to develop crucial technological items themselves. Also, employees' work ethics and attitudes play a significant role in their intention to participate in the firm's internal innovation processes. Therefore, it is suggested to SMEs to link innovation, and innovation practices effectively with business goals, to articulate and share the vision with firms' all stakeholders, to explore and exploit opportunities to be innovative, to include practical steps in the implementation of innovation into the strategy and to have a framework for managing ideas.

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PARODY AS A FAIR USE OF FREEDOM OF SPEECH

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Abstract

The right to criticize or parody has always been a fundamental human right. In today's world of technology and the Internet, parodies or caricatures of someone's work are not uncommon. Technology has become so readily available that anyone can create a parody or caricature of another person's work. The main task of the nowadays researchers is find balance between one person's right to the inviolability of his property and the right of other persons to imitate it.

The aim of this article is to analyze the concept of parody and caricature, as well as the case law of different countries – exploring how case law assesses whether an imitated work can be defined as a parody, or whether it is an “unsuccessful” imitation. Where is the line where an author has created a parody or has already infringed the rights of another author?

The methodological basis of this article is based on general scientific approaches (analysis and synthesis, deduction and induction, comparison, analogy and a systemic and structural-functional approach). The article also draws on court decisions, legislation, legal literature, publications and doctrine. Conclusions are drawn using the method of scientific induction and deduction.

Keywords: copyright, exceptions, freedom of speech, parody

DOI: [10.37804/1691-6077-2023-14-186-196](https://doi.org/10.37804/1691-6077-2023-14-186-196)

INTRODUCTION

Intellectual property, like any traditionally understood property, gives its owner full power over the matter – not only to get all the benefits, but also to decide what to do with it. For example, the author has an exclusive right to control the public performance and distribution of his work. The trademark owner also has such a right to prohibit the use of his trademark if he considers that the use of his trademark may damage his reputation or, by unfairly using his trademark image, create the illusion that the two trademarks are linked, thereby misleading the consumer. Persons who use these works without the authorization of the author or right holder may be held liable for civil, administrative or criminal liability. Therefore authors or rightsholders should also be able to control the creation of works such as parodies on the basis of their exclusive rights.

As is well known, in order to create a parody, it must inevitably use a work already created by an author, borrowing either the original plot or characters, and it is unlikely that such use would be authorized. Therefore be understood whether the use of such a work would be interpreted as an infringement of rights. Legal questions about legal use of an author's work in a parody or caricature, moreover if it is the parody of that author's work that is the source of profit for the other author are increasingly.

Parody or caricature has always been a method of criticism, ensuring one of the fundamental human rights – freedom of expression – but how to distinguish whether a new work is a parody or just a copy. In addition, what to do if another person is profiting commercially by directly parodying his work. Does the author have the right to prohibit the publication of such a work?

Today, technology gives people unlimited opportunities to express themselves in different ways, but does copyright restrict people's ability to parody works, thereby limiting freedom of expression? And how to strike a balance between society's right to freedom of expression and the author's property rights in his own work.

The object of the research is legal regulation and case law for parody in copyright and trademark regulation. The purpose of the research is to analyse specific problems of legal regulation and case law of parody.

The tasks of researches: 1) to analyse the problems how to balance different fundamental rights; 2) to analyse judicial practices of different countries; 3) to identify main problems of parody in case law.

The methods of the research: the research was carried out by employing the logical, the systematic, the historic, linguistic, analysis of legal documents.

FREEDOM OF CREATION AND FREEDOM OF SPEECH

The author's moral rights, such as the right to authorship, the right to a name, the right to inviolability of the work, the right to revocation of the work, are not only laid down in the special legal norms that give protection to the author, but these rights are also included in the Constitution of Latvia (in Latvia – *Satversme*). Article 113 of the Constitution of Latvia protects and guarantees the author's freedom of scientific, artistic and other creative work. Article 105 of the Constitution of Latvia guarantees that everyone has the right to property and that this right may be restricted only in accordance with the law. Article 100 of the Constitution of Latvia, on the other hand, guarantees everyone the right to freedom of expression, which includes the right to freely obtain, retain and impart information and to express one's opinions (Constitutional Assembly of Latvia, 1922).

The legislator's task in adopting a constitution and enshrining human rights in it is also to determine their content, scope and possible limitations, in order to reconcile the freedom of one individual with the freedom of another (Pleps, et al., 2014, 142 p.). The question therefore arises of how to ensure a balance between these fundamental rights enshrined in the Constitution, balancing the fundamental human rights to property, freedom of expression and freedom of speech, while at the same time none of these rights – in principle – can be absolute.

As recognised by the Constitutional Court, in order to restrict the fundamental rights established in the Constitution of Latvia, there must be a legitimate aim for which the fundamental right is being restricted in the first place (Constitutional Court of Latvia, 2005). The restriction of a fundamental right must be justified by a legitimate aim – the protection of other values of constitutional rank. In assessing a restriction of a fundamental right, it is necessary to take into account the guarantee of the fundamental nature of the right, namely that no restriction may go so far as to infringe the essence of the fundamental right in question (Levits, 2022).

In assessing the principle of proportionality and the necessity of a restriction, the question whether, in the circumstances, the State is even entitled to interfere with the individual's freedom of action and whether the State's tendency to impose restrictions in the pursuit of apparently legitimate aims is within the necessary limits may be relevant (Pleps, et al., 2014, 142 p.).

The right to property laid down in Article 105 of the Constitution of Latvia includes a subjective right characterised by an economic interest. That Article provides for a comprehensive guarantee of a right of a pecuniary nature: it is any right of a pecuniary nature which the person entitled may use for his own benefit and which he may dispose of at his own will (Constitutional Court of Latvia, 2020).

Freedom of artistic expression is one of the fundamental rights of the individual protected by Articles 100 and 113 of the Constitution of Latvia. The European Court of Human Rights has also repeatedly recognised that artistic freedom plays an important role in a democratic society. It guarantees a creative environment and protects the right of the individual to freely express his or her views, experiences and opinions, choosing the means of artistic expression that he or she deems most appropriate (see, for example, the judgment of the European Court of Human Rights in *Handyside v. The United Kingdom* of 7 December 1976). The German Constitutional Court has also indicated that artistic freedom is broad and that restrictions on it must not lead to censorship (see the judgment of the German Federal Constitutional Court of 13 June 2007 in Case No 1 BvR 1783.05 *Esra and Adam v. Beschwerdeführerin*).

The fact that among the personal freedoms subject to restrictions under Article 116 of the Constitution of Latvia there is no direct reference to Article 113 is of great significance. It follows that artistic or scientific and technical creativity may not be restricted, whatever its direction. At the same time, given the inextricable link between creativity and freedom of expression, legitimate restrictions may also apply to creativity indirectly, i.e. as a result of the views expressed as a result of creativity (in cases provided for by law in order to protect the rights of others, the democratic polity, public security, welfare and morals). However, the right to freedom of creativity means that creativity may not be restricted on the grounds that the author's opinion on this or that matter is not “correct”, i.e. not in line with the opinion of others. Similarly, the process of creativity may not be restricted by specifying what may or may not be depicted in a literary or artistic work other than in the cases provided for by law (see Commentary to the Constitution of the Republic of Latvia, Chapter VIII. Fundamental Human Rights, pp. 680, 689-692).

Creativity is a human activity. In a broader sense, it can be understood as an activity directed towards the creation of anything, i.e. both material and immaterial values (Latviešu literārās valodas vārdnīca, 1980, 37 p.). From the point of view of the protection of freedom of creativity, it is important that an expression of creativity is an original work which differs either in content or in the form of its expression from any other previously published work.

The term “freedom of expression” as used in Latvian may not always be translated identically in other languages. For example, the English term “freedom of expression” should most clearly be translated as freedom of expression rather than freedom of speech, as it includes not only verbal but also other forms of expression. However, according to the decision of the Terminology Commission of the Latvian Academy of Sciences, this translation of the term has been adopted in Latvia, assuming that its content also covers non-verbal forms of expression, such as cartoons (Terminology Commission of the Latvian Academy of Sciences, 2003).

The right to freedom of expression is enshrined in many international instruments. For example, Article 19 of the Universal Declaration of Human Rights of 10 December 1948 establishes the right of everyone to freedom of opinion and expression: this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers. Article 27, on the other hand, provides that everyone has the right to take part freely in the cultural life of society, to enjoy the arts, to take part in scientific progress and to enjoy its benefits. In addition, everyone has the right to the protection of his moral and material interests in scientific, literary or artistic works of which he is the author (UN General Assembly, 1948).

For example, Article 19(2) of the International Covenant on Civil and Political Rights of 16 December 1966 establishes the right of everyone to freedom of expression, which includes freedom to seek, receive and impart information and ideas of all kinds, either orally, in writing, in the press or through artistic media, or through any other media of his choice, regardless of frontiers (United Nations, 1966).

Article 11 of the Charter of Fundamental Rights of the European Union also states that everyone has the right to freedom of expression. This right includes freedom of opinion and freedom to receive and impart information or ideas without interference by public authorities and regardless of frontiers. Since parody can be considered as the communication of opinions, everyone has the right to create parodies without interference by public authorities (European Convention, 2000). However, it should be remembered that this right is not absolute and may be limited. According to Article 10 of the Convention for the Protection of Human Rights and Fundamental Freedoms of 4 November 1950, although everyone has the right to express his or her views freely. This right includes freedom of opinion and the right to receive and impart information and ideas without interference from public authorities and regardless of frontiers. The second part of the Article states that “since the exercise of these freedoms is subject to duties and responsibilities, it may be subject to such formalities, conditions, restrictions or penalties as are prescribed by law and are necessary in a democratic society in order to protect the interests of national security, territorial integrity or public safety, to prevent disorder or crime, to protect health or morals, to protect the reputation or rights of others, to prevent the disclosure of confidential information or to preserve the authority and impartiality of the courts” (Council of Europe, 1950). Thus, not only freedom of expression but also parody may be restricted in certain cases.

The Constitutional Court's jurisprudence has also established that “the private aspect of freedom of expression means that every person has the right to his or her own opinions, the right to hold them and to express them freely. The public aspect of freedom of expression concerns the right of everyone to receive information freely and to express his or her views in any form – orally, in writing, visually, through artistic means of expression, etc.” (Constitutional Court of Latvia, 2003). Thus recognising the right of a person to express his or her opinions by virtually any means of expression. This is also the practice of the European Court of Human Rights, which in fact protects any form of expression in the most diverse forms (e.g. paintings, books, films, radio announcements, information leaflets) and regardless of the content. The European Court of Human Rights has emphasised that Article 10 of the European Convention for the Protection of Human Rights and Fundamental Freedoms is not limited to certain types of information or ideas or forms of expression, particularly of a political nature; it also covers artistic expression, information of a commercial nature and even light music and advertising (European Court of Human Rights, 1994).

The right contained in Article 100 of the Constitution of Latvia is linked to Article 113 of the Constitution of Latvia, which provides that the state recognises the freedom of scientific, artistic and other creative work, and that the state protects copyright and patent rights, since the right to freedom of creative work is closely related to the right of a person to freedom of expression. Freedom of artistic expression is therefore also a fundamental personal right (Supreme Court Senate of Latvia, 2012).

In the practice of the Constitutional Court it has already been established that the protection of fundamental rights must be balanced in the law and, when extending one fundamental right, care must be taken to ensure that other fundamental rights are restricted to the least possible extent. Therefore, although freedom of expression is fundamental to the existence of a democratic society and the exercise of fundamental rights, the right guaranteed in Article 100 of the Constitution is not absolute. Moreover, as the Constitutional Court has concluded, the state may impose restrictions on freedom of expression in cases where a person's right to freedom of expression directly affects the rights of other persons (Kučs, 2016).

The case-law of the European Court of Human Rights indicates that whether there is a legitimate aim to restrict the freedom of creativity must be assessed on a case-by-case basis, taking into account the principle of proportionality. In similar cases on the limits of artistic freedom, the European Courts of Human Rights have provided insight into the criteria to be taken into account when assessing the proportionality of freedom of artistic expression with other fundamental personal rights. For example, in *Vereinigung Bildender Künstler v. Austria*, the European Court of Human Rights referred to the

need to assess the genre of the work of art, the overall context, the personality of the persons depicted in the work and their likelihood of recognition, as well as other circumstances of the case. In that case, the Austrian court had banned the exhibition of a painting by the Austrian painter Otto Mühl entitled “Apocalypse” (heads of public figures cut from newspaper photographs were pasted on nude bodies painted in various sexual poses), but the European Court of Human Rights found that the painting was not in conformity with Article 10 of the European Convention on Human Rights and Fundamental Freedoms. The Court of Human Rights held that the painting in question was a caricature which contained satirical elements and was not intended to depict reality but to provoke, and must therefore be assessed in the context of the idea it illustrated (European Court of Human Rights, 2005).

As the Supreme Court has recognised, when assessing the necessity of limiting the freedom of creativity, it is important to first answer the question whether the object in question is a work of creativity and to what genre it belongs. Thus, the starting point for determining whether there is a legitimate aim in restricting freedom of creativity is whether the disputed publication is a literary work and to which literary genre it belongs. Next, the court must assess the relationship of the literary work to reality (whether it is fiction or contains news and facts that can be verified from the point of view of objective veracity), the form of the work's artistic expression, its content and its overall context, on the basis of the genre of the work in question. This is particularly important in cases where the creative work (e.g. a novel) is based on real events, facts, while also containing elements of fiction (Supreme Court Senate of Latvia, 2012).

THE CONCEPT OF PARODY

The development of technology and the internet has made parody and its conflicts with copyright even more relevant. Today, everyone's social life is full of memes, remixes and parodies, but how to define what a parody is if there is still no understanding of the term itself.

Article 4(3) of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society mentions parody as one of the exceptions that Member States may provide for to the rights referred to in Articles 2 and 3: Member States may provide for exceptions or limitations in the following cases: /../ (f) use for caricature, parody or pastiche (European Parliament and Council, 2001). However, this EU law also does not define the term parody.

In the absence of legal rules defining the nature of parody in intellectual law, legal scholars refer to the dictionary definition of parody as “exaggerated imitation, especially to ridicule people” (Oxford Advanced Learner's Dictionary, 2023).

For example, the Britannica Expository Dictionary defines parody in literature as the imitation of the style and manner of a particular writer or school of writers. The purpose of parody is usually negative; it draws attention to the writer's supposed weaknesses and seeks to ridicule them. However, parody can serve a constructive purpose, or it can be an expression of admiration. It can also be simply a comic exercise (Britannica Dictionary, 2023). The Oxford English Dictionary defines parody as “the exaggerated imitation of someone/something's style, especially in order to ridicule people” (Oxford Advanced Learner's Dictionary, 2023). According to the definitions, parody has two characteristics. Firstly, it must refer to an existing work, while differing significantly from it. So it must be related to another work, but at the same time it must be different from other works. Secondly, it must be humorous or mocking. These two conditions are considered to be the essential elements of the concept of parody. However, as the case-law points out, ideas of what is funny or humorous are highly subjective - it depends on each individual's sense of humour. In some cases it may be easier to

determine whether there is an element of humour or mockery, but in more complex cases it may be more difficult (Mattila, 2019).

The broadest definition of parody is that of *Deckmyn v. Vandersteen*, which states that “the essential characteristics of a parody are, first, to recall an existing work while differing significantly from it, and, second, to be humorous or mocking” (Court of Justice of the European Union, 2014). However, as some legal scholars have acknowledged, this definition can be criticised for not explaining whether a humorous intent would be sufficient expression and whether a humorous effect is necessary for success. A humorous “effect” would make the definition of parody narrow and could create difficulties in applying the subjective test, as it would place too much emphasis on the court's discretion in deciding whether the humorous effect was successful (Mattila, 2019). Moreover, a presumption of humorous intent or effect is not necessary in all cases to be considered a parody, e.g. in *Laugh it Off Promotions CC v South African Breweries International Finance*¹, where parody was found, the parody was intended to directly shock the audience (Constitutional Court of South Africa, 2005).

However, “while the original work of the author is undoubtedly important and should be afforded copyright protection because of the work that went into its creation, parody also requires the work of the parodist in order to create a new transformative work.” As critic Dwight Macdonald has said, “Parody is making a new wine that tastes like the old one, but has a slightly lethal effect” (Macdonald, 1960).

USE OF WORK IN PARODY

In Latvia and most European countries, a copyrighted work can be used without the copyright owner's permission if it is used in a parody or caricature. This exclusive right strikes a balance between encouraging the creation of works and not restricting a person's freedom of expression.

While technology today gives people many more opportunities to express themselves in different ways, the special regulation of intellectual property can limit the possibilities to parody the work of others, teetering on the brink of limiting freedom of expression and creativity. Many countries have explicit exceptions in their legislation, while others have interpreted general concepts of copyright law in favour of the parody author. In the UK, for example, parodies of copyrighted works until recently required the consent or permission of the copyright owner, unless they fell within three specified exceptions. Thus, from 1911 until October 2014, only three 'fair use' exceptions were available under English copyright law: research and private study; criticism and review; and news reporting. Until October 2014, when the UK Copyright, Designs and Patents Act 1988 was amended to provide that fair dealing of a work for the purposes of caricature, parody or pastiche does not infringe copyright (United Kingdom Parliament, 1988).

Given that parody and satire are considered to be an integral part of British humour, there has been little litigation in the English courts – only rarely has the question of whether a parody infringes the copyright of a work arisen, and it should be noted that the courts have been relatively favourable to the parodist. For example, in *Glyn v Weston Feature Film Co [1916]*, the court held that the rights of the author of the original work were not infringed because the parody author had put in so much mental labour and had reworked and altered it so as to produce an original result. In both *Joy Music Ltd v Sunday Pictorial Newspapers (1920) Ltd* and *Williamson Music Ltd and others v The Pearson Partnership Ltd (1987)*, the court held that new texts parodying original works do not reproduce a

¹ Laugh It Off Promotions CC produced and sold t-shirts that featured spoofs of well-known trademarks. These spoofs, although derived from well-known trademarks, are social statements of one kind or another and are essentially parodies of the well-known trademarks. South African Breweries claimed that the sale of t-shirts with the disputed label infringed the reputation of the registered trademark.

substantial part of the original expression. The new songs were created with sufficient independence to constitute a new original work and not a reproduction (Lagarde, Ang, 2016).

In France, the French Intellectual Property Code also does not prohibit to using a work in parody, pastiche or caricature, subject to the rules of the genre (Code de la propriété intellectuelle, 2020). In view of the protection of the moral rights of French authors, the French copyright legislation being very strict, this Article was interpreted as follows until *the Deckmyn vs Vandersteen* (Court of Justice of the European Union, 2014): the work must be transformative but may pay homage to the original author; the work need not be humorous; the parody must raise a laugh without detracting from the original or harming its author; the parody must not give rise to confusion with the original; the parody may be used for commercial purposes but must not be used solely for advertising purposes in competition with the original work; the parody must not contain manifestly unlawful elements.

For example, in *SAS Arconsil v Moulinsart SA*, where the Paris Court of Appeal, 18 February 2011, No 09/19272 held that Gordon Zola's series of novels about “Saint-Tin and his friend Lou”, derived from the Tintin comics, were exempt from copyright infringement. The Court found that the purpose of the parody was immediately apparent from the titles and covers, as was the intention to make people laugh, and there was no risk of confusion with the original work (Mouron, 2021). As the Paris Court of Appeal stated, “artistic inspiration always takes into account previous works, sometimes with imitations, reproductions, which in principle cannot be prohibited, in this case the quotations are clear, the risk of confusion is nil, the parody exception is perfectly permissible and justified” (Ledru, 2020).

Following the judgment of the Court of Justice of the European Union in *Deckmyn vs Vandersteen*, in which the CJEU recognised parody as an autonomous concept of European Union law and defined the concept, several EU countries changed their approach to the interpretation of the concept of parody. The CJEU held that the concept of parody is part of the provisions of the Directive, which makes no reference to national law, and is to be regarded as an autonomous concept of European Union law and is to be interpreted uniformly within its territory (see in this respect *Padawan SL v Sociedad General de Autores y Editores de España (SGAE)*, EU:C:2010:620, paragraph 33). The Court held that the essential characteristics of a parody are that it resembles an existing work while differing significantly from it; and that it is an expression of humour or mockery. The CJEU pointed out that, unlike works copied for the purposes of criticism and review, a parody need not refer to the original work or mention the source of the work parodied. Nor does the parody have to be original in character, nor can it reasonably be attributed to a person other than the author of the original work. The Court added that national courts must apply the parody exception in such a way as to ensure a fair balance between the interests and rights of the copyright owners of the original works and the freedom of expression of users of copyright-protected works (Court of Justice of the European Union, 2014). This leaves Member States with very little discretion as regards the legal regulation of parody. Given the essential characteristics of parody as defined by the CJEU and a fair balance in the overall assessment, the parody exception can operate as a flexible exception allowing a wide range of humorous and critical uses of copyrighted works.

According to Article 19 of the Copyright Law of the Republic of Latvia, in certain cases an author's work may be used without the author's consent and without remuneration, and according to paragraph 12 of the Article, such use is allowed if the work is parodied, caricatured or used in stylisations. It should further be noted that, under Article 18 of the Copyright Law, the limitations on the author's economic rights shall be applied in such a way that they do not conflict with the normal exploitation of the author's work and do not unduly prejudice the legitimate interests of the author. In case of doubt, it is presumed that the author's right to use the work or to receive remuneration is not limited. Consequently, even in the case of parodies or caricatures, the author's rights must be respected in order not to prejudice the author (Parliament of the Republic of Latvia (Saeima), 2000).

Analysing the Latvian case law, it can be concluded that there are only a few copyright infringement cases concerning parody, for example, in 2004 the Supreme Court terminated a case concerning defamation and copyright infringement. The case involved a dispute over the fact that the programme “Oh, Sir” parodied Jānis Rušenieks' interview with Juris Kulakovs – mocking their slow and boring speaking style. During the parody, the interviewer manages to shave his beard, brush his teeth and go to the toilet. The excerpts of Kulakov's speech were edited from the original interview by Jānis Rušenieks. In the case, the court found that Viesturs Dūle had made a parody of Jānis Rušenieks' programme “Music and Video”, had used only small excerpts from the programme and had not deliberately intended to infringe Jānis Rušenieks copyrights (Blūmfelds, 2004).

In the United States, as exception is used the fair use², and Section 107 of the Copyright Act of 1976 sets out a four-step approach: (1) the purpose and character of the use, including whether such use is for commercial or non-profit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use on the potential market for or value of the copyrighted work (United States Congress, 1978).

Similarly, courts in the United States have a different approach to parody. For example, *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569 (1994), a U.S. Supreme Court copyright case, held that a commercial parody could qualify as fair use within the meaning of § 107. In that case, it was held that the fact that a work makes money does not make it impossible for fair use to apply; it is only one part of the fair use analysis. Notwithstanding the provisions of Articles 106 and 106A, fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or in any other manner specified in that Article, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship or research, is not an infringement of copyright. In determining whether a use of a work is fair use in any particular case, the following factors shall be taken into account. The Supreme Court held that the factors set out in section 107 must be applied on a case-by-case basis (United States Supreme Court, 1993).

TRADEMARK PARODIES

Although parody is more often associated with copyright, there is also case law on parody under trademark law. There is a legal framework that gives the right holder a right of action where there are concerns that a trademark has been diluted. In the case of an infringement or unfair competition claim, it must be shown that the parodist's use is likely to cause confusion. A claim for trademark dilution requires proof that the parodist's use is likely to blur or tarnish the trademark owner's famous mark. The trademark proprietor must prove that the parody is likely to dilute the distinctive character of the trademark proprietor's trademark, either by blurring or tarnishing, and must prove that the association of the parody with the trademark is likely to dilute or tarnish the trademark. The key question in relation to parody is whether the parodyer has caused confusion by identifying the trademark as the actual source of the message and not merely as the target of the parody. If the parody is clearly perceptible, then it is understandable that the parodyer is not taking advantage of the goodwill of the trademark proprietor. Rather, his sole purpose in using the trademark is the parody itself, and for this reason the risk of consumer confusion is lowest. Although parody may cause some initial confusion, effective parody will reduce the risk of consumer confusion because it reflects just enough of the original to enable the consumer to appreciate the meaning of the parody. Where a trademark is being used for the purposes of parody, criticism or comment, the law requires a balancing of the rights of the trademark proprietor with the interests of freedom of expression.

² “Fair use” and “fair dealing” are terms that refer to situations where the use of an artistic work does not require the authorization or license of the copyright owner. “Fair use” is a defense under US law, while ‘fair dealing’ is used in the context of copyright exceptions in the UK.

A parody of a trademark must convey two simultaneous and contradictory messages: that it is the original, but also that it is not the original and is instead a parody. Although a parody must remind us of the actual product in order to be successful, this same success necessarily distinguishes the parody from the original product. The second message must not only distinguish the parody from the original, but must also contain some articulable element of satire, mockery, joke, ridicule or irreverent comment. To achieve the desired result, the parody relies on a distinction from the original trademark, possibly a humorous distinction.

However, there is also a lot of criticism of trademark parodies, as there is a perception that trademark parodies would not be possible if trademark owners had not invested years of money and effort in developing iconic products. Major brands claim that companies selling humorous imitations profit mainly from the work of others. For example, in *VIP Products LLC v. Jack Daniel's*, in which Jack Daniels is asking the court to ban a dog toy manufacturer from selling toys that are shaped like the company's famous whisky bottles³. The court ruled that in this trademark case, under US law, although the toy manufacturer used the whiskey seller's trademark and bottle design, they were also used to convey a humorous message protected by the US Constitution (United States Supreme Court, 2023).

CONCLUSIONS

The concept of parody is contained in the Greek definition of “parodeia” as “a song sung alongside another song”. Modern dictionaries accordingly describe parody as 'a literary or artistic work which imitates the characteristic style of an author or work in order to produce a comic effect or to ridicule', so that the parody needs to imitate the original in order to make its point and is therefore entitled to use the work of another author. However, in order to determine whether a parody is an infringement or fair use, all relevant factors must be taken into account: the purpose and the nature of the use.

The interaction between copyright and parody is closely linked to fundamental rights, with both parody and copyright providing both freedom of expression and a right to property.

In EU law, the relationship between parody and copyright is essentially governed by the InfoSoc Directive and the ECtHR judgment in *Deckmyn vs Vandersteen*. According to this definition, a parody “must refer to an existing work while differing significantly from it and – for the parody to be humorous or mocking.” However, the CJEU also stated that: 1) the application of the parody exception in a particular case must strike a fair balance between the interests and rights of rightsholders and the freedom of expression of the user of a protected work who relies on the parody exception, and 2) the courts of the EU Member States must determine, taking into account all the circumstances, whether the application of the parody exception preserves this fair balance.

However, no legislation or case law provides a clear answer as to where the line is that protects both the author of the original work and the author of the parody. It cannot be denied that both the trademark and the original work are someone's property, that's why no one could argue to cause damage on private property sometimes is not an abuse of freedom of expression.

³ VIP Products LLC is the maker of Silly Squeakers, a vinyl novelty pet toy line that playfully imitates over 30 popular beverages, from lemonades to spirits. Each toy in the line shares many of the physically distinct features of its more famous counterparts, but the text on the bottles and cans has been replaced with various pet-related puns. One of the famous bottles the company imitates is Jack Daniel's Tennessee Whiskey, recognizable by its square bottle, black label and old-fashioned-looking white text. The Bad Spaniels dog toy not only includes all of these elements, but also turns most of the bottle text into jokes that refer to the dog relaxing on a “Tennessee rug”.

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