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BALTIJAS ŽURNĀLS

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ECONOMY AND ENTREPRENEURSHIP

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SMALL ENTREPRENEURSHIP: CHALLENGES AND OPPORTUNITIES FOR INCREASING EMPLOYMENT LEVELS IN LATVIA

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Abstract. The article examines and substantiates the main approaches to stimulating small business activity through proposed development scenarios, highlighting the advantages and disadvantages for each type of scenario. It analyzes the impact of taxation and specific risks arising in small business activities on their stability and development. Based on the assertion that small businesses expand employment and create favorable conditions for more rational economic development in the regions, the sectoral structure of small business entrepreneurial activity within Latvia's administrative-territorial division is reviewed.

Key words: small entrepreneurship, sectoral structure of regions, taxation, employment, development scenario.

Introduction. The interest in the research topic is largely determined by the fact that small business plays a significant role in the development of Latvia's economy, as it performs social functions, contributes to expanding employment opportunities for the working-age population, provides additional income sources, and enables the entrepreneurial potential of various social groups. Achieving a high level of employment is one of the key goals of the macroeconomic policy of a welfare state, to which Latvia also aligns itself. An economic system designed to meet the material needs of the population can achieve this by increasing the production of social goods through both labor productivity growth and the creation of additional jobs. A high employment rate is one of the primary goals of any country's socio-economic policy. Employment issues are particularly relevant for Latvia at the moment. This can be achieved both by creating additional jobs and by encouraging the population to develop small businesses.

The relevance of the research topic is underscored by the current state of Latvia's economy, the aggravation of the labor market situation, and the need to find new approaches and mechanisms for employment regulation. The development of small businesses as a factor in increasing employment and reducing unemployment deserves close attention. The stimulation of small business activity is not only a prerequisite for stabilizing the national economy but also a powerful impetus for systematic economic renewal and regional development. To address Latvia's internal economic and social challenges and improve the living standards of its population, it is essential to harness the potential of small businesses, which underscores the relevance of this research topic.

Despite the socio-economic significance of this issue for the country's economy and the practice of regulating and influencing the labor market, the features and challenges of small business

development in Latvia have not been fully explored. Researchers, such as American economists D. Blanchflower, Yin, M., Australian economist Thomas Lange, J. Lichy, and Latvian researchers Rīta Greitāne, Christoph Ernst Wilken Kisker, and Lāsma Dobeļe, have all focused on issues related to unemployment and employment management. Latvian scholars, including Ilze Sproģe, A. Zvejnieks, Acad. R. Karnīte, I. Kodoliņa-Miglāne, L. Kavale, A. Kodoliņš, K. Ketners, I. Sīpola, Ī. Vītola, A. Boruks, among others, have also contributed to this research area.

However, despite extensive research on small business development, insufficient attention has been paid to the challenges faced by self-employed individuals, particularly their risks and opportunities. There is also insufficient focus on the taxation of entrepreneurs who have independently established their micro-businesses and are forced to manage both business operations and financial reporting simultaneously. Additionally, the issue of unequal regional development in Latvia requires urgent attention, particularly in addressing budget shortfalls in light of the sectoral structure of small businesses under the new administrative-territorial division. The analysis of recent studies and publications outlining the main aspects of small business challenges highlights unresolved issues within the broader problem, particularly the urgent need for state support and the development of small entrepreneurship. These studies emphasize the necessity for enhancing governmental policies to address the barriers faced by small businesses, which are essential for fostering economic growth and reducing unemployment, highlight the research objective which is to focus on activating small business activities to promote employment. The unresolved issues that remain in the context of small business development, such as inadequate state support, limited access to financial resources, and complex regulatory frameworks, have direct implications on employment rates. By addressing these gaps, the research aims to propose effective solutions for stimulating small business growth, which, in turn, would contribute to increasing the employment rate and improving the overall economic stability of the country.

Research Objective. The research objective is to develop and substantiate approaches to modeling scenario-based development of small business activities. This will be based on the assessment of identified factors that hinder the activation of these businesses and the increase in employment in Latvia.

Research Methodology. The research methodology combines analytical and forecasting methods, statistical data analysis and their connectedness (correlation), as well as comparative and analytical methods. These approaches aim to provide a comprehensive understanding of the obstacles small businesses face and offer actionable models for enhancing their contribution to employment and economic growth in Latvia.

Economic Features of Regional Development in Latvia

In Latvia's economy, the small business sector significantly influences the country's economic growth rates, employment levels, as well as the structure, size, and quality of the gross domestic product (GDP). The country's economic independence largely depends on this sector, which is especially relevant in the context of EU-imposed economic sanctions on Russia, global market instability, and structural unemployment. The share of small business output in Latvia's GDP exceeds 65%, which is notably lower compared to highly developed EU countries, where it averages around 70% of GDP. This highlights the potential for growth and the need to strengthen the small business sector to boost Latvia's economic resilience and competitiveness. Across all regions of Latvia, micro and small businesses account for more than 98% of all registered enterprises. Notably, over 71% of all companies are registered in the Riga Planning Region (Figure 1). The small business sector dominates Latvian business, thus becoming a critical employer for the country's residents. In 2023, 67.3% of all employees working in registered companies in Latvia were employed by micro and small enterprises. Nearly three-quarters of these small businesses are concentrated in the Riga region, while the remaining regions account for approximately 29%, with the smallest share in Latgale.

This distribution indicates a strong concentration of small businesses around the capital and its surrounding area, while other regions have significantly fewer small enterprises. Each region also demonstrates its own specific economic focus, highlighting the diverse economic landscape across Latvia.

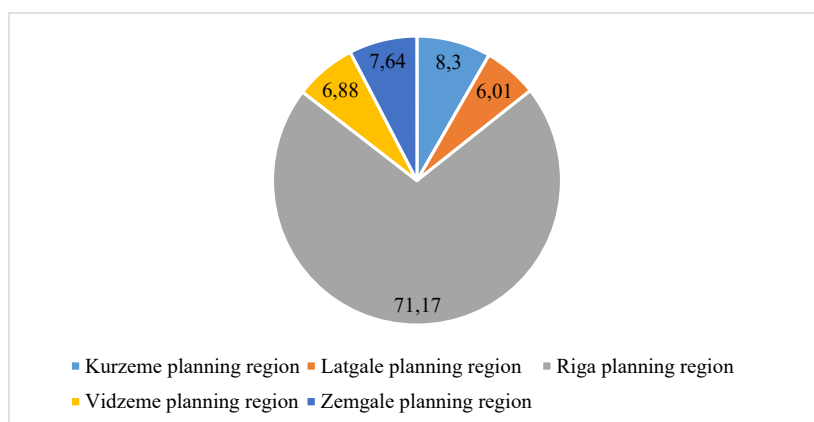


Fig. 1. Regional Distribution of Small Businesses in Latvia, %, 2022

Source: Created by the author based on Lursoft data

This figure 1 highlights the uneven distribution of small businesses across Latvia's planning regions. Riga Planning Region dominates, accounting for over 71% of all small businesses, while the other regions hold a significantly smaller proportion. This reinforces the importance of Riga as the primary economic hub for small business activity in the country, with rural areas like Latgale and Vidzeme playing a more marginal role in small business development.

The Republic of Latvia is historically divided into four regions, as well as the capital Riga and the Riga region. The capital of Latvia, Riga, and its region are the wealthiest in terms of budget revenue and offer the most favorable conditions for employment. Small business activities in the Riga region primarily align with the needs and demands of the local population and differ significantly from the types of activities in regions farther from the center.

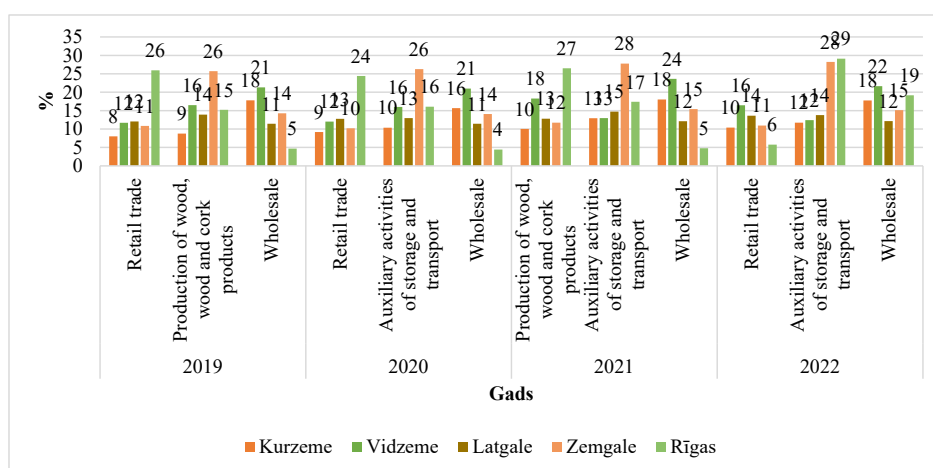


Fig. 2. Main types of small businesses according to NACE 2nd edition in the planning regions of Latvia, % of total net turnover of the region, 2019–2022

Source: created by the author based on Lursoft data

Each of Latvia's five regions has its own distinct characteristics in the development of economic, cultural, and social life. Entrepreneurs register their companies by specifying their primary activity according to NACE codes, 2nd edition. The main activity of small businesses across all planning regions of Latvia from 2019 to 2022 has consistently been wholesale trade, accounting for 12% to 29% of the total annual net turnover in the planning region, followed by retail trade, contributing 9% to 24%. (Figure 2) In third place are storage and transportation services, making up 6% to 10% of the total net turnover in the planning regions. Diagram 2 presents the percentage data for the main small business sectors in Latvia's regions for the years 2019–2022.

Data Comparison:

1. Retail Trade:

- Riga dominates in 2019, 2020, and 2021 with percentages of 26%, 25%, and 24% respectively.
- In 2022, Riga increases its share to 29%.
- Vidzeme also shows a high percentage in 2021 (18%) but drops to 16% in 2022.
- Latgale remains steady at around 12% throughout all the years.

2. Wood Products Manufacturing:

- Zemgale leads with peak figures of 26-28% in 2020-2022.
- Kurzeme and Vidzeme show moderate values around 16-18%.
- Latgale remains stable at around 13% over the entire period.

3. Wholesale Trade:

- Riga also shows significant results in wholesale trade, especially in 2022 with 19%.
- Zemgale experienced growth in 2021, reaching 27%, but dropped to 22% in 2022.
- Kurzeme steadily grows over the four years, reaching 18% in 2022.

4. Logistics and Transport Services:

- Zemgale leads in this sector, reaching 28% in 2021 and 22% in 2022.
- Riga continues to show steady growth, reaching 18% in 2022.

This comparison highlights how Riga remains dominant in both retail and wholesale trade, while Zemgale shows strength in wood products manufacturing and logistics. Meanwhile, other regions like Latgale and Kurzeme remain relatively stable in their respective sectors.

Conclusions:

- The Riga region maintains its leadership across all categories, particularly in retail and wholesale trade.
- Zemgale shows strong positions in wood product manufacturing and transport services, with a growing share in these sectors.
- Kurzeme and Vidzeme continue to develop steadily, particularly in wholesale and retail trade sectors.
- Latgale holds relatively modest positions across all categories but remains stable.

Features of Small Business Taxation in Latvia:

Small businesses at this scale are often fragile and unstable, requiring state support. Frequent changes in legislation negatively impact the development of small enterprises.

To reduce the administrative and tax burden on small businesses, the Microenterprise Tax Law was adopted in 2010. Since then, the law has been amended 13 times, with the tax rate rising from 9% to 40% between 2010 and 2024. From 2010 to 2014, the tax rate was stable at 9% of the company's turnover. However, from March 2015 to 2017, the rate increased to 15%, and from July 2021, it further rose to 25%. At the same time, the allowable net turnover for businesses eligible for this tax was reduced—from €100,000 in 2010 to a sharp drop to €40,000 in 2018 (the threshold for VAT registration). The latest legislative changes in 2021 and 2022 completely abolished the microenterprise tax for legal entities. This left businesses without preferential taxation during the challenging period of the COVID-19 pandemic.



Fig. 3. Change in the number of legal entities paying the microenterprise tax and their employees

Source: constructed by the author based on data from the State Revenue Service

Regular restrictions caused by constant changes to the Microenterprise Tax Law have gradually destroyed small businesses. The numerical data in Figure 3 demonstrate that the number of legal entities using the microenterprise tax and the number of employees in these businesses decreased proportionally as tax rates increased.

From 2017, when the tax rate was raised from 9% to 15%, to 2018, when in addition to the tax rate increase, the net turnover limit was reduced from €100,000 to €40,000, the number of registered businesses choosing this taxation method decreased proportionally. This was not due to taxpayer choice but to legislative preference that limited business opportunities.

Over the last five years (2017–2021) due to increased legislative restrictions, the number of businesses paying this tax decreased by 57%.

In mid-2021, restrictions also impacted the number of employees in microenterprises. Starting from July 1, 2021, businesses were required to pay general taxes for all employees in addition to the unified turnover tax. (Figure 4) The numerical data in Figure 3.9 show a sharp decline in both the number of registered taxpayers, from 14,000 to 7,000 during 2021, and the number of employees, from 18,000 to 4,000 by the beginning of Q4 2021.

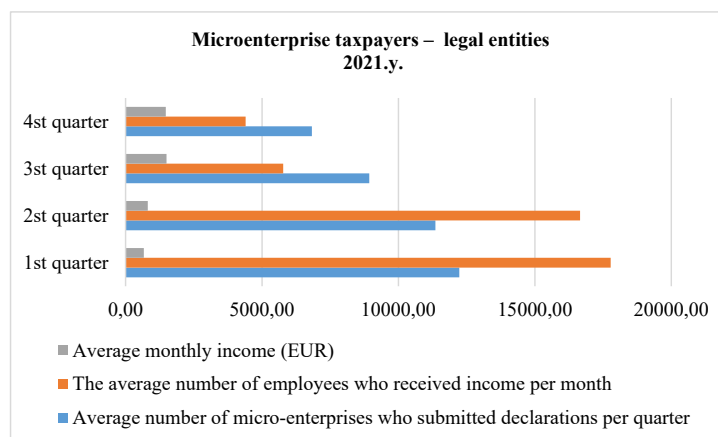


Fig. 4. Changes in the number of legal entities paying the microenterprise tax and the income of their employees in 2021

Source: constructed by the author based on data from the State Revenue Service

As a result, many employers were unable to manage with the additional tax burden, leading to significant workforce reductions. This, in turn, sharply increased the country's unemployment rate (Fig. 5).

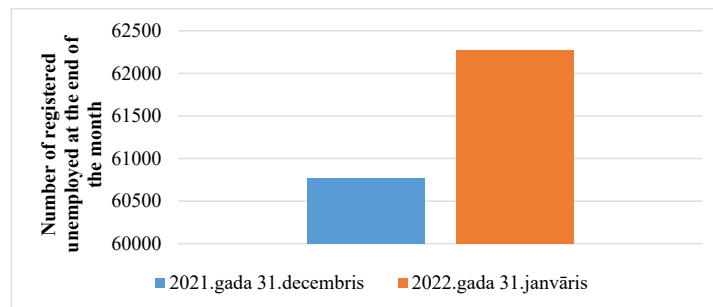


Fig. 5. Comparison of main unemployment indicators (as of January 31, 2022, compared to December 31, 2021)

Source: NVA statistical data

The year 2021 marked a transitional period not only for entrepreneurs but also for the government, which was forced to pay unemployment benefits to former taxpayers instead of collecting taxes. (Figure 6) According to NVA indicators, the unemployment rate rose by 0.4% between December 2021 and January 2022, negatively impacting the overall welfare of the population.



Fig. 6. Ratio of the average unemployment benefit paid to the level of minimum wage in Latvia

Source: constructed by the author based on VSAA statistical data

The amount of unemployment benefits received by the Latvian population does not even reach the country's level of the minimum wage. As a result, individuals who lose their jobs immediately fall below the poverty line (Figure 7).

Despite increases in Latvia's minimum wage from 2014 to 2018, the gap between unemployment benefit and the subsistence minimum narrowed from 39% to 21%. However, in 2021, the gap reached 37%, leaving the working population who lost their jobs on the brink of survival. On one hand, this situation encourages unemployed individuals to start their own businesses. On the other hand, as previously mentioned, frequent legislative changes undermine the stability of small enterprises. During the challenging times of the pandemic, legislation has also changed frequently. Since 2019, the Law

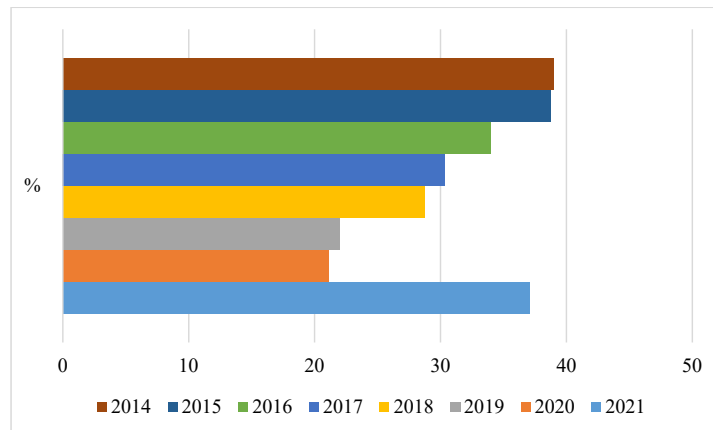


Fig. 7. Deficit (gap level) of the unemployment benefit received compared to the minimum wage in % (2014–2021)

Source: constructed by the author based on VSAA and NVA statistical data

on State Social Insurance has been amended eight times, the Personal Income Tax Law seven times, and the VAT Law nine times. In their struggle for survival, entrepreneurs are forced to constantly adapt to unexpected legislative changes.

Legislative changes for small businesses, effective January 1, 2022, including the abolition of the microenterprise tax, have significantly worsened the condition of enterprises that previously paid this tax. The situation is further exacerbated by the fact that these legislative changes were implemented during the COVID-19 pandemic, a time when small businesses were already facing significant challenges. Many businesses suspended their operations starting January 2022, while others were completely liquidated.

For those that survived and remain operational, net turnover and payroll funds have already decreased significantly due to the pandemic. Following the implementation of the law abolishing the microenterprise tax, tax contributions have increased as these businesses transitioned to regular taxation.

Additionally, changes in the Law on State Social Insurance, effective July 1, 2021, deprived microenterprise taxpayers and self-employed individuals of unemployment benefits. This has led to an increase in layoffs and, consequently, a rise in unemployment, with the government failing to provide support even at the initial stage of income loss (fig. 8).

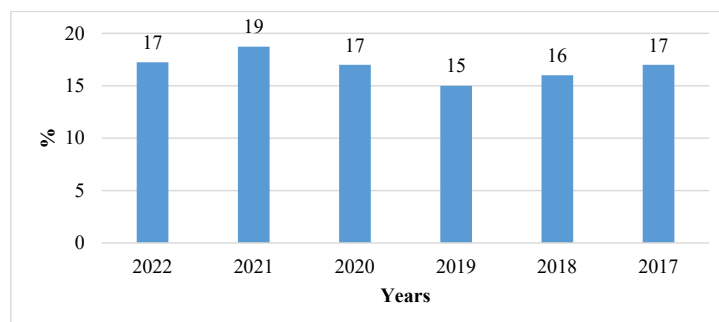


Fig. 8. Reduction in unemployment benefit fund payments with the possibility of employing unemployed individuals part-time, % (2017–2022)

Source: Developed by the authors

Starting in 2019, the Law on State Social Insurance, effective July 1, 2021, states that if an employee or a self-employed individual has a declared (aggregated) object of mandatory contributions in a quarter that is less than three times the monthly wages set by the Cabinet of Ministers, the employer is responsible for making mandatory contributions on the difference between three times the monthly wage and the declared object of mandatory contributions from their own resources. This means that when hiring a specialist, the employer is obliged to pay taxes based on the country's minimum wage, even if the hired specialist is only needed on a part-time basis. The social security contributions, which in 2022 amount to 23.59% of the minimum wage in Latvia (620 euros), amount to 146.26 euros for the employer, regardless of whether the employee generates this profit for the employer. This situation discourages employers from hiring necessary specialists, thereby hindering entrepreneurial development. Furthermore, a specialist registered as unemployed with the NVA and receiving unemployment benefits from the government for eight months, incurs expenses rather than generating additional tax revenues.

This creates two interrelated problems: on one hand, the government misses out on tax revenues, and on the other hand, employers lack access to the services of specialists who are needed for a limited time to foster business growth. If 50% of the specialists searching for full-time employment for 8 months and receiving unemployment benefits could be employed part-time, and if the employer had the ability to pay social contributions based on the actual wages paid, government expenses on unemployment benefits could be reduced by an average of 17% annually.

The restrictions imposed by the government on entrepreneurs regarding the part-time employment of specialists not only hinder entrepreneurial development and tax revenues but also limit the potential for improving the population's living standards. The upcoming tax reform of 2025 introduces further changes to the previous tax reform of 2018, once again distracting entrepreneurs from their business activities and increasing the tax burden on both the population—by raising income tax rates from 20% to 25.5%—and entrepreneurs across various sectors, despite only a slight increase in the non-taxable minimum, which becomes fixed.

It is justifiable to assert the necessity of developing and adopting a comprehensive tax concept that aligns with specific socio-economic conditions, including those that foster the activation of small business activities.

Based on empirical approaches, the following principles should underpin this concept:

- **Precise Definition of State and Regional Influence:** A clear delineation of the state's and regions' influence on economic processes and, consequently, the application of tax multiplier opportunities.
- **Objective Assessment of Tax and Borrowed Financing:** An objective evaluation of the effective ratio between tax and borrowed financing relative to the budget balance, aiming to mitigate the effects of inflationary-deflationary crises in the context of economic expectations and uncertainty.
- **Rational Tax Structure:** The establishment of a rational balance in the tax structure concerning the combination of progressive and proportional taxes based on the scale of tax withdrawals and objects of taxation.
- **Objective Analysis of Tax Reductions:** An objective analysis of the potential consequences and outcomes of tax reductions, considering the need to ensure adequate revenue in the budget system while stimulating business and investment activities under specific conditions.
- **Scientifically Justified Taxation Levels:** A scientifically substantiated methodology for determining the maximum taxation level.
- **Account for Government Structure Features:** An objective consideration of the characteristics of government structure when determining the composition of taxes, methods of collection, and redistribution.

In the context of economic uncertainty due to geopolitical risks, state taxes have risen to unjustifiably high levels, with tax revenues forming a significant portion of government income. With rapidly

increasing state debt, it is essential not to underestimate the quantitative and qualitative impact of taxes on both economic growth and decline. From this perspective, the most significant areas of tax impact are, first and foremost, entrepreneurial activity—especially in small businesses—employment, and the distribution of income within both government and local administrations, as well as households. Chaotic and poorly considered interventions in changing tax rates do not contribute to creating conditions for revenue growth, which is necessary to meet the increasing needs and expenditures of the state, influenced by the ongoing military actions in Ukraine.

Economic Consequences of Business Liquidation in Latvia

Aggregated data from the Enterprise Register from January 1, 1991, to 2023 demonstrate that the most challenging years for entrepreneurs occur within the first five years of operation. During this period, entrepreneurs find themselves in an uncertain and unstable legal environment, which significantly increases the difficulties and risks associated with business activities. As a result, the highest number of liquidations occurs in the third, fourth, and fifth years of operation.

Workers from liquidated businesses register as unemployed, receive unemployment benefits, and contribute to a decrease in the overall employment rate in the country. In contrast, enterprises that surpass the five-year mark tend to adapt more effectively to the entrepreneurial landscape, resulting in a sharp decline in the number of liquidations.

It is crucial to emphasize that during the first five years of operation, entrepreneurs require state support and stability in tax legislation to navigate the challenges of establishing their businesses successfully (Fig. 9).

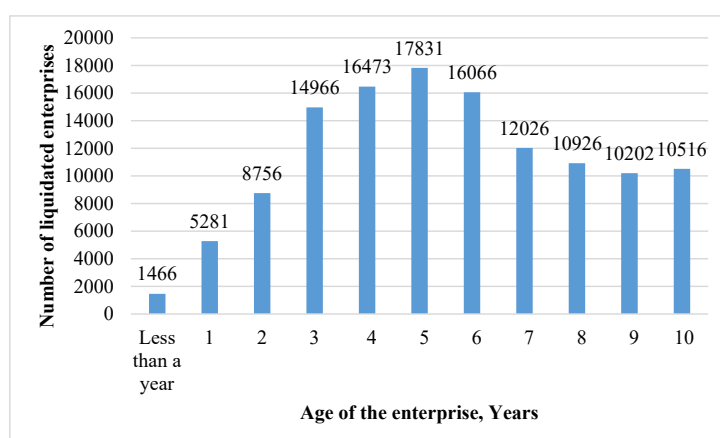


Fig. 9. Dynamics of Liquidated Micro and Small Enterprises (1991–2023)

Source: Developed by the authors

From 2018 to 2023, according to NVA statistics, a total of 452,783 individuals were registered as unemployed. The highest number of individuals who became unemployed occurred in 2020, with 103,018 people affected during the COVID-19 pandemic, as well as in 2022, when 90,577 individuals became unemployed due to the intervention in Ukraine, which also impacted the Latvian economy. During the same period from 2018 to 2023, a total of 24,482 enterprises with an operational age of 1 to 5 years were liquidated. Economic calculations justifying support for small entrepreneurship in the first five years of operation indicate that with adequate support, the number of registered unemployed individuals could be reduced by an average of 5.4% annually (Fig. 10).

Based on the average unemployment benefits paid from 2019 to 2023 (covering the first five years of operation), calculations indicate that government support for entrepreneurs during this initial period enhances employment levels, provides individuals with personal income, and ensures tax rev-

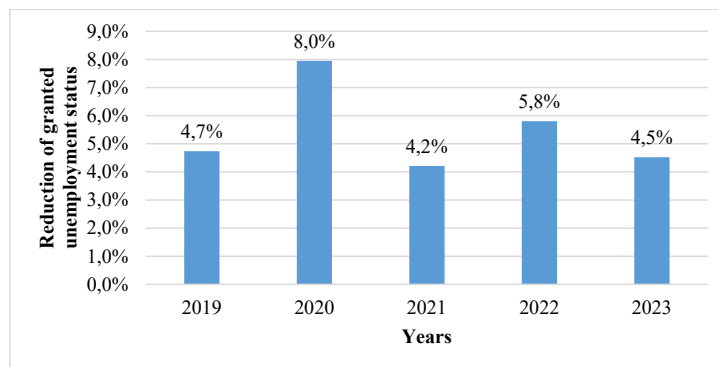


Fig. 10. Dynamics of Registered Unemployed Individuals with Government Support for Small Enterprises in Their First Five Years of Activity (%), 2019–2023

Source: Developed by the authors

venues for the budget (Figures 9 and 10). Considering the anticipated increase in the minimum wage starting in 2025, it is reasonable to expect a more significant trend in tax revenues to the budget, while the use of the social insurance special budget for unemployment benefits will decrease.

Employment levels are a fundamental economic issue that generates considerable social resonance. By definition, micro and small enterprises employ between 1 and 49 staff members. This study examined the average number of employees in companies and analyzed the trends in employee numbers within economically active enterprises. The study results on the employment of the working population in Latvia (aged 15–64) from 2016 to 2023 demonstrate a direct correlation with the number of employees in micro and small enterprises. The employee count does not exclude the same employee working in multiple companies (Fig. 11).

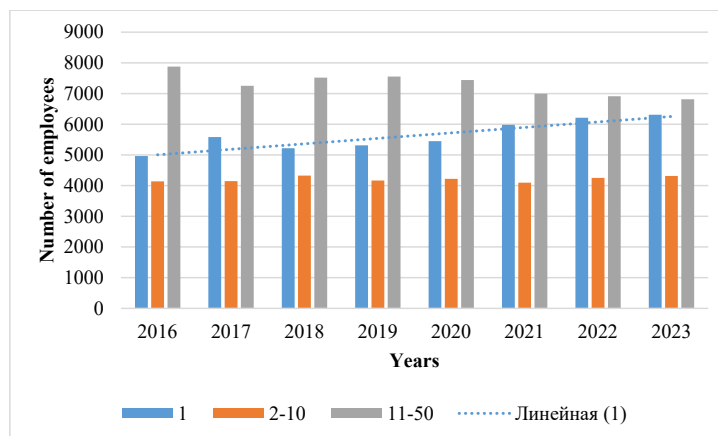


Fig. 11. Distribution of Latvian Enterprises by Number of Employees, 2015–2022

Source: Created by the author based on data from the Central Statistical Bureau

Most micro and small enterprises employ only one staff member (Figure 11). At the same time, during this period, self-employed individuals find work for themselves and organize their own “businesses” without having hired employees. This form of micro-entrepreneurship, namely self-employment, contributes to reducing the number of people leaving the country to seek work abroad.

Scenarios for the Development of Small Enterprises

To assess the prospects for the development of small enterprises and their impact on increasing employment levels in Latvia, a scenario analysis method was employed. This method is useful when

the forecasting objects are either very simple or, conversely, very complex, making it nearly impossible to consider the influence of numerous factors on the outcome.

For developing scenarios for small enterprise growth in Latvia, this approach is particularly relevant, as the forecasting object and the influencing factors create a sufficiently complex system. Utilizing the scenario method helps minimize erroneous decisions. When predicting developments, several scenarios are typically considered to prepare for potential risks while taking into account the economic and social implications for the population under different scenarios.

Scenario analysis does not assume specific future events due to the high level of uncertainty in the evolution of a complex socio-economic system within the country. Instead, it establishes certain boundaries for future developments. Thus, this type of analysis is well-suited for determining trends in small enterprise growth in Latvia, especially considering the frequent changes in legal regulations and the instability of the political and economic landscape.

In the study of trends in the development and directions of utilizing the potential of small entrepreneurship to increase employment in Latvia, the opinions of members of small business boards hold significant importance. To determine the preferences of working individuals regarding changing their status, a sociological survey was conducted among both self-employed individuals and employees of micro and small enterprises. A total of 311 people were surveyed, of which 113 were self-employed. The survey revealed that 36.28% of self-employed individuals refuse to change their status and transition to being employees. The remaining 63.72% expressed a desire to abandon their “business” and become employees if a favorable opportunity arose. Furthermore, in Latvia, a large portion of those wishing to become employees prefer to work in small enterprises (with 10–49 employees) rather than in micro enterprises (with 2–9 employees).

As of early 2024, there are 430,710 active small enterprises in Latvia. To confirm the scientific significance of the ratio of the surveyed enterprises (311) to their total number in Latvia, the methodology by J. Cohen was utilized, considering specific parameters

$$SS = ((Z\text{-score}^2) \times \text{StdDev} \times (1 - \text{StdDev})) \div (\text{ConfInt}^2),$$

where

- SS – sample size;
- confidence level – 90% (Z-score = 1.65) – the most commonly used value;
- StdDev – standard deviation (set at 0.5, which is a safe value ensuring a sufficiently large SS);
- ConfInt – confidence interval (set at $\pm 5\%$).

As a result of the calculations based on these parameters, a sample size of $SS = 272.25$ was obtained (rounded to 273). This indicates that the number of surveyed specialists (311) exceeds the theoretically required amount and is scientifically justified, with the statistical results being significant. The conclusions drawn using this model are scientifically substantiated and applicable in practice.

Guided by the data from the sociological survey and the results of their processing, the first scenario for the development of small entrepreneurship can be reasonably proposed, in which 63.7% of self-employed individuals cease their activities and transition to work in micro and small enterprises as employees. For example, in the 4th quarter of 2023, the State Revenue Service of Latvia registered 38,689 self-employed individuals paying social security contributions. The statistics on social security contributions include both those self-employed individuals who pay 10% of their income exceeding the minimum wage of 700 euros per month and those who pay 25% or 31.07%. According to the forecast of the first scenario for the development of small entrepreneurship, if 63.7% of self-employed individuals transition to employee status, their personal incomes will increase almost two-fold, which, in turn, will double the social contributions to the state budget.

Advantages and Disadvantages of Scenario 1: Transition of Self-Employed Individuals to Employee Status

Advantages:

1. Increase in Personal Income: The transition of 63.7% of self-employed individuals to work in micro and small enterprises could lead to an almost twofold increase in their personal incomes, thereby improving their standard of living.

2. Growth of Social Contributions: As incomes rise, social contributions to the budget will also increase, which may enhance the funding for social programs, healthcare, and pensions.

3. Employment Stability: Employees typically enjoy greater protection in labor relations, reducing the risk of income loss due to unforeseen circumstances, such as economic crises or market changes.

4. Increased Motivation and Productivity: Working in a stable structure can boost employee motivation, which in turn may lead to increased labor productivity.

5. Reduction of Administrative Burden: The transition to employee status may decrease the administrative and financial costs associated with running a business, such as accounting and taxation.

Disadvantages:

1. Loss of Independence: Self-employed individuals may feel less independent and more dependent on their employer, which can negatively affect their motivation and job satisfaction.

2. Reduced Flexibility in Work Hours: Employees often have a fixed work schedule, which may limit the flexibility they enjoyed as self-employed individuals.

3. Adaptation to a New Environment: Transitioning to employee status may require self-employed individuals to adapt to a new work culture and employer expectations, which can be stressful.

4. Risk of Increased Unemployment Among Self-Employed: If a significant number of self-employed individuals leave their businesses, this could lead to a reduction in the overall number of small and micro enterprises, potentially increasing unemployment in this sector.

5. Dependency on Economic Conditions: Employees may be more vulnerable to economic fluctuations and layoffs, which could result in job instability during crises.

Advantages and Disadvantages of Scenario 2: Transition of Employees to Self-Employed Status

Advantages:

1. Self-Realization and Creative Freedom: Transitioning to self-employment allows workers to implement their ideas and utilize their creative potential, which can lead to greater job satisfaction.

2. Flexibility in Work Hours: Self-employed individuals have the ability to set their own work schedules, allowing them to better balance personal and professional commitments.

3. Increased Income Potential: Successful self-employed individuals can significantly increase their earnings, as they have the opportunity to set prices for their services or products according to market demand.

4. Creation of New Jobs: A rise in the number of self-employed individuals can contribute to job creation across various sectors of the economy, positively impacting economic growth.

5. Economic Diversification: An increase in small businesses and self-employment fosters economic diversity and enhances competitiveness in the market.

Disadvantages:

1. Financial Risks: Self-employed individuals often face financial instability, especially in the early stages of their business, when income can be unpredictable.

2. Lack of Social Guarantees: Self-employed individuals do not always have access to the same social guarantees as employees, such as paid vacations, sick leave, and pension contributions, which can decrease their financial security.

3. Need for Self-Management: Transitioning to self-employment requires individuals to manage their own business, which can be a challenging task for those without relevant experience or skills.

4. Income Instability: The income level of self-employed individuals can fluctuate depending on market conditions, leading to financial uncertainty and stress.

5. Adaptation to New Conditions: Workers may encounter difficulties during the transition, including the need to find clients, develop business strategies, and manage business processes.

The second scenario, where employees resign and become self-employed, offers numerous advantages, such as the opportunity for self-realization and flexibility. However, it is also associated with significant risks, including financial instability and the lack of social guarantees. The success of this scenario depends on the readiness of workers to accept these challenges and the availability of support from the government and organizations that promote entrepreneurship development.

Advantages and Disadvantages of Scenario 3: Additional Entrepreneurship

Advantages:

1. Additional Income: Registering a personal business allows employees to earn supplementary income, which can significantly enhance their standard of living and financial stability.

2. Flexibility in Employment Choices: Workers can decide how much time and effort they wish to dedicate to their business, providing the ability to manage their work hours flexibly.

3. Skill and Experience Development: Working as a self-employed entrepreneur enables the development of new skills, such as business management, marketing, and customer service, which can be beneficial in their primary profession.

4. Minimized Financial Risks: Since the main job remains stable, employees can reduce the financial risks associated with entrepreneurship and use additional income for investments or creating reserves.

5. Networking Opportunities: Additional entrepreneurship can lead to the expansion of professional contacts and the creation of new business relationships, which can be advantageous for career development.

Disadvantages:

1. Increased Workload: Balancing a primary job with entrepreneurship can lead to overload and stress, negatively affecting the employee's health and personal life.

2. Time Constraints: Challenges in time management may arise from the need to balance the main job with entrepreneurial activities, potentially resulting in decreased quality of work in both areas.

3. Legal and Tax Obligations: Registering a personal business requires knowledge of the law as well as compliance with various legal and tax obligations, which can be a time-consuming and complex process.

4. Income Unpredictability: While additional entrepreneurship can generate income, it is not always stable and predictable, creating financial uncertainty.

5. Conflict of Interest: In some cases, work at the primary job may conflict with entrepreneurial activities, especially if the employer has strict rules regarding additional occupations.

The third scenario, in which 47% of the working population registers their own entrepreneurship alongside their main job, has many advantages, such as the opportunity to earn additional income and develop new skills. However, it is also associated with drawbacks, such as increased workload and legal obligations. The success of this scenario will depend on the ability of workers to effectively manage their time and resources, as well as the support from employers and the government.

It is important to note that when evaluating the most acceptable scenario for the development of small entrepreneurship, it is necessary to consider the situation while taking into account the personal qualities and advantages of the individual.

The summarized results of potential small entrepreneurship development scenarios are presented in Table 1. In the second scenario, an "X" is marked in the first row of the predicate of Table 1, as the significant uncertainty when opening one's own business means that it cannot be predicted in advance whether it will be successful or not.

Indicators	Scenario 1	Scenario 2	Scenario 3
additional VSAOI revenues to the state budget	+	X	+
eligibility for unemployment benefits	+	—	+
increase in personal income	+	+	+
arrival of qualified personnel	+ / -	- / +	+
opportunities for self-realization of employees	—	+	+
free work schedule (no need to comply with the working hours and conditions of the employer)	—	+	+
salary restrictions	—	+	+
personal burnout at work	+	+	-

Note: “+” indicates a positive influence, “—” indicates a negative influence, and “+/-” indicates a possible positive or negative influence depending on the circumstances.

Source: Developed by the authors

We believe that the most positive scenario is number 3, in which the working population registers additional economic activity as self-employed individuals in addition to their main jobs, thereby obtaining additional personal income, which, as a consequence, leads to increased tax contributions to the state budget.

Conclusions. Small entrepreneurship is a significant factor in socio-economic development that can have a noticeable impact on the issue of employment in the country. Enterprises that have crossed the five-year mark of operation sustainably adapt sustainably adapt sustainably adapt to the entrepreneurial environment and contribute to the stabilization of economic development. The results of the research, obtained through scenario analysis, identified possible future alternatives – advantages and disadvantages – in the proposed three options for the development of the economic situation in Latvia. The most preferred scenario is one in which the working population, in addition to their main jobs, registers additional economic activities as self-employed individuals, thereby obtaining additional personal income, which results in increased tax contributions to the state budget. The self-employment of the population and small entrepreneurship have a direct impact on addressing the issues of universal employment in the country, facilitating the emergence of new opportunities for job creation in various sectors of the economy. Government regulation of this process promotes full and effective employment.

The main conclusion: In the overall system of entrepreneurial activity, small businesses hold a special place, as they most closely align with the core essence of Latvia’s socio-economic development. One of the key objectives of structural reforms in the Latvian economy is to create an efficient entrepreneurial environment for small businesses and establish conditions that stimulate activity, thereby consistently maintaining and increasing employment of the labor force.

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IDENTIFICATION OF ATTRIBUTES AND COMMUNICATION CHANNELS BASED ON SOCIO-DEMOGRAPHIC GROUPS OF INTERNATIONAL STUDENTS

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Abstract. In the modern age, universities are experiencing the impact of increased competition in the educational services market, and the emergence of many social networking platforms and communication methods, which negatively affect the quality of communication between students and the university. The purpose of the study is to identify the main and relevant channels and methods of communication when foreign students search for information about Estonian universities. The study revealed that the use of various communication channels is influenced by gender, age, and educational background of students. The results show differences in the use of communication channels among Bachelor's, Master's and PhD students of different ages and genders. The study found that for all groups of international students, the presence of popular, high-engagement social media accounts is perceived positively, while the absence of such accounts has a negative impact.

Key words: Marketing, communication channels, university, students

JEL Classification: M30, M31, M39.

Introduction. The emergence of numerous social networks and other online resources has, on the one hand, facilitated communication between universities and foreign students. On the other hand, due to rapid technological advancements, it is challenging and impractical for universities to allocate resources indiscriminately to all available online technologies. Universities must develop tools to analyze their target audience and segment them into groups based on habits and preferences. Identifying the preferred communication channels of different groups of foreign students in Estonia will help universities structure content in a way that is both be familiar and comprehensible to students. Without a detailed understanding of target audience, it is impossible to determine the necessary communication attributes, the extent to which mobile applications and the university website should be utilized, or how to attract students through interaction, which is now possible using various new technologies.

Literature Review. Since the COVID pandemic, the digital world has exponentially advanced the hybrid learning style. Teachers and students have successfully combined a large number of communication channels, such as email, mobile apps, and messaging platforms. (Colfer, B. P., Johri, N., & Wagner, S. L., 2021, pp. 441-466). The modern era is highly digitized and encompasses various forms of communication.” (Radu, M. C., Schnakovszky, C., Herghelegiu, E., Ciubotariu, V. A., & Cristea, I., 2020). The main tool used today is the smartphone, which allows for virtually continuous communication activities between subjects.

During the pandemic, HEIs began to adopt social media progressively as a marketing tool in addition to a teaching and learning tool. Social media is becoming an increasingly important tool for business and social engagement. (Hung, N. T., & Yen, K. L., 2022, p. 8522)

Social media was already popular before the COVID pandemic (Nguyen, N., & Leblanc, G., 2011). According to Hobsons's survey on international higher education, more than 80% of students rely on social media platforms to find information about educational institutions, (Hobsons, 2017).

It is important to mention that universities, their students, and potential students are assumed to be technocrats, (Mohammadi, M., Sarvestani, M. S., & Nouroozi, S., 2020, p.16).

According to Fourie, L. E., correspondent students most frequently used the university website (56.4%), friends (34.6%), and word-of-mouth (33.3%) as information sources when selecting a university. Since four of the top five information sources include personal friends, word-of-mouth (Elahinia, N., & Karami, M. 2019, pp. 21-34), family members other than parents, university students, and career advisors, it can be inferred from these statistics that students prefer to consult personal sources when choosing a university (Fourie, L. E., 2015).

Social media platforms have an extensive reach and can connect prospective students, particularly those from abroad (Ragini, Y., 2016). Among other advantages, information on social media can be updated and changed after publication, unlike traditional marketing. Social media promotes involvement, communication, and teamwork (Cohen, I. K., & Salaber, J., 2015, p. 167-186). Social media is free to use and can reach a wide audience at any time, particularly those from abroad. Studies conducted before the COVID pandemic, particularly before 2019, suggest that social networking exposes adolescence to a variety of social standards, enabling them to gather important knowledge, build relationships with others (Uguina-Gadella, L., Estévez-Ayres, I., Fisteus, J. A., Alario-Hoyos, C., & Kloos, C. D., 2023), and establish connections before attending college, (Pumptow, M., & Brahm, T., 2021, pp. 555-575). Online platforms were more instantaneous and accessible than conventional media, which is the primary distinction between the two types of media, (Vizcaya-Moreno, M. F., & Pérez-Cañaveras, R. M., 2020, p. 8267). Higher educational institutions consider traditional media less efficient and more expensive. Previously, universities used social networks to build communities among different groups of students (e.g., local and international students) and between teachers and students, other communication channels, such as university's websites, SMS messages, and blogs, were also used to inform students (Goh, T. T., Seet, B. C., & Chen, N. S., 2012, pp. 624-640).

As mentioned above, the situation has changed since 2019 (Ramadan, Z., 2023, p. 1905-1918): social networks have become one of the main communication channels between students and universities (Yalcinkaya, G., Sengul Salik, Y., & Buker, N., 2020, pp. 473-482). Universities in general have begun to use the Internet more often, especially to attract international students (Ahmadi, Y., 2019). Many authors, including Camilleri (Camilleri, M., 2020, pp. 77-95), have demonstrated that social media marketing activities, such as posting videos, news, and information about institutions, significantly influence students' intentions to enroll in college or university (Prabowo, H., Bramulya, R., & Yuniarty, Y., 2020, pp. 103-110).

Research done by Kisiołek, A., Karyy, O., Halkiv, L., (2021) suggests that 98% of research participants reported regularly using social media, but only 37.4% of them utilized it to help them choose a university. A quantitative descriptive research study, which used an online electronic questionnaire and a non-probability sampling approach, found that potential university students, primarily from the Generation Z demographic (defined as those between the ages of 14 and 22), reached information about the institution on social media platforms before submitting an application; over half (58.3%) of the respondents did so, 33% said they did so to get familiarized with the university's culture (Arungbemi, 2020).

Students identified establishing connections and communication with HEIs as the primary use of social media, considering it the most significant aspect (Hung, N. T., & Yen, K. L., 2022, p. 8522). Furthermore, a study conducted by Blázquez, F., Rodríguez, C., Teijeiro, M. (2020) and Eger, L., Egerová, D., Tomczyk, L., Krystoń, M., (2021, p. 88-99) found that when higher education institutions post photos and videos on Facebook, they receive the highest response rates, particularly in the

form of ‘likes’, ‘shares’, and ‘comments’. Same results were found by Sörensen, I., Vogler, D., Fürst, S., Schäfer, M. S. (2023, pp. 264-277), who concluded that multimodality—using images, videos, or emojis in content—positively impacts user engagement on Facebook, Instagram, and Twitter, according to the cross-platform study. Amplified diversity and conversation make the area more engaging and appealing, which raises awareness and encourages possible participation and loyalty (Sörensen, I., Vogler, D., Fürst, S., & Schäfer, M. S., 2023, pp. 1-20). Nevertheless, universities must employ more questions to foster interactivity even while they use this social network as a source of knowledge (Maresova, P., Hruska, J., & Kuca, K. (2020, p. 74).

When choosing the right educational institution, potential students often look for certain aspects that suit their needs. Factors include reputation, location, educational programs and departments, ratings, cost, and quality (Onsardi, Wulandari, K., Finthariasari, M., & Yulinda, A. T., 2021). Miotto, G., Del-Castillo-Feito, C., & Blanco-González, A., (2020, pp. 342–353) demonstrated that service marketing is major factor in potential student’s decision-making. When researching universities, students use different channels to find necessary information that meets their needs and preferences. It should be mentioned that social media plays a significant role in student’s lives Mohammadi, M., (Sarvestani, M. S., & Nouroozi, S., 2020, p. 16).

Therefore, universities should inform students about available digital services to improve their productivity in education by providing means of communication and collaboration (Benavides, L. M. C., Tamayo Arias, J. A., Arango Serna, M. D., Branch Bedoya, J. W., & Burgos, D., 2020, p. 16).

In the context of marketing, social media engagement between students and their university faculty can influence the desire to communicate with the university. It was also proven that for higher education institutions, social media marketing activities, such as posting videos, news and information about their institutions, significantly influence students’ intention to enroll in a college or university. Furthermore, higher educational institutions should be aware of and take appropriate steps to engage potential students. as additional interaction between faculty and students has been shown to enhance student retention and loyalty (Sörensen, I., Vogler, D., Fürst, S., & Schäfer, M. S., 2023, pp. 1-20). It was necessary to establish which channels of communication students and university faculty use.

Nevertheless, it should be mentioned that social media plays a significant role in student’s lives. In fact, research conducted by Prabowo, H., Bramulya, R., & Yuniarty (2020, pp. 103-110) shows that students use social media significantly often. The majority of respondents spend up to 25% of their time on social media using Facebook a day, and up to 40% using Instagram. 80% of students who use Instagram once a day do so for at least three hours on average. On the other hand, 41.7% of users browse Facebook for one to three hours each day on average. However, study conducted by Vizcaya-Moreno, M. F., Pérez-Cañaveras, R. M., (2020, p. 8267) found that the most popular platforms among Generation Z are Facebook, Twitter, and YouTube.

In addition to interacting with their friends, students who use Facebook and Instagram also get current information from their universities. According to Šola, H. M., & Zia, T., (2021, pp. 1–23), results showed that potential students extensively use various social media platforms when selecting a higher educational institution, and a specific course of study. Compared to more conventional technologies such as email and phone interaction, social media was commonly used, despite variations in its design and functionality. Additionally, among all the resources available, Facebook was the most popular choice among prospective students for communicating with HEIs and exchanging information with peers. Additionally, Facebook was rated as the best resource for finding possible HEIs and courses. However, an analysis conducted by Sörensen, I., Fürst, S., Vogler, D., Schäfer, M. S., (2023, pp. 264–277) revealed differences in user engagement across platforms. Compared to Facebook and Twitter, a significantly higher number of users responded to higher educational institution’s postings on Instagram.

This study aims to identify the attributes and communication channels that are important for international students in Estonia.

Hypothesis: There are statistically significant differences among international students based on gender, age, and level of education in their preference for certain communication channels and essential communication attributes.

Method. Based on scientific literature, the author identified online and offline attributes and communication channels important for students, before and after the pandemic, which were included in the survey. As part of the study, a survey of foreign students was conducted at Estonian universities included in the Times Higher Education World University Rankings in 2023.

To calculate the significance of differences in the proportions (percentages) of the frequency of occurrence of characteristics, the Z and c2 criteria were used using SPSS software. The critical significance level of for testing statistical hypotheses in this study was set at 0.05. For multiple comparisons, the Bonferroni correction was applied, (Abbas, M., Asghar, M. W., & Guo, Y., 2022, pp. 231–248):

$$\alpha_B = \frac{\alpha}{m}, \quad (1)$$

where:

α – initial alpha level (0.050)

α_B – adjusted α level with Bonferroni correction

m – number of hypotheses.

Furthermore, the Cano Method, (Hossain, M. A., Cano, J. A., & Stewart, C. M., 2023, pp. 4001-4019) was used to identify attributes related to the subjective perception of the university. To compile the Kano questionnaire, two questions were formulated for each identified attribute, requiring feedback from international students (Tontini, G., Søylen, K. S., & Silveira, A., 2013, pp. 1253-1271). Based on the responses to the two parts of the question, the product feature can be classified into one of six categories: A=Attractive, M=Must-be, O=One-dimensional, I=Indifferent, R=Reversal, Q=Questionable.

Once all the Kano questionnaires have been collected, the data are tabulated by classifying each customer requirement in the Kano Evaluation and recording it in the appropriate row of a Kano questionnaire tabulation form.

To determine the indicator “Positive impact in the presence of an attribute”, the results were obtained using the Kano model: the indicators “Attractive (A) and One-dimensional (O) were summed up and divided by the sum of Attractive (A), Questionable (O), Must-be (M), and Indifferent (I).

To identify the “Negative impact in the absence of an attribute” indicator, the results were obtained using the Kano model: Questionable (O) and Must be (M) were summed up by the sum of the indicators; Attractive (A), Questionable (O), Must be (M) and Indifferent (I).

Next, all the results were transformed using the Mike Timko method to show a decrease in satisfaction depending on the presence or absence of the corresponding element (Timko, 1993).

Results. The analysis of scientific literature contributed to the identification of important attributes and communication channels, both online and offline, that were relevant before and after the pandemic. These attributes and communication channels are a priority for different groups of consumers of educational services (see Table 1).

Table 1

Communication Channels and Attributes

Attributes	Author
Educational Ratings	Kisiołek, A., Karyy, O., & Halkiv, L. Onsardi, Wulandari, K., Finthariasari, M., & Yulinda, A. T. Miotto, G., Del-Castillo-Feito, C., & Blanco-González, A.
University websites	Ramadan, Z. Kisiołek, A., Karyy, O., & Halkiv, L. Mohammadi, M., Sarvestani, M. S., & Nouroozi, S.

Table 1 (continuance)

Internet Review, comments	Kisiołek, A., Karyy, O., & Halkiv, L. Mohammadi, M., Sarvestani, M. S., & Nouroozi, S.
Websites about education	Hung, N. T., & Yen, K. L. Fourie, L. E. Mohammadi, M., Sarvestani, M. S., & Nouroozi, S.
Search Engine	Fourie, L. E. Nguyen, N., & Leblanc, G. Mohammadi, M., Sarvestani, M. S., & Nouroozi, S.
Communication with friends	Hung, N. T., & Yen, K. L. Fourie, L. E. Camilleri, M. Sörensen, I., Fürst, S., Vogler, D., & Schäfer, M. S.
Social media	Colfer, B. P., Johri, N., & Wagner, S. L. Radu, M. C., Schnakovszky, C., Herghelegiu, E., Ciubotariu, V. A., & Cristea, I., Hung, N. T., & Yen, K. L. Kisiołek, A., Karyy, O., & Halkiv, L. Sörensen, I., Fürst, S., Vogler, D., & Schäfer, M. S.
Education agents	Kisiołek, A., Karyy, O., & Halkiv, L. Sörensen, I., Fürst, S., Vogler, D., & Schäfer, M. S.
Video	Prabowo, H., Bramulya, R., & Yuniarty, Y. Blázquez, F., Rodríguez, C., & Teijeiro, M. Maresova, P., Hruska, J., & Kuca, K. Sörensen, I., Fürst, S., Vogler, D., & Schäfer, M. S.
Blogs	Prabowo, H., Bramulya, R., & Yuniarty, Y. Mohammadi, M., Sarvestani, M. S., & Nouroozi, S.
Mobile application	Colfer, B. P., Johri, N., & Wagner, S. L. Radu, M. C., Schnakovszky, C., Herghelegiu, E., Ciubotariu, V. A., & Cristea, I.
Forums	Prabowo, H., Bramulya, R., & Yuniarty, Y. Mohammadi, M., Sarvestani, M. S., & Nouroozi, S.
Hashtag	Prabowo, H., Bramulya, R., & Yuniarty, Y. Blázquez, F., Rodríguez, C., & Teijeiro, M.
Real time events	Uguina-Gadella, L., Estévez-Ayres, I., Fisteus, J. A., Alario-Hoyos, C., & Kloos, C. D.
Calls to University	Yalcinkaya, G., Sengul Salik, Y., & Buker, N.
Online chat	Sörensen, I., Fürst, S., Vogler, D., & Schäfer, M. S.
WOM	Fourie, L. E., Elahinia, N., & Karami, M.
EdU platforms	Hung, N. T., & Yen, K. L. Sörensen, I., Fürst, S., Vogler, D., & Schäfer, M. S.
Subscriptions	Prabowo, H., Bramulya, R., & Yuniarty, Y., Camilleri, M.
Photo	Prabowo, H., Bramulya, R., & Yuniarty, Y., Camilleri, M. Blázquez, F., Rodríguez, C., & Teijeiro, M. Maresova, P., Hruska, J., & Kuca, K. Sörensen, I., Fürst, S., Vogler, D., & Schäfer, M. S.
Influencers	Kisiołek, A., Karyy, O., & Halkiv, L.
Pop-up windows	Arungbemi O.G.
SMS	Goh, T. T., Seet, B. C., & Chen, N. S.
Email	Colfer, B. P., Johri, N., & Wagner, S. L. Radu, M. C., Schnakovszky, C., Herghelegiu, E., Ciubotariu, V. A., & Cristea, I.

A questionnaire was developed and used to survey 425 respondents. The demographic characteristics of the respondents show that 55% (n=133) are aged 23–37 years, 25% (n=62) are

aged 37–55 years, 15% (n=36) are under 23 years old, and 5% (n=13) are 55 years and older. The study showed that 81% (n=197) were women, 19% (n=47) were men. Among the respondents, 71% (n=172) were undergraduate students, 13% (n=32) were master's students, and 16% (n=40) were doctoral students.

Analysis of the results of the questionnaire revealed that most respondents use Facebook as the primary social network (See Fig. 1).

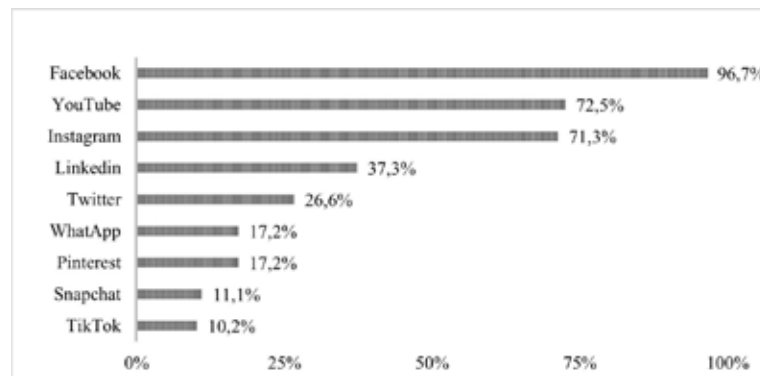


Fig. 1. Respondents' answers to the question “What social networks do you use?”

To determine what information sources and channels respondents use when they are looking or would look for information about a university, a list of possible sources was compiled based on a review of the literature (See Fig. 2).

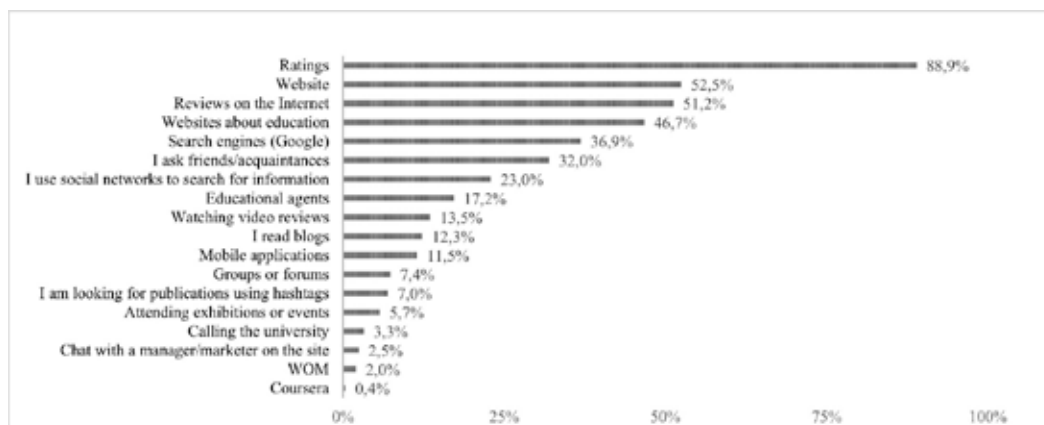


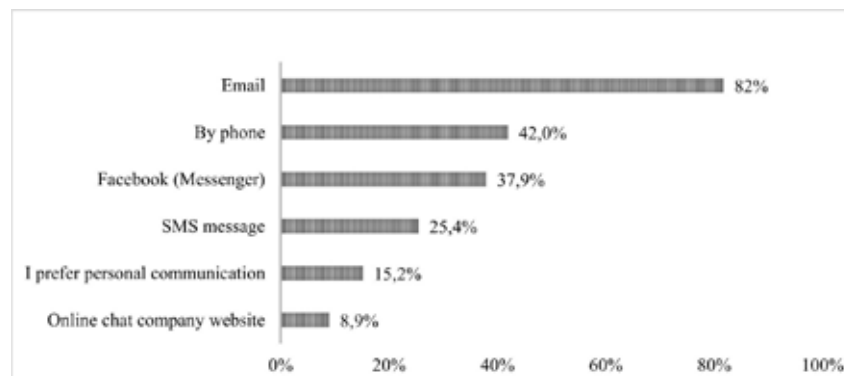
Fig. 2. Respondents' answers to the question “What do you use when you are looking or would look for information about a university?”

To determine whether respondents verify information on website, the following results were obtained. The majority, 58% (n=141), almost always verify information; 22% (n=53) sometimes do, 13% (n=33) do not check at all, and 7% (n=17) do not engage with the information.

The questionnaire results also revealed whether respondents consider it important to have specific actions available on a website (e.g., purchasing or signing up). A majority of 66% (n=162) believe that this is important, 19% (n=45) of respondents do not care, 10% (n=25) do not use the sites and 5% (n=12) believe that it is not important.

Among respondents, 40% (n=98) are neutral about pop-up windows for communicating with managers and use them if necessary, 29% (n=70) dislike them but still use them, 24% (n=58) close them immediately, 5% (n=13) find them premature, and 2% (n=4) are unfamiliar with them.

The majority of respondents (81.7%, n=183) prefer to be contacted by a manager or marketer via email (See Fig. 3).



**Fig. 3. Respondents' answers to the question
"How would you like the manager to contact you if necessary?"**

Since many services today are promoted using famous or authoritative personalities, respondents were asked whether they trust the recommendations of famous (popular) personalities. Of these, 48% (n=117) of respondents answered that they trust in some cases but often verify the information. Meanwhile, 37% (n=88) do not trust such recommendations unless they come from a professional in the relevant field, and 15% (n=37) trust them only if the recommendation is from a professional. 44% (n=107) of respondents rarely leave reviews on the Internet about goods or services, while 37% (n=91) do so more often than not. Among those who leave reviews, 9% (n=21) mostly leave positive reviews, while only 1% (n=2) leave negative reviews. Only 6% (n=16) of respondents never leave reviews. Only 3% (n=7) of respondents stated that they are always willing to leave feedback.

To determine how respondents feel about email newsletters, a relevant question was asked. The majority, namely 39.3% (n=95) answered that they do not subscribe to newsletters and will not, 18.2% (n=44) stated they would subscribe if the university provided interesting offers and content. 13.6% (n=33) have never been offered such a subscription, 9.1% (n=22) would subscribe if there was a positive experience of cooperation, 8.3% (n=20) would subscribe if offered, 7.4% (n=18) never subscribe, while 4.1% (n=10) might subscribe to maintain contact. Respondents' answers to the question "Do you subscribe to e-mail newsletters from the university?"

Social networks are a popular media channel; therefore, universities without social media pages appear less trustworthy. Moreover, the frequency and quality of their publications influence user engagement, as they either capture interest or go unnoticed. 29% (n=70) of respondents pay (more often pay) attention to publications from the university. 29% (n=70) answered that they don't pay attention more often than they pay attention. 24% (n=59) reported paying attention, stated they do not, and only 7% (n=18) indicated they had not seen such information. At the same time, 25% (n=60) of respondents like more often than not under posts on social networks with information from the university that is interesting to them, 24% (n=59) like, more often they do not like than they do – 20% (n=49), do not like 24% (n=58) and 7% (n=18) have not seen such information. To understand under what circumstances respondents subscribe to university social media pages, a corresponding question was asked (See Fig. 4).

To understand under what conditions respondents are willing to return and use the services of a university they liked, a corresponding question was asked. 58% (n=140) of respondents are willing to return, 20% (n=49) stated that their decision depends on various circumstances, 11% (n=27) answered that they are more likely to return than not, 9% (n=22) would return if a discount were available, and

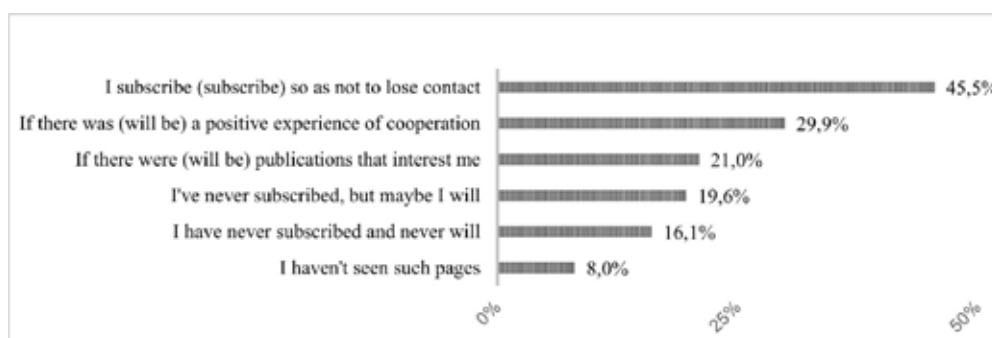


Fig. 4. Respondents' answers to the question "In what cases do you subscribe to the university's pages on social networks?"

2% (n=5) answered that they are more likely not to return than to return. 41% (n=99) of respondents usually publish photo, 16% (n=40) do so very rarely, – 16% (n=40) publish depending on various circumstances, 15% (n=37) always publish, 7% (n=17) never publish, and 5% (n=11) almost never publish. At the same time, 24% (n=59) of respondents usually tag publications with hashtags, 17% (n=42) tag them, but very rarely, 21% (n=51) never tag them, 12% (n=28) almost never tag them, 16% (n=40) do so depending on various circumstances, 7% (n=18) always mark them, and only 3% (n=6) do not know what hashtags are. The majority of respondents, 38% (n=93), usually mark publications with geotags, 17% (n=41) do so very rarely, 6% (n=16) almost never mark them, 16% (n=38) – never noted them, 14% (n=35) always noted them, and 7% (n=16) do so depending on various circumstances. Only 2% (n=5) of respondents do not know what it is.

Thus, women statistically trust recommendations from famous personalities more (75%, n=73) than men do (54%, n=15). Additionally, men (46%, n=13) are more likely than women (25%, n=24) to trust recommendations, but only if they come from a professional in the relevant field. These may include video clips (including advertising) on YouTube, posts (reviews) from famous bloggers on Instagram, etc. (p=.0478).

At the same time, women are statistically more likely to leave online reviews about university services (89%, n=82) than men (60%, n=9). In addition, men are more likely to never leave reviews (40%, n=6) compared to women (11%, n=10) – (p=.0098).

Additionally, the analysis of the study results revealed that women (74%, n=52) are statistically more likely than men (44%, n=7) to pay attention to university publications from a university on social networks (p=.0335). Furthermore, women (45%, n=89) are statistically more likely than men (28%, n=13) to subscribe to university pages on social networks if they find the publications interesting (p=.0287).

When examining social networks as a communication channel and user behavior within them, the following results were obtained:

Statistically, significantly more women tag publications with hashtags (53%, n=67) than men (35%, n=10) – (p<0.05). However, age does not influence the use of hashtags.

Statistically, more people under the age of 37 (66%, n=103) geotag publications than those people aged 37 and older (37%, n=25), (p=.0010).

Significantly more women publish photos (72%, n=119) than men (44% n=17) – (p=.0016).

The use of social networks depends on the gender and age of respondents. Statistically, significant gender differences were identified in the use of the social network Instagram, Twitter, and Pinterest. Women are more likely to use Instagram (74.6%, n=147) than men (57.4%, n=27) (p=.0308), while Twitter is used more by men (40.4%, n=19) than women (23.4%, n=46) – (p=.0281). Similarly, Pinterest is used more by women (20.3%, n=40) than men (4.3%, n=2) (p=.0086). Age-based differ-

ences were also identified in the use of Facebook, LinkedIn, Instagram, TikTok, and YouTube in two age groups: under 37 years old and 37 years and older. Facebook (99%, $n=167$), LinkedIn (44%, $n=75$), Instagram (83%, $n=141$), TikTok (15%, $n=25$), and YouTube (78%, $n=132$) are used more by individuals under 37 years of age than by those aged 37 and older ($p<0.05$). Also, differences were identified in how respondents of different genders, education levels, and ages search for or would search for information about the university if needed.

The use of certain channels when searching for information about a university depends on the gender of the respondents. Ratings are primarily used by women (92%, $n=182$) rather than men (74%, $n=35$) ($p=.0011$). Similarly, education websites are more commonly used by women (52.8%, $n=104$) than men (21.3%, $n=10$) ($p=.0001$). Conversely, statistically more often men (12.8%, $n=6$) are called directly than women (1%, $n=2$) – $p=.0008$.

At the same time, the use of certain channels when searching university-related information is also associated with respondents' age. Statistically, significantly more people under the age of 37 (42%, $n=71$) use search engines to find information about a university than those aged 37 and older (25.3%, $n=19$) – $p=0.02$. However, university websites are used more frequently by individuals aged 37 and older (64%, $n=48$) than by those under 37 (47.3%, $n=80$) – $p=0.001$. In addition, respondents aged 37 and older read blogs more (21%, $n=16$) than those under 37 (8%, $n=14$) – $p=.0042$. But at the same time, when selecting a university, individuals over the age of 23 (67% $n=50$) are more likely to use social networks to search for information than those under 23 (4%, $n=6$) – $p=0.03$.

At the same time, the use of certain channels when searching for information about a university is also linked to the respondents' level of education. Thus, respondents pursuing a bachelor's or doctoral degree (54%, $n=114$) are more likely to use online reviews to search for information than master's students (34%, $n=11$) – $p=0.04$. A similar trend is observed among those who visit the website: bachelor's or doctoral students (55%, $n=117$) than master's students (34%, $n=11$) – $p=0.045$. Educational websites and platforms are used more frequently by respondents bachelor's or doctoral students (51%, $n=108$) than by master's students (19%, $n=6$) – $p=0.01$.

Also, differences were found between respondents' level of education and their preferred method of contact with a manager if necessary. The choice of communication channels for contacting a manager, when necessary, depends on the respondents' level of education. Thus, doctoral and master's students (53%, $n=38$) are more likely to prefer phone communication with a manager than bachelor's students (33%, $n=56$) – $p=.0049$. Also, bachelor's and doctoral students (77%, $n=164$) are statistically more likely to prefer email contact from a manager, if necessary, compared to master's students (59%, $n=19$) – $p<0.05$. At the same time, no differences were found between the respondents' gender and age and their preferred method of contact with a manager if necessary ($p<0.05$).

Thus, the survey results show that there are differences in the use of social networks and communication channels among international students with varying genders and levels of education.

Kano's Model Results. Noriaki Kano and his team first developed this model in 1984. This model was developed to enhance consumer satisfaction over time when they return to a product from the same manufacturer. It aims to classify and prioritize customer needs while providing a structured framework a production container with guidelines for product design and development cycles (Madzik, P., 2018, pp. 387-409). In the Kano diagram, the horizontal axis represents the extent to which specific qualitative traits are fulfilled, while the vertical axis represents the level of customer satisfaction with these attributes. The attributes and communication channels identified in the survey were logically grouped into categories: The 'Social media' category with high metrics, included factors contributing to improved social media performance, such as hashtags, geolocation tags, photo and video content, subscriptions, active student interactions, comments and reviews.

The 'Online Community' category includes attributes that facilitate the formation of interest-based groups, such as mutual friends and influencers. The "Cooperation" includes attributes related to promotion through educational agents, educational websites, and platforms.

The most significant differences were observed across four groups: bachelor's and master's students aged 37 and younger, doctoral students aged 37 and younger, bachelor's and master's students older than 37 years old, doctoral students after 37 years old (See Fig. 5).

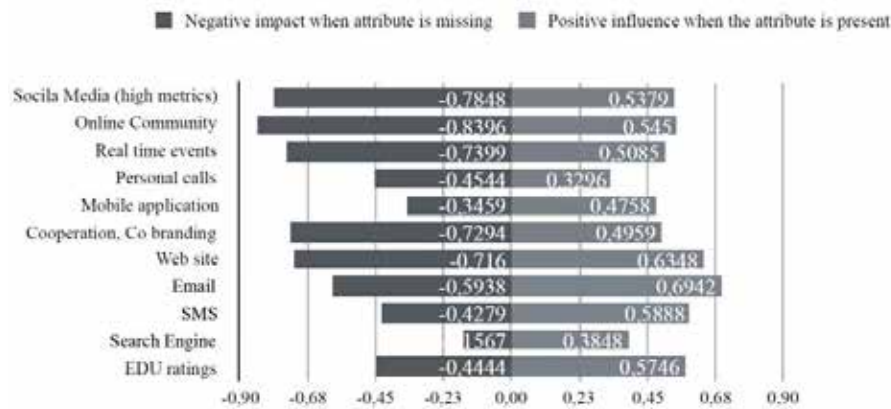


Fig. 5. Positive and negative impact of the identified attributes on the attitude of foreign students in Estonia

(bachelor's and master's students up to 37 years old to the perception of higher education institutions in the presence and absence of appropriate opportunities)

In the first group, bachelor's and master's students up to 37 years old, it was revealed that it is not so important how widely the university promotes itself in search engines (-0.15; 0.38), it is important that the university is active in social networks (-0.78; 0.53) and in the Online community building (-0.83; 0.54), as well as interacts with other universities and organizations both in real life and on the Internet (-0.72; 0.49) (See Fig. 6).

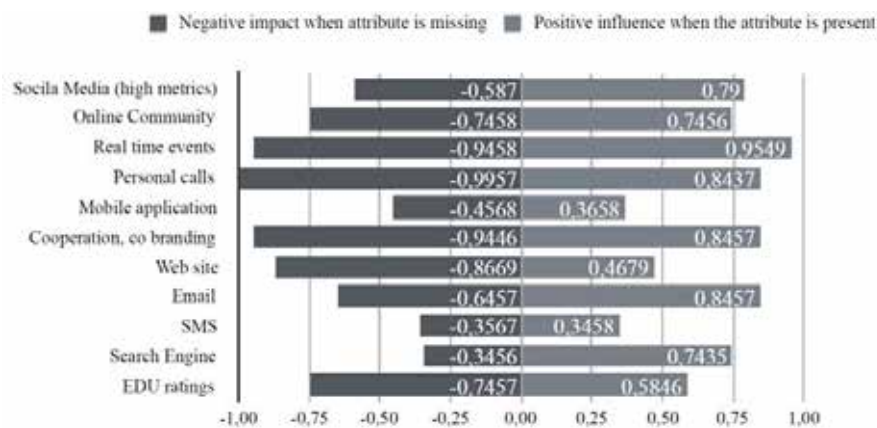


Fig. 6. Positive and negative impact of the identified attributes on the attitude of foreign students in Estonia

(doctoral students up to 37 years old (inclusive) to the perception of higher education institutions in the presence and absence of appropriate opportunities)

In the second group, which included doctoral students up to 37 years old, it was noted that alongside popular social networks (-0.99; 0.96), it should be easy to contact the university (-0.85; 0.73), the phone number should be easily found on the university's website, in social media accounts (See Fig.7).

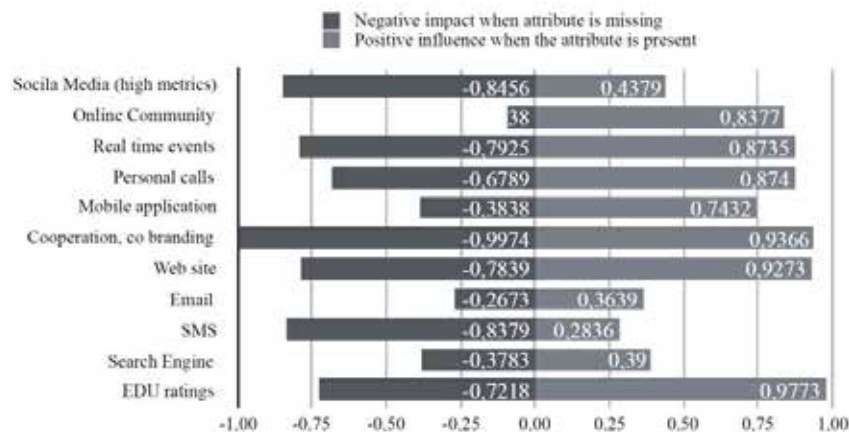


Fig. 7. Positive and negative impact of the identified attributes on the attitude of foreign students in Estonia

(bachelor's and master's students of the country is 37 years old) to the perception of higher education in the presence and absence of appropriate opportunities

For the third group of respondents (bachelor's and master's students over 37 years old), it was important that real events were held at the university (-0.94; 0.95) so that the university actively cooperated with partners (-0.94; 0.84) and engages with educational platforms, as well as promoted itself through educational ratings (-0.74; 0.58) (See Fig. 8).

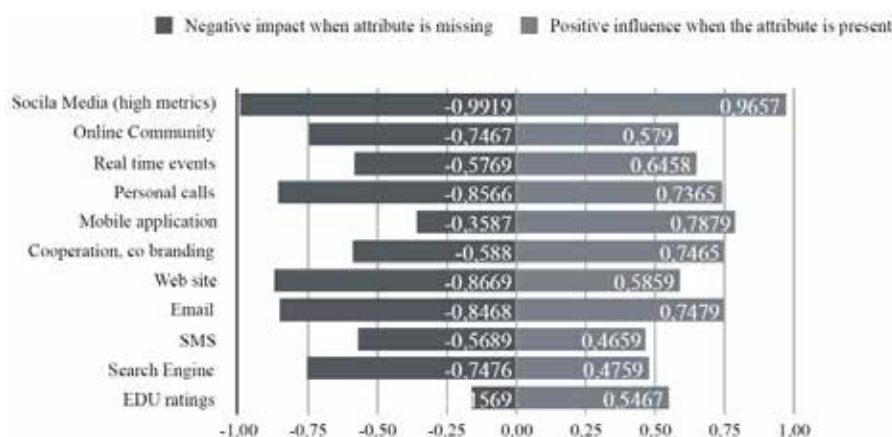


Fig. 8. Positive and negative impact of the identified attributes on the attitude of foreign students in Estonia

(doctoral students over 37 years old) to the perception of higher education institutions in the presence and absence of appropriate opportunities

For the fourth group of international students, doctoral students over 37 years old, the lack of an online community (-0.09) did not worsen the perception of the university, and the presence of real events (-0.79; 0.87), cooperation with other educational agents (-0.99; 0.93), a high ranking in educational ratings (-0.72; 0.97) and the presence of a popular website (-0.78; 0.92) were important attributes.

Discussion. As many researchers have mentioned, after the pandemic, universities have become more likely to use ICT to interact with students, especially those from abroad (Colfer, 2021; Radu, 2020).

However, despite this shift, real-life events at universities and the opportunity to make a phone call and speak to a real person remain relevant for some student groups. As shown in studies by Hung & Yen (2022), Hobson (2017), Ragini (2016), Cohen & Salaber (2015), Prabowo, Bramulya, & Yuniarty (2019), Vizcaya-Moreno & Pérez-Cañaveras (2020), and Sörensen et al. (2023), for most international students across all groups, a developed social media system and the ability to use specific social media communication attributes—such as hashtags, likes—are a priority.

Similarly, in studies by Fourie (2015), Ragini (2016); Cohen & Salaber (2015), it was found that international students value a university that is active not only online but also in real life.

The results of this study differ from previous research. For example, according to Fourie (2015), students most often used the university website (56.4%), friends (34.6%) and word of mouth (33.3%) when searching for university-related information. This study revealed that foreign students first check whether a university appears in educational rankings, then review the university's website, and examine reviews published in the intervention. Discussion with friends about the university ranked only sixth in importance.

The study by Capriotti, Carretón-Ballester, & Losada-Díaz (2024) supports the argument that universities must thoroughly analyze their target students and tailor messages using modern technologies. A more personalized message is necessary. Capriotti, Martínez-Gras, & Zeler (2023) found that despite the availability of numerous online communication methods and channels, universities often fail to consider the interests of prospective students. They do not actively engage their social media followers and tend to publish generic, monotonous content. These findings further confirm that the data obtained on the preferences of foreign students in Estonia can help universities enhance the communication strategies and make them more effective.

Conclusion. The purpose of the study was to identify the attributes and communication channels with the university that are important for foreign students in Estonia to facilitate more effective interaction between students and the educational organization. The study reveals that the university should build its marketing strategy for promotion and communication with students based on students' level of education, age, and gender. This will help the university convey messages to the target audience; the messages will be more personalized and easily understood by students. In turn, students will be able to interact with the university in a way that is convenient for them, without having to consider which social network or communication channel provides the most detailed and high-quality information. Also, in the future, the data obtained in this study will help universities refine student profiles for each communication channel, leading to more tailored communication strategies. The results of the research showed that, despite the popularity of online communication methods, different attributes and communication channels are prioritized for different groups of international students. This suggests that the university should consider these differences when designing communication strategies and online promotion.

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THE IMPACT OF THE SHARING ECONOMY ON TOURIST ACCOMMODATION PREFERENCES: A CASE STUDY OF SPAIN

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Abstract. This study aims to examine tourists’ preferences between traditional hotel accommodations and rental options like Airbnb, Vrbo, and HomeAway in Spain. The research will explore the key factors shaping these preferences within the framework of the sharing economy, focusing on aspects such as cost-effectiveness, convenience, location, safety, and overall experience. Ultimately, the research will contribute to the broader understanding of how the sharing economy is reshaping the global tourism industry, offering both opportunities and challenges for traditional and alternative accommodation providers. Additionally, it will assess the impact of cultural and regional differences, shedding light on whether international visitors and domestic tourists prioritise different aspects when selecting accommodations. The study’s conclusions may also inform marketing strategies, tourism infrastructure development, and regulatory policies aimed at balancing the needs of tourists, local communities, and service providers in an increasingly competitive and diversified marketplace.

Key words: sharing economy, C2C, accommodation, Airbnb, Spain

Introduction. The rise of the sharing economy has brought notable transformations to the tourism industry, especially in the accommodation sector. Platforms such as Airbnb, Vrbo, and HomeAway have challenged traditional hotel markets by providing tourists with alternative lodging choices. This study aims to explore these shifting preferences and their impact on the tourism industry within the sharing economy framework. Spain, known for its developed tourism infrastructure and innovative approaches, serves as an ideal setting for this research. The findings will offer valuable insights to guide tourism strategies in other countries, particularly Uzbekistan, in creating a more dynamic and competitive tourism sector.

Dolnicar, S. argues that the exchange of goods between non-commercial individuals (“ordinary” people) is not a new concept. Historically, people used public notice boards or classified ads in local newspapers for such transactions. Today, the internet has become the preferred platform, significantly improving the efficiency of these exchanges. Among these, the online trading of space has garnered the most attention. However, this is not “sharing” in the sense of the “sharing economy,” as buyers are paying for temporary access to someone’s space. Likewise, it is not “collaborative consumption,” since no joint effort or collaboration is involved in the process [4].

Gössling, S., & Hall, C. M. note that in recent years, digital platforms have become key players in the global sharing economy, transforming corporations like Airbnb, Booking, and TripAdvisor into intermediaries that control and profit from most transactions. This paper focuses on the accommodation sector and conceptualises the sharing economy in relation to the broader collaborative economy.

It examines the social, economic, environmental, and political impacts of both models, particularly in the context of the Sustainable Development Goals. The study concludes that while the sharing economy has significant potential to contribute to sustainability, it is increasingly being supplanted by the collaborative economy, which accelerates and extends neoliberal economic practices [5].

Basic theoretical and practical provision. Tourists are not merely passive elements within their environments; rather, they are active participants who shape and create their social experiences. As co-creators of their individual journeys, the value they perceive arises not from a specific product or object, but from the experience of consumption itself. This concept of co-creation is grounded in service-dominant logic, which posits that value is realized only when consumers engage with the service that a product is intended to deliver, as mentioned by Amore, A., de Bernardi, C., & Arvanitis, P. [2].

According to Zhang, G., Cui, R., Cheng, M., Zhang, Q., & Li, Z., if consumer-to-consumer (C2C) interactions develop into relationships, their impact on consumer behaviour could be significantly deeper. Additionally, individuals possess varying motivations, personalities, interpersonal skills, past experiences, and other personal differences that can influence their travel behaviour and participation in activities. This highlights the importance of the social dimension in examining tourist behaviour [16].

A significant portion of growth, as noted by Hall, C.M., Prayag, G., Safonov, A., Coles, T., Gössling, S., Koupaei N., in the sharing or platform economy is fuelled by peer-to-peer (P2P) accommodation providers like Airbnb. Existing literature presents arguments for both the positive and negative socio-cultural, economic, and environmental effects arising from tourism and hospitality businesses reliant on Airbnb and similar online platforms. These impacts include competition with traditional business models (such as hotels, motels, and bed-and-breakfasts) and their influence on tourist and visitor flows. Additionally, the spatial effects of these accommodations have led to considerable community opposition against Airbnb in certain destinations [8].

Adamiak, C. notes that there have been high expectations for the sharing economy to establish a new business model centered around peer-to-peer (P2P) exchanges of underutilized assets. This model was anticipated to greatly contribute to sustainability by creating new entrepreneurial opportunities, promoting more sustainable resource use, and fostering consumer cooperation within tight economic networks. However, in recent years, digital platforms have emerged as the dominant players in the global sharing economy, transforming corporations like Airbnb, Booking, and TripAdvisor into intermediaries that control and profit from the majority of transactions [1].

According to Baute-Díaz, N., Gutiérrez-Taño, D., & Díaz-Armas, R. J., the digitalization of the economy has reduced the distance in economic exchanges between service providers and their users, significantly impacting value and supply chains, capital structure and concentration, and the associated market power. This transformation has also altered the nature of service provision [3].

Travelers are motivated by a desire for deeper social interactions with locals and unique experiences in authentic environments, leading them to travel more frequently, extend their stays, and engage in a greater variety of activities. Additionally, lower accommodation costs enable travelers to explore destinations, trips, and tourism activities that would typically be beyond their financial reach. The study also offers insights for tourism planning and management [13].

Guttentag, D mentioned that the principles of disruptive innovation are applied to analyse Airbnb's innovative business model, which leverages modern internet technologies. Airbnb's unique appeal lies in its cost savings, home-like amenities, and the opportunity for more genuine local experiences. However, despite its increasing popularity, many Airbnb rentals violate short-term rental regulations and are therefore considered illegal [7].

Instead, paid online peer-to-peer accommodation trading involves a non-commercial provider (host) offering space for short-term stays directly to an end user (guest). While numerous companies have tried to effectively facilitate this type of trading, only three—Airbnb, HomeAway, and Booking.com—have emerged as major global players in the market, as discovered by Gutiérrez, J., García-Palomares, J. C., Romanillos, G., & Salas-Olmedo, M. H. [6].

According to Phua, V. C., regardless of how it is defined, the rise of globally dominant platform-based intermediaries like Airbnb, Booking.com, and Uber has fundamentally transformed interactions and relationships among participants in the tourism system. This shift has been notably disruptive, with Airbnb frequently regarded as having one of the most significant impacts on the accommodation sector and various destinations [10].

Attitudes towards peer-to-peer (P2P) accommodation can be categorized into two groups. The first group views P2P accommodation as a threat to tourism. This perspective is generally supported by the accommodation sector and governments, which criticize P2P models for creating unfair competition, undermining job security, evading taxes, and posing safety risks (Juul, 2015). Conversely, start-ups and travelers tend to have a more positive outlook on P2P accommodation, emphasizing its potential to create employment opportunities, offer affordable lodging, and encourage longer stays for tourists, as noted by Salar Kuhzady, Siamak Seyfi & Luc Béal. [12].

Quattrone, G., Kusek, N. & Capra, L. A., note that despite its benefits, the sharing economy faces several challenges. Trust and safety concerns can emerge when strangers engage with one another and share personal spaces or services. Regulatory compliance is another issue, as the sharing economy disrupts traditional industries and frequently operates in a legal grey area. Additionally, it has been criticized for worsening socio-economic inequalities and potentially displacing certain workers and businesses [11].

Evaluation of research results. The research was conducted over several months in 2024 in Spain, covering cities such as Girona, Lloret de Mar, Calella, Mataro, Barcelona, Sitges, Salou. Respondents were selected based on several factors, such as being active travelers, age, cultural background, geographic location, and so on. The main target of the research was people aged over 18 years old, who frequently travel and visit new places, and who are familiar with the concept of the sharing economy. Respondents were provided with an online survey. Hypotheses of the research are as follows: Tourists' preferences between traditional hotels and rental accommodations in the sharing economy are shaped by a combination of factors, including cost, convenience, flexibility, cultural preferences, and perceived authenticity. These factors vary across demographics such as age, income, and nationality. Peer-to-peer platforms, like Airbnb, are increasingly favored due to their adaptability to diverse tourist expectations, especially in terms of personalized experiences, accessibility, and sustainability. For some respondents, printed surveys were provided for added convenience. Approximately 400 surveys were distributed, and 300 responses were received. The research is based on these 300 responses. The questionnaire consisted of the following sections: The first part included demographic questions. The next part focused on travel habits, such as how often respondents travel, the duration of their trips, and the purpose of their travel. The following section asked about preferred types of accommodation and the factors influencing their choice. The subsequent part explored the influence of social media on accommodation choices. The closing section included questions about the sharing economy and its usage. A special section was added for respondents' comments and suggestions, which were used to formulate recommendations at the end of the research.

The research aims to explore the factors influencing tourists' preferences between hotel accommodations and rental options within the sharing economy. Initial findings indicate that both men and women favour rental accommodations, with slightly higher preferences among women (61.1%) compared to men (50%). The study also examined how annual income affects accommodation choices. Participants with annual incomes ranging from €20,000 to €80,000 predominantly preferred rental accommodations over hotels. In contrast, those with annual incomes below €20,000 typically chose hotels. Hostel stays were the least popular option, chosen by only 6.3% of participants, all of whom had incomes under €20,000, which aligns with their financial situation.

Further analysis looked at how nationality influences accommodation choices in Spain. Participants from Spain, France, and the UK provided the most responses. Among them, Spanish participants

showed a strong preference for rental accommodations like Airbnb, with 59.6% favouring this option. French participants followed with a preference of 55% for rental accommodations, while UK participants tended to prefer hotel stays, with 50% choosing this option. Age also played a role in accommodation preferences. Participants aged 18 to 55 were more inclined to choose rental options such as Airbnb, which is expected given that younger travellers often prefer these types of accommodations. The only group favouring hotel stays was participants over 66 years old. The duration of stay did not significantly influence accommodation choices, as most participants still preferred rentals over hotels and hostels. However, the amount participants were willing to spend did have an impact. Those willing to pay more than €200 per night generally preferred hotels, while 70% of participants willing to spend less than €200 opted for rental accommodations. Satisfaction levels were notable, with 57% of participants who had stayed in rental accommodations expressing satisfaction. Key factors influencing the preference for rentals over hotels included price, location, kitchen availability, service level, convenient booking, and safety. When selecting accommodations, participants prioritized reviews from other guests, descriptions of amenities, and overall accommodation ratings.

See Fig. 1.

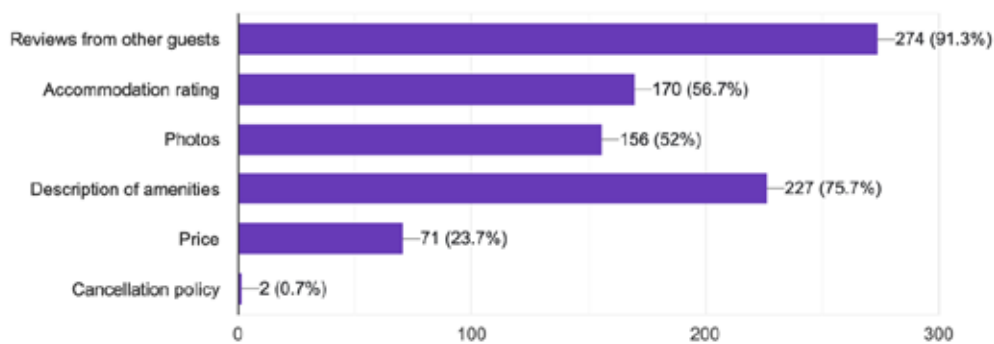


Fig. 1. Information influencing the choice of accommodation (by the authors)

The main question was whether participants, after their experience, would use rental accommodations again or plan to use them in the future. 55.8% of participants (aged 18–55) are willing to use rental accommodations in the future. The other group of participants, aged between 56 and above, shows slightly different statistics. In this group 60.9% of respondents are positively looking towards future experiences.

See Fig. 2.

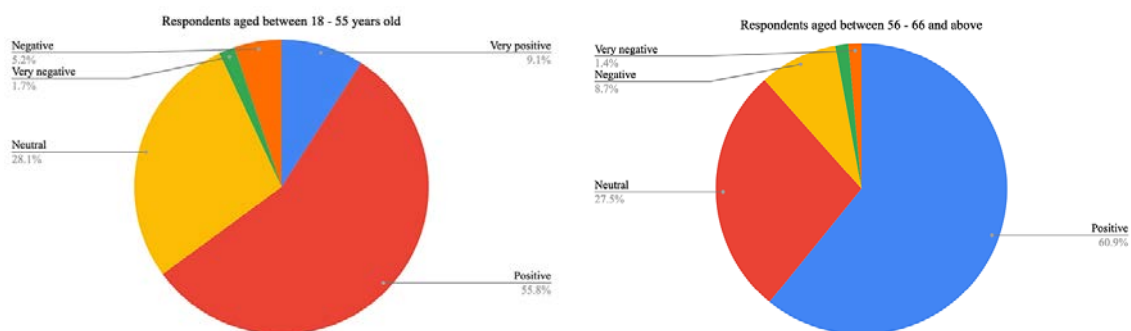


Fig. 2. Willingness of participants to use rental accommodation in the future (by the authors)

As clearly shown in the figure, participants are positively inclined towards C2C rental accommodation options and happy to use them. Based on the comments and suggestions provided by participants during the research, the authors have proposed several recommendations to improve the market situation. These recommendations include:

- Offer multilingual customer service and materials to cater to international tourists.
- Implement a mobile app or platform that provides real-time updates on bookings, local events, and emergencies.
- Encourage guests to participate in a “clean stay” program with incentives for maintaining cleanliness during their stay.
- Invest in advanced security systems, including surveillance cameras and secure access controls in accommodations.
- Collaborate with local law enforcement to ensure a visible presence and quick response capabilities.
- Equip rentals with smart home devices (e.g., smart locks, thermostats, lighting) for enhanced convenience and security.
- Ensure rental agreements include a detailed breakdown of all costs, including utilities and maintenance fees, to avoid hidden charges.
- Provide detailed listings that include descriptions, amenities, and nearby attractions with high-quality images.
- Offer virtual tours of accommodations to give potential guests a realistic view of the space.
- Explore dynamic pricing strategies that adjust rates based on demand, seasonality, and booking trends.
- Encourage guests to share their own photos and experiences, showcasing the reality of the accommodations.
- Establish a routine maintenance schedule for all amenities to ensure they are in excellent working condition.
- Provide options for guests to upgrade amenities (e.g., premium bedding, kitchen appliances) for an additional fee.

Conclusion. This study provides valuable insights into the factors influencing tourists’ preferences between traditional hotels and rental accommodations within the sharing economy in Spain during the summer of 2024. The findings suggest that rental platforms like Airbnb, Vrbo, and HomeAway are increasingly favored by tourists, particularly those aged 18– 55 and those with middle-to-high annual incomes. Key factors driving this preference include cost-effectiveness, location convenience, kitchen availability, and service flexibility, with women showing a slightly higher inclination towards rentals than men. Additionally, Spanish and French participants showed a stronger preference for rentals compared to their UK counterparts, indicating that cultural and regional differences play a role in accommodation choice.

The research highlights the growing importance of peer-to-peer accommodation in tourism, especially as younger generations prioritize authentic, home-like experiences over conventional hotel stays. However, the study also points out challenges that need to be addressed such as safety, service quality, and transparency in pricing. By offering solutions such as multilingual customer support, smart home devices, and virtual tours, rental providers can enhance their appeal and ensure long-term sustainability in the market. These findings are not only relevant to Spain but may also inform tourism strategies in other countries, offering a comprehensive framework for balancing the needs of tourists, local communities, and service providers in the increasingly competitive accommodation sector.

Future research will extend this study to two additional countries, Latvia and Uzbekistan, through similar surveys. The broader scope of this research will allow for a comparative analysis of tourist preferences across different cultural and regional contexts, providing a more comprehensive under-

standing of how the sharing economy impacts diverse tourism markets. This expanded study will offer significant insights into global consumer behavior, helping policymakers and service providers adapt their strategies to meet the evolving demands of both domestic and international travelers.

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SOCIAL MEDIA METRICS AS AN INDICATOR OF UNIVERSITY RANKINGS AND THEIR SIGNIFICANCE IN FOREIGN STUDENT ENGAGEMENT IN THE BALTIC COUNTRIES

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Abstract. Universities play an important role in expanding intellectual capital, particularly in the context of implementing international educational policies. Attracting international students is necessary for expanding educational opportunities and fostering expertise, innovation, and constructive partnerships. One effective method for attracting foreign students and enhancing engagement is the analysis of social media metrics.

This research aims to determine whether the growth of social media fans and interactions, particularly on Facebook, correlates with an increase in foreign student enrollment and university rankings.

The result of this research shows that social media metrics on Facebook can be categorized as stable and unstable. A stable metric, the “Fans” indicator, is dependent on university ratings, as evidenced by comparisons between leading universities with high numbers of foreign students and universities in the Baltic countries, regardless of the cluster. Unstable metrics, such as Page Performance Index, Follower Growth, and Post Interaction, do not correlate with the university rating and tend to be more volatile. To develop an effective social media promotion strategy for international students, universities must consider distinct categories of social media metrics.

Key words: Social media, foreign students, universities, metrics, marketing, the Baltic States

JEL Classification: M31, M39, O32.

Introduction. The introduction of modern social media marketing technologies, which are currently widely used in universities providing educational services, can significantly enhance the potential for development. However, many universities, when implementing policies to attract and promote themselves to foreign students, overlook social media analysis and prioritize educational ratings, disregarding the correlation between high social media metrics and foreign students. Universities, public institutions, and enterprises in the Baltic States develop and implement programs, projects, and activities aimed at increasing the economic impact and expanding educational infrastructure. This contributes to the integration of the country into the international educational network. As a result of the activities of educational institutions providing educational services, the

number of foreign students has been steadily increasing each. Thus, social media data can serve as an important resource for customer analysis, market research, crowdsourcing new ideas, data collection, and value creation.

Accordingly, in a world where higher education is competitive, this is a crucial problem for educational institutions to attract more students seeking educational degrees. The increasing number of higher education institutions in recent years has intensified competition. Universities face intense competition for potential students. Therefore, leveraging resources, branding, and a strategic marketing approach—particularly through social media—is essential for higher education institutions. Since universities vary in student populations and other characteristics, employing a clustering method in marketing analysis enables more accurate comparisons.

Literature review. Significant studies indicate that social media is an important tool for future student growth. Social Media Metrics assess the effectiveness of interactions, which play a significant role in attracting students and significantly impact the modern socio-economic sphere. (Yu, S., Draghici, A., Negulescu, O. H., & Ain, N. U. 2022). Zehrer and Grabmüller (2012) demonstrated that students use Facebook most of all to communicate with each other and their university (Zehrer, A., & Grabmüller, A., 2012; Yohanna, 2020). Akar and Topcu, in their analysis, found that the majority of respondents at an academic institution used not only Facebook, but also YouTube, among other social media platforms (Akar, E., & Topçu, B., 2011; Biczysko & Jabłońska, 2016). Despite the emergence of new social media platforms, students and universities continue to use these platforms predominantly. This is confirmed by a wide range of studies (Li, F., Larimo, J. & Leonidou, L.C., 2021; Sobaih, A. E. E., Hasanein, A. M., & Abu Elnasr, A. E., 2020; Hosen, M., Ogbeibu, S., Giridharan, B., Cham, T.H., Lim, W.M., & Paul, J., 2021). In the findings by Olaleye, S., Ukpabi, D., & Mogaji, E. (2020), the authors have found that most universities in African countries use Facebook as the communication tool to promote, collaborate, and interact with students. Hence, it is the best marketing tool being utilized.

The swift expansion and diversity of social media platforms, especially Facebook (Mariappan, N., & Md Saad, N. H. 2023), being the top choice among young adults and youth, indicates that prospective college and university attendees will be receptive of organizations utilizing tools for recruitment purposes. These findings were supported by Maresova, P., Hruska, J., & Kuca, K. (2020) and Chugh, R., & Ruhi, U. (2018). With respect to YouTube, findings by Pham, Hiep-Hung and Farrell, Kelly and Vu, Huyen-Minh, and Vuong, (2017) indicate that, generally, colleges and universities follow both for information content and appeal messages on YouTube, independent of the institution's place outside of the top 500 or under in the worldwide rankings, or place of cultural origin. The degree of interactive openness in using YouTube's two-way communication platform is still under consideration, with cultural background and global rankings playing a significant role.

Prospective foreign students often use social media to explore international education opportunities, seeking information on university's prestige, cost, location, and promotional activities, as supported by Rekhter, N., & Hossler, D. (2019). A questionnaire was conducted to determine key factors influencing potential transfer students. In their study, numerous research has examined how international students utilize Facebook to create social media prior to attending an overseas college. Therefore, it is imperative for higher educational institutions to use Facebook and YouTube as resources. It can be concluded that Facebook and YouTube are among the most widely used social media platforms for prospective students seeking information. Research done by Bentley-Steyn, L. (2019), Facebook ranks among the top six social media platforms consulted by students, yet it ranks eighth when compared to other non-social media resources. YouTube, on the other hand, follows closely behind Facebook in perceived usefulness. In addition, most youth have social media accounts, particularly on Facebook and/or YouTube, Research by Intan and Balqiah (2020) indicates that nearly all international student participants, mainly from Asia and some from Europe, have a Facebook account, while approximately half use YouTube.

Study findings suggest that Facebook advertising is highly effective (Buljat, B., Babić, A., & Čapko, Z., 2020). Social media improves stakeholder engagement, sales, customer relationships, satisfaction, and new customer acquisition (Dwivedi, Y. K., Ismagilova, E., Rana, N. P., & Raman, R., 2023). Additionally, social media interactions with customers provide companies with the chance to cultivate a deeper sense of identity. Thus, social media communication has an impact on customer perceptions fostering deeper consumer engagement and participation (Appel, G., Grewal, L., Hadi, R., & Stephen, A. T., 2020).

Facebook, YouTube, and Instagram were utilized by almost all institutions studied by Hyder, A. S., Lilja, A., & Paag, J. (2019). Their research showed the platforms used depended on the nations where marketers and communicators targeted their audiences. Universities are reaching out to a wider audience and prospective students by using multiple platforms. However, although Facebook is the most popular social media platform, it has drawn criticism for its constantly evolving nature, which makes it challenging to maintain and modify connections with students. (Mazzucchelli, A., Chierici, R., Di Gregorio, A., & Chiacchierini, C., 2021).

The framework in which higher educational institution utilize social media can exacerbate the importance of building relationships with students. Subsequently, providing a foundation for marketing opportunities amongs peers (Jain, V., Mogaji, E., Sharma, H., & Babbili, A. S., 2022). According to Cao, D., Meadows, M., Wong, D., & Xia, S. (2020), social media moderates engagement intention, which, in turn, influences engagement behavior. Hence, in a competitive market, social media contextual elements have the power to implicate many stakeholders and shape their behavior, which benefits competitors seeking to influence stakeholders. Managers utilize comparable strategies to promote higher education institutions on social media. The most well-liked resources for marketing managers in both nations were Facebook, YouTube, and other blogs from higher education institutions (administration, instructors, celebrities, and marketing departments). For example, research has shown that marketing managers in Ukraine use more technologies than their Polish counterparts to promote higher education events on social media (Kisiołek, A., Karyy, O., & Halkiv, L., 2021).

Potential students who follow a university on Facebook are exposed to the institution's social media content, which increases their likelihood of considering the university when they interact with it (Valand, J. B., & Gaur, A., 2020; Ahmadi, Y., 2019). One of the study's key findings is that social media popularity is the most significant factor in influencing potential students and university recruitment. The relationship between engagement with academic content and social media popularity is another important result. The findings indicate that the two factors together have a major impact on university recruitment. This indicates to managers of education marketing initiatives that investing in the production and promotion of interesting content will yield positive results.

This study aims to confirm or refute the hypothesis that a university's ranking in terms of foreign student enrollment correlates with its social media performance, indicating an effective engagement policy with international students. Hence, the purpose of the study is to identify metric indicators in the social media of universities in the Baltic countries and their connection with their place in the educational rankings and whether there is a significance in interface with students and its connection to growth.

Method. Using significant clustering variables—namely, the number of international students and the national ranking position for 2021-2022—fourteen world-ranked institutions from the Baltic States were included in the analysis. The variable 'total of international students' characterizes the demand for the university among applicants from abroad and can also characterize the size of the university. However, a more precise and important factor is the one that reflects the quality of a university – its ratings. A global performance table that rates and evaluates research universities is known as the Times Higher Education World University Rankings. Based on the perspectives of students, academics, university administrators, corporations, and the governments, thirteen performance indicators are

used in the assessment (Times Higher Education, 2021). The indicator “Number of foreign students” provides the information on the university’s recognition, attractiveness, ease of communication, and effectiveness of its marketing strategy for attracting international students. The criterion “position in the global ranking among universities with the highest number of foreign students” measures the degree of intercultural communication, interaction, and trust in the university’s reputation as well as the quality of education.

It is suggested to examine the factors that determine the order in which clusters form and their optimal number by applying the hierarchical algorithm using the Statistical Package for the Social Sciences, or SPSS, software.

Using analysis of variance (ANOVA) and the “Cluster analysis” data processing module in statistical systems, a second factor selection procedure was conducted. The study considered several clustering possibilities during its analysis. The distribution of universities into four clusters was the most practical approach. Cluster analysis was conducted in several stages:

1. A hierarchical agglomerative clustering algorithm was used. The Euclidean distance was employed as the measure of distance between objects, as shown formula (1):

$$p(x_{ij}) = \sqrt{\sum (x_{il} - x_{jl})^2} \quad (1. \text{ Charrad, M., Ghazzali, N., Boiteau, V., \& Niknafs, A., 2014})$$

where i and j are indicators.

Centers of clusters. The k-means method, based on Euclidean distance, takes as input a dataset ‘x’ with ‘n’ points and a parameter ‘k’ that specifies the number of clusters required. The result is a set of K cluster centroids, with labels assigning each point in the dataset ‘x’ to a specific cluster. Within a given cluster, every point is closer to its centroid than to any other centroid. Next, calculations are performed using formula (2):

$$J = \sum_{k=1}^M \sum_{i=1}^N \|x_i - c_k\|^2 \quad (2. \text{ Charrad, M., Ghazzali, . N., Boiteau, V., \& Niknafs, A., 2014}),$$

where x is the clustering object; c is the cluster center (centroid).

The indicators that used to evaluate the influence of components in the clustering process include cluster centers, the distance between clusters, the distance between each item and the center of the cluster, and the results of variation analysis (ANOVA). The interdependence of clusters is reflected in the distances between them; with a new distribution, neighboring clusters may merge to form new clusters or cluster groups. The results for universities in the Baltic countries are compared with leading institutions in terms of the number of international students, using lower and upper thresholds corresponding to the minimum and maximum input values from the dataset.

Quantitative social media metrics were obtained by analyzing data from the following online analytics platforms: Fanpage Karma and Facebook Analytics. Key and available social media indicators for the period 2021–2022 were used.

Results. Social media metrics are indicators of effective interaction between a university and students, including foreign students. The study used standard metrics for Social Media Analysis: Facebook (Table 1).

The following section examines social media metrics for these universities, providing benchmark data for universities with lower rankings in the Times Higher Education World University Rankings.

The analysis of Social Media Metrics indicators for universities within a cluster allows for a more precise comparison of data and an evaluation of how universities’ marketing strategies influence student engagement and institutional growth. This study examines Social Media Metrics of universities in the Baltic States for the academic year 2021–2022. Nevertheless, complete data for 2023 is not yet

Table 1

Social Media Metrics Indicators

Name	Description
The Page Performance Index	Average user engagement and audience growth.
Post Interaction	The average number of all interactions, including comments, likes, and shares
Posts per Day	The average number of posts published per day
Fans	Total number of subscribers
Follower Growth	Increase in the target audience as a percentage

available. Given that almost all universities have profiles on facebook, YouTube, and Instagram, these platforms were chosen based on a review of scientific research and their popularity.

Table 2 presents the Top 5 Universities in the Organization for Economic Cooperation and Development countries with the highest percentage of international students.

Table 2

Leading Universities in International Student Enrollment (2022)

Institution Name	Country	International Students	World University Ranking
London Business School	United Kingdom	91%	126-150
Near East University	Northern Cyprus	86%	801-1000
Central European University	Austria	78%	301
Eastern Mediterranean University	Northern Cyprus	78%	501-600
Jacobs University Bremen	Germany	78%	401-500

Table 3

Facebook, 01.01.2022 – 31.12.2022 compared with 01.01.2021– 31.12.2021

Name	Country	Page Performance Index		Fans		Follower Growth		Post Interaction		Posts per day	
		2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021
Central European University	Austria	24%	32%	56,143	3.5%	3.5%	-0.38	0.44	-0.36	0.9	-25%
Jacob University Bremen	Germany	24%	30%	36,000	17%	17%	10.44	0.14	-0.2	0.3	-44%
Eastern Mediterranean University	Cyprus	17%	17%	191,903	3%	3%	-0.73	0.28	0.12	1.7	60%
London Business School	UK	10%	0	336,618	1.8%	1.8%	-2.41	0.24	0.20	0.4	-32%
Near East University	Cyprus	40%	-	441,106	5.2%	5.2%	-1.35	0.15	0.3	0.5	-38%

At Jacobs University Bremen, the number of Followers Growth (%) is increasing quickly. Jacobs University Bremen led in this category year ago. London Business School was the leader in the category of subscribers, despite a decline in other performance indicators over the past year. Near East University overtook Central European University in the Page Performance Index during 2021–2022.

The majority of postings written on a daily basis are likely not particularly popular, as seen by the fact that the university's indicators have hardly grown. Among all institutions, Central European University posts the most frequently, yet Jacobs University Bremen leads in Follower Growth (%) and Post Interaction, demonstrating that quality engagement is more impactful than posting frequency alone (Table 3).

Universities in the Baltic countries enroll fewer international students and hold lower positions in global rankings (Table 4). It was essential to classify all the research objects based on specific criteria in order to examine and contrast the operations of higher education institutions in the Baltic States.

Table 4

Position in the Global Ranking

University	2020	2021	2022
Rīga Stradiņš University	Not ranked	Not ranked	501-600
Vytautas Magnus University	Not ranked	1001	1201
Tallinn University	801-1000	801-1000	1001-1200
Riga Technical University	1001	1001	1001-1200
Lithuanian University of Health Sciences	Not ranked	Not ranked	601-800
Tallinn University of Technology	801-1000	801-1000	601-800
Estonian University of Life Sciences	Not ranked	Not ranked	801-1000
Vilnius Gediminas Technical University	1001	801-1000	1001-1200
University of Tartu	301-350	251-300	251-300
Vilnius University	801-1000	801-1000	801-1000
Estonian Academy of Arts	Not ranked	Not ranked	1201
Kaunas University of Technology	1001	1001	1201
University of Latvia	801-1000	601-800	601-800
Latvia University of Life Sciences and Technologies	1001	1001	1201

The official data for the total number of students (2020–2022) and the percentage change are presented in Table 5; the increase in indicators practically across most Baltic State institutions is displayed.

Table 5

Clusters by Share of International Students (2021–2022)

University	Clustering by Share of International Students (2021)				Clustering by Share of International Students (2022)				% Change comparing 2021-2022)
	Students (2021)	Foreign Students (2021)	% Foreign Students (2021)	Cluster	Students (2022)	Foreign Students (2022)	% Foreign Students (2022)	Cluster	
Rīga Stradiņš University	-	2,556	-	1	8083	2,344	29%	1	-
Vytautas Magnus University	8,269	1,240	15%	4	7,328	1,466	20%	4	18.2%
Tallinn University	4,506	586	13%	3	4,062	722	19%	3	31.7%
Riga Technical University	11,134	1,336	12%	3	10,515	1,893	18%	3	41.7%

Table 5 (continuance)

Lithuanian University of Health Sciences	-	-	-	1	6,720	1,142	17%	1	-
Tallinn University of Technologies	9,437	1,321	14%	1	9,162	1,466	16%	1	11%
Estonian University of Life Sciences	-	-	-	2	2,285	197	13%	2	-
University of Tartu	9,328	1,119	12%	1	9,164	1,100	12%	1	-1.7%
Vilnius Gediminas Technical University	8,735	874	10%	3	9,087	1,090	12%	3	24.7%
Vilnius University	1,6470	1,647	10%	2	16,815	1,513	9%	2	-8.1%
Estonian Academy of Arts	-	-	-	4	1,210	97	8%	4	-
Kaunas University of Technology	9,587	575	6%	4	9,060	725	8%	4	26.1%
University of Latvia	12,007	840	7%	1	12,054	844	7%	1	0.5%
Latvia University of Life Sciences and Technologies	3,880	78	2%	4	3,891	156	4%	4	100%

The Estonian Academy of Arts, the Lithuanian University of Health Sciences, and the Estonian University of Life Sciences appeared in global rankings for the first time in 2022.

Since the global educational ranking includes a large number of different universities in the Baltic countries, a cluster analysis was conducted to facilitate more effective comparison of university data. During the study, four clusters were identified and are presented in Table 6.

Table 6

Distribution of Universities According to Clusters

Cluster	University
1	1. University of Tartu 2. Rīga Stradiņš University 3. Lithuanian University of Health Sciences 4. Tallinn University of Technology 5. University of Latvia
2	1. Estonian University of Life Sciences 2. Vilnius University
3	1. Tallinn University 2. Riga Technical University 3. Vilnius Gediminas Technical University (Vilnius Tech)
4	1. Vytautas Magnus University 2. Kaunas University of Technology 3. Latvia University of Life Sciences and Technologies 4. Estonian Academy of Arts

From these data sets, it can be observed that, year after year, the clusters remain the same. The “position in the global ranking” reflects trust in the university’ brand, the quality of education, the level of intercultural interaction and communication.

The analysis of each cluster for the Social Media Facebook page is presented below, including indicators from Table 1.

Analysis of Social Media Metrics Indicators

Cluster 1

The activities of universities in each cluster on Facebook were analyzed in Table 7.

Table 7

Facebook, 01.01.2022 -31.12.2022 compared with 01.01.2021-31.12.2021

Name	Country	Page Performance Index		Fans		Follower Growth		Post Interaction		Posts per day	
		2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021
University of Latvia	Latvia	61%	-4%	2,487	6.6%	6.6%	-0.9	0.77	0.6	1.1	-49%
Rīga Stradiņš University	Latvia	67%	-10%	21,000	5.2%	5.2%	-0.8	0.46	-0.08	0.8	-15%
Lithuanian University of Health Sciences	Lithuania	42%	-2%	23,660	6.1%	6.43%	-4.97	0.20	-0.6	0.60	47%
Tallinn University of Technology	Estonia	24%	-6%	26,390	3%	3%	-2.7	0.11	-0.7	0.4	-7.5%
University of Tartu	Estonia	57%	-3%	22,806	4.9%	5.07%	-0.7	0.39	-0.7	0.5	-10%

Riga Stradiņš University has a higher audience engagement rate than other universities in this cluster. The target audience actively responds to the published content but does not subscribe to the Facebook page. In 2021, Riga Stradiņš University published content more frequently than in 2022. However, the Lithuanian University of Health Sciences saw the largest increase in subscribers along with good engagement rates. In 2021, almost all indicators were higher than in 2022. In terms of engagement, Tallinn University of Technology has low indicators but a large number of subscribers. However, subscriber growth is very low. It can be concluded that the university attracted subscribers earlier in 2020, and then actively published content. The University of Tartu has quite high engagement rates, and the number of subscribers is increasing rapidly. The indicators of the University of Latvia in 2022 also decreased, even though the reaction rate to posts went higher. Perhaps the university publishes content selectively, as the number of posts per day has decreased dramatically, yet the engagement rate has improved.

Cluster 2

Like Facebook, Follower Growth dedeclined for four universities. In the second cluster, universities saw an overall increase in fans in 2022, with the Estonian University of Life Sciences being the only institution to improve its post-interaction rate (Table 8).

Table 8 presents the analysis of two universities based on their Facebook performance. It can be observed that Vilnius University outperformed the Estonian University of Life Sciences. For instance, Fans growth for Vilnius University increased slightly more than that the Estonian University of Life Sciences. Furthermore, Vilnius University had a less negative percentage rate in post interaction on Facebook compared to 2021. Additionally, it the number posts per day for Vilnius showed a positive growth rate of 22%, whereas the Estonian University of Life Sciences experienced a decline of 40%.

Table 8

Facebook, 01.01.2022 -31.12.2022 compared with 01.01.2021-31.12.2021

Name	Country	Page Performance Index		Fans		Follower Growth		Post Interaction		Posts per day	
		2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021
Estonian University of Life Sciences	Estonia	28%	-12%	12,498	5.3%	5.3%	-1.33	0.37	0.3	0.3	-40%
Vilnius University	Lithuania	52%	11%	70,251	5.7%	5.7%	-12.18	0.16	-0.11	1.6	22%

Cluster 3

Within the third cluster, all universities experienced a decline in Follower Growth and Post Interaction Indicators in 2022 (Table 9).

Table 9

Facebook, 01.01.2022 -31.12.2022 compared with 01.01.2021-31.12.2021

Name	Country	Page Performance Index		Fans		Follower Growth		Post Interaction		Posts per day	
		2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021
Riga Technical University	Latvia	69%	1%	19,045	8.4%	8.4%	-1.55	0.18	-0.9	2.4	75%
Tallinn University	Estonia	30%	-6%	26,390	2.3%	3.5%	-2.09	0.13	-0.7	0.2	-49%
Vilnius Gediminas Technical University (Vilnius Tech)	Lithuania	32%	-7%	36,000	3.4%	3.4%	-0.62	0.20	0	0.4	-41%

In cluster 3, Riga Technical University demonstrated the highest development rates on its Facebook page. Compared to 2021, in 2022 most indicators improved, except for subscriber growth.

Regarding the Facebook Performance Index for all three universities, Riga Technical University led with an impressive 69%, significantly outperforming the other universities. Fan Growth also increased by 8.4%, the highest among the three institutions. Tallinn University had the lowest page performance index increase (30%), and its post-per-day rate decreased by 49%, the largest drop among all universities. Vilnius Gediminas Technical University (Vilnius Tech) also experienced some improvements but faced a 41% decline in post-per-day frequency.

Cluster 4

Cluster 4 shows positive trends, with three out of four universities increasing Fans and Follower Growth. No data is available for the Latvian University of Life Sciences and Technologies. However, the Estonian Academy of Arts and Vytautas Magnus University show a decline in post-interaction (Table 10).

Rīga Stradiņš University, part of the first cluster, ranked 501-600 in 2022 but absent from the educational rankings in 2021 and 2020, shows positive growth in Facebook metric on compared to 2021, when the indicators were lower. Page Performance Index 9%, Follower Growth 5.2%. Even though this university has the highest rating in this cluster, its metrics are lower than those of the Lithuanian University of Health Sciences and the University of Latvia. The Lithuanian University of Health

Table 10

Facebook Metrics: Comparison Between 01.01.2022–31.12.2022 and 01.01.2021–31.12.2021

Name	Country	Page Performance Index		Fans		Follower Growth		Post Interaction		Posts per day	
		2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021	2022	Compared with 2021
Estonian Academy of Arts	Estonia	36%	-1%	12,403	7%	7%	0.43	0.12	-0.3	0.80	-19%
Kaunas University of Technology	Lithuania	51%	-6%	36,212	5.5%	5.5%	-0.5	0.32	-0.2	0.8	-15%
Latvia University of Life Sciences and Technologies	Latvia	-	-	1,500	-	5.4%	-	0.77	0.11	0.4	-0.2%
Vytautas Magnus University	Lithuania	45%	-1%	27,348	6.6%	6.6%	0.8	0.086	0	2.1	0%

Sciences has a Page Performance Index of 40%, Follower Growth of 6.43%, and Post Interaction of 0.58%. All indicators show steady annual growth, unlike Rīga Stradiņš University. The University of Latvia has a Page Performance Index of 16% and Follower Growth of 6.6%. Other universities in this cluster have weaker Facebook metrics.

The second cluster includes two universities: the Estonian University of Life Sciences and Vilnius University, both ranked 801-1000 in 2022. In terms of metrics, Vilnius University has stronger Facebook indicators. The Page Performance Index is 8%, and Follower Growth and the number of Fans are significantly higher, exceeding 71,000.

All universities in Cluster 3 share the same ranking (1001–1200) in 2022. However, in 2020 and 2021, Tallinn University was ranked (801–1000), as was Vilnius Gediminas Technical University in 2021 (801–1000). Along with their rankings, the social media metrics of these universities also declined: the Page Performance Index decreased by 6% for Tallinn University and by 7% for Vilnius Gediminas Technical University compared to 2021. The Follower Growth indicator also declined in 2022. The number of Fans increased for all universities in this cluster. However, Riga Technical University shows the best dynamics. Its ranking remained stable from 2020 to 2022 and its Page Performance Index is the highest at 69%.

The fourth cluster includes four universities, all ranked 1201 in 2022. Notably, most universities in this cluster had a higher ranking in 2021. For instance, Kaunas University of Technology, Latvia University of Life Sciences and Technologies, and Vytautas Magnus University were ranked higher in 2021. They were ranked 1001. On average, the Facebook metrics for these universities are similar. There are no sudden fluctuations in performance. Vytautas Magnus University has the highest Page Performance Index at 12%, the Estonian Academy of Arts leads in Follower Growth, and the Latvia University of Life Sciences and Technologies has the highest Post Interaction. Kaunas University of Technology has the highest number of Fans, with 37,000.

When comparing the metrics of leading universities in terms of international student numbers with those of the Baltic universities, it is evident that leading universities have a significantly higher number of Fans, ranging from 33,800 to 191,000, while Baltic universities in the educational rankings range from 1,900 to 71,000.

For the leading universities in terms of international student numbers, their Facebook metrics are, on average, higher only in terms of the number of Fans and Followers Growth.

Discussion. It is impossible to ignore the impact of emerging social media and the evolution of existing platforms, which demonstrates that as social media platforms grow in popularity, their marketing influence on international student enrollment also increases. The findings of this study align with earlier research by Zehrer and Grabmüller (2012) and Akar and Topçu (2011), emphasizing the importance of social media platforms such as Facebook. Moreover, to grow and develop, higher education institutions must embrace digital marketing, particularly social media (Paladan, N., 2018; Sintani, L., Fransisca, Y., Anjarini, A. D., & Mulyapradana, A., 2021). As noted, evaluation is facilitated by modern measurement tools and techniques. This research highlights the importance of social media, as does the study by Biczysko and Jabłońska (2016), which further underscores its significance. Since all public higher education institutions in Poland participated in the survey, it provides an accurate representation of the current distribution of social media marketing tools. Facebook, Instagram, YouTube, and Twitter are among the widely used platforms investigated, while Pinterest and Twitter are either rarely used or not used at all. The findings suggest that maintaining a Facebook fan page has become an unofficial standard in Social Media marketing strategies. Achieving a high level of effectiveness through social media to attract students is a promising strategy, but it requires additional funding, which is often beyond the current means of Baltic universities.

Conclusion. The goal of the research was to compare the rankings of educational institutions and their social media metrics for the Baltic universities included in the Times Higher Education World University Ranking, to trace trends in indicator growth based on university rankings, and to demonstrate a correlation with the growth in the number of students. It can be concluded that growth in interactions on social media does draw in additional foreign students.

The study showed that universities with the highest ratings have several stable indicators that increase annually. However, several unstable indicators may not be related to the university's ranking; their growth depends on the quality of published content and well-tuned search engine optimization for social media. Stable indicators for Facebook include 'Fans'. This indicator is higher for universities with a higher rating, and changes in this indicator longer compared to others. Its increase was positive compared to the previous year, as this study compared 2022 indicators of with those from 2021. The remaining indicators are unstable and unrelated to university rankings; their growth or decline can be abrupt, warranting further research in this area.

Universities included in global educational rankings have maintained more stable social media metrics over several consecutive years, with consistent annual improvements. Future research should be aimed at categorizing metrics and targeting them effectively, particularly as part of a marketing strategies to attract international students. Additionally, future studies should focus on metrics from other social media platforms and compare them with university rankings.

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PROBLEMS OF BUSINESS DEVELOPMENT IN THE CONTEXT OF THE EXPANSION OF FINTECH TECHNOLOGIES AND THE GRADUAL TRANSITION TO SETTLEMENTS IN CRYPTOCURRENCY

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Abstract. The market capitalization of cryptocurrencies, including Bitcoin, Ethereum and others, has grown significantly over the past few years. This confirms that cryptocurrencies are becoming an increasingly recognized and stable asset. Cryptocurrencies have begun to attract the attention of large institutional investors such as hedge funds, investment banks, and even large corporations. For example, companies such as Tesla, BlackRock and others have started to actively invest in cryptocurrency. BlackRock offered its options for stabilizing assets in the cryptocurrency market. Bitcoin price is constantly growing, despite cyclical downturns its correlation with the price of gold is stable and gives a stable position to the assets in bitcoins Figure 1. Cryptocurrencies are increasingly being used for international transfers, online payments and even as a means of savings. For example, some countries such as El Salvador have recognized Bitcoin as an official currency, demonstrating the potential of cryptocurrency as a medium of exchange. Decentralized financial (DeFi) platforms have begun to compete with traditional financial institutions by offering lending, insurance, and exchange services without intermediaries. The rise of cryptocurrencies is also associated with increasing risks to traditional financial markets, such as high volatility, the threat of money laundering and terrorist financing through anonymous crypto networks. Financial regulators around the world are actively working on creating new standards and approaches to control cryptocurrencies, which confirms the importance of this topic for the stability of the financial system.

Key words: Cryptocurrency, technology, tokenization, audit, risk, Central Bank.

Introduction. As FinTech technology evolves, the very nature of settlement is changing, the property of new money that is emerging alongside the public money (fiat money) we are used to – these can be various monetary derivatives – these are contracts that lock in certain parameters for future settlements and payments. They help reduce uncertainty about future prices. Derivatives include options, futures, forwards, swaps and their combinations, as well as private cryptocurrencies, which do not always fulfil the usual properties of money, namely to determine value, to accumulate and preserve capital, to serve as settlement means of exchange and payment.

The emergence of private money may lead to competition between public and private money for speed and price of settlement, stability and the ability to operate in full or partial anonymity, serve as a means of international settlement, be subject to regulation and customer confidence. The emergence of private money has forced some countries to ban its circulation on their territory, for example, China

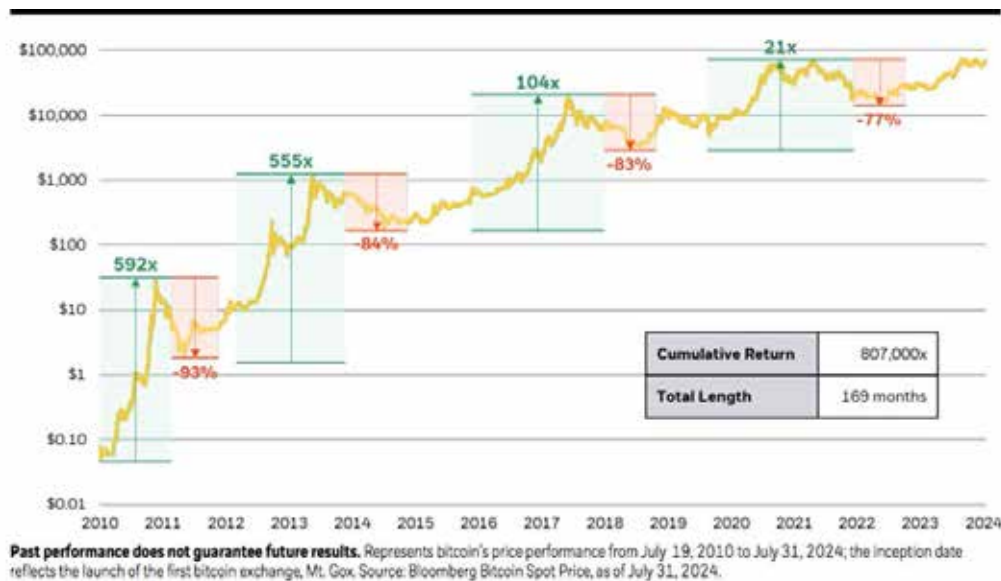


Fig. 1. Bitcoin's long-term performance (BlackRock.2024)

and India have banned the circulation of private cryptocurrencies in connection with the development and implementation of state money CBDC (Central Bank Digital Money). The fiat money we are used to may gradually take the form of cryptocurrencies, which are introduced by the state to maintain its position as the main issuer of stable money, controller and regulator of money markets.

Figure 2 presents a picture and developed by the authors, which we tried to maximize the reflection of the current situation and give recommendations to businesses that are ready for the coming changes, as well as to take into account and use this situation in their own interests.

It is important for businesses to understand how to work today with both fiat and cryptocurrencies and their derivatives and soberly assess their prospects in this difficult transitional situation, to understand and prepare for new monetary relations that will arise as cryptocurrencies spread further and FinTech technologies develop.

We talk a lot about new breakthrough technologies in FinTech areas, but we still cannot put these technologies at the service of peoples and countries; they all work for a rather narrow group of people in very specific markets (Baltgailis, J., Simakhova, A., & Buka, S. 2023). Thus, the number of identified and verified owners of crypto assets increased from 2016 to November 2023 by more than a hundred times and amounted to 575 million people (Statista.2024), which, according to our calculations, is less than 10% of the adult population of the planet – from 25 to 65 and above. (Our World in Data. 2024).

Since 2016, launching a new cryptocurrency has proven to be too easy. The project code itself was publicly available. The talented developers of the original blockchain procedures that underlay cryptocurrencies have long done the hard work. To launch a new cryptocurrency, it was enough to copy the known program code and make minor changes. New cryptocurrencies were launched in the thousands per year. Most of the new currencies that started appearing since 2016 were created without any value or innovation. Many projects were not intended for transactions, but this did not stop each new project from calling it a means of payment. The emergence of a new cryptocurrency brought large investments with a minimum number of inconvenient questions from large investors. The bubble of meaningless investments was growing steadily. All these investments drew funds from the market of real projects and, naturally, from real audited profits, which made it possible to fill the budgets of almost all countries.

At the beginning of 2017, many people heard about blockchain technology. This is a decentralized and more reliable technology for storing data on the transfer of information and money. In 2018, advertising hype arose, which made it possible to turn “simple technology” into “magic technology” to solve all problems. People believed in this technology and invested billions of dollars in new projects.

Since Bitcoin, thousands of new cryptocurrencies have appeared on the market. It was too easy to create them. Project after project was launched using the Initial coin offering method (ICO). An official from the European Central Bank emphasized that the main structural flaw of fiat crypto assets, which make up the bulk of the crypto market, is that they do not provide any benefit to society. In Europe in 2021, the capitalization of all crypto assets reached 2.5 trillion euros. (Panetto F. 2022).

There were many projects where there was not even a working blockchain at the core. All information was stored as a record that is familiar to many as recording data in Excel. In this version, anyone can open the page and change any numbers in any cell. This is not possible in the blockchain system; only the owners of electronic wallets can manage funds there, and these are the co-owners of the blockchain.

Digital platforms and the development of cryptocurrencies have been studied by different authors. Blockchain technologies have been studied in detail by Zutshi A., Grilo A., Nodehi T. (2021). Kosse A., Glowka M., Mattei I. and Rice T. (2023) developed a monetary system that utilizes the potential of tokenization. Attention to decentralized digital platforms was given by Cumming D., Drobetz W., Momtaz P., Schermann N. (2025). Cloud platforms have been investigated by Surucu-Balci E., Iris Ç., Balci G. (2024). The authors of the article in their 2022 and 2023 papers explore FinTech and digital currencies (Baltgailis J., Simakhova A. (2022), Baltgailis J., Simakhova A., Buka, S. (2023). But despite the rather active research on digital currencies and platforms, it is relevant to analyze the possibilities of new technologies to increase productivity.

Methodology. To achieve the goal, the article used general scientific methods of analysis and synthesis, systematization and comparison of data. Scientific articles, monographs, open statistical data of Internet resources became the information base of the article.

Results. The Chainalysis Global Cryptocurrency Adoption Index confirmed the massive adoption of cryptocurrencies around the world (154 countries were studied). The global adoption of cryptocurrency is growing for several reasons: it allows you to save savings during the devaluation of national currencies, overcomes restrictions on currency transactions and, despite all existing risks, allows you to carry out money transfers and business transactions. The prospects here are that in developed countries and states where cryptocurrencies are already widespread, there will be a growing volume of transactions and explosive growth (DeFi) of decentralized finance, and in emerging markets this role will be played by P2P platforms.

Several banks in the US gained exposure to the market for cryptocurrencies and crypto-related companies before and during the COVID-19 pandemic, however the 2020–2022 crypto bubble burst at the end of 2022. Last year, three banks in the United States lost \$532 billion in assets, which is more than all American banks lost in the 2008 financial crisis, while their reserves were formed mainly due to cryptocurrency, which due to volatility, high risks and weak liquidity did not ensure the sustainability of these banks (New York Post. 2023).

Despite all these problems in the cryptocurrency market, as Chainalysis notes, when we look at the development of the crypto ecosystem, especially through the prism of e-wallet activity, it is clear that we are experiencing a seismic shift in the use of cryptocurrency. Transfer activity in the recent market surge has eclipsed previous highs seen in late 2020 and 2021. Thus, the number of transactions per month between electronic wallets increased from 2018 to March 2024 from 50 million to 430 million per month, and the number of electronic wallets with a positive balance over the same period increased from 60 million to 360 million (The Chainalysis. 2024). This faster growth rate com-

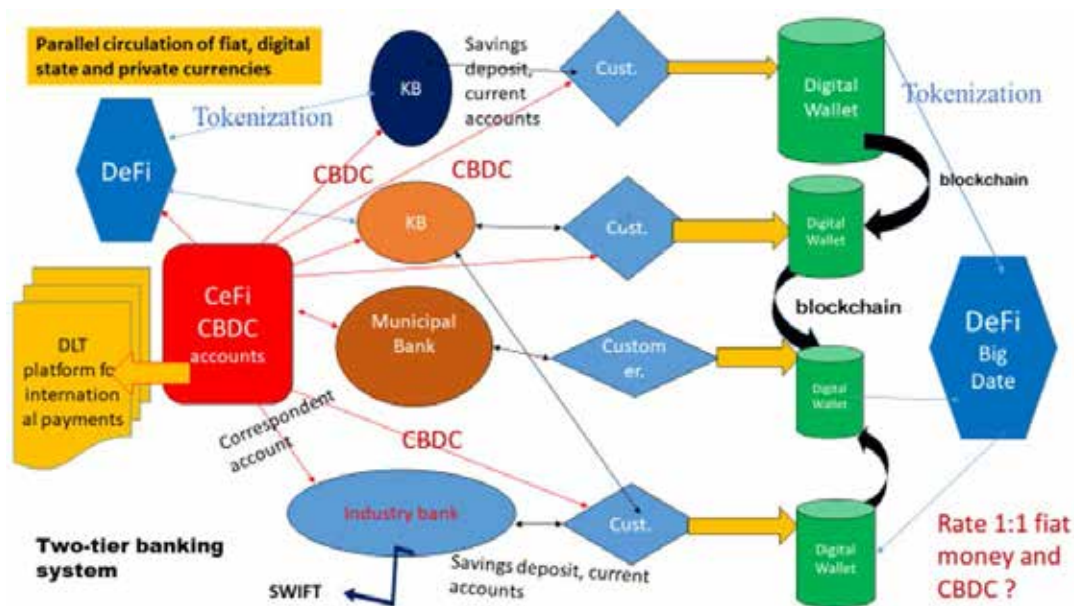


Fig. 2. Current situation reflection by the authors

pared to past cycles could indicate increased market confidence. However, it is unlikely that we will be able to find out how much taxes were paid on these amounts and what kind of surge did these volumes of cryptomoney pumped into the budgets of their countries give? On this occasion, ECB Board Member Panetta suggested that in Europe, given the negative externalities that crypto activities can generate across multiple Member States, the EU should introduce a tax levied on cross-border crypto issuers, investors and service providers. This would generate revenues that can be used to finance EU public goods that counter the negative effects of crypto-assets (Panetta F. 2022).

Using the blockchain analysis engine, you can analyze transaction records and gain insight into how criminals carry out their illegal actions. Therefore, regulators, auditors and law enforcement officials must become experts in this technology to combat malicious actors. This is an important element in building artificial sociality. Experts suggest exchanges monitor large deposits from suspicious clients. The largest number of crimes in the cryptocurrency sector in 2021 were fraud, with theft in second place, most of which are the result of hacking blockchain projects. The reason for the sharp increase in fraud and theft is the decentralization of DeFi and the presence of vulnerabilities in many DeFi protocols! For fiscal year 2021, the IRS Criminal Investigation Division seized \$3.5 billion in cryptocurrency fraud cases. According to tax officials, 93% of the money they confiscated in 2021 came from cryptocurrency-related cases (Hollerith D. 2021).

Cryptocurrency is not anonymous, it is pseudonymous. Users' cryptocurrency balances and transaction histories are associated with unique addresses, are expressed as long strings of letters and numbers, are typically generated by a multi-address digital cryptocurrency wallet, and are easily viewable on public blockchains. Cryptocurrency transactions are more transparent than regular financial ones. Transaction records on the blockchain remain forever and can be viewed at any time, even years later. However, the real name of the person or organization conducting the transaction is not visible on the blockchain. In general, most cryptocurrency transactions are conducted through cryptocurrency exchanges and other Big Data financial services providers. In most jurisdictions, these services are regulated in the same way as regular financial institutions, and they are also required to conduct know-your-customer (KYC) checks on all users and report any suspicious activity.

Considering that many private companies attract bank loans, the auditor's report must reflect real assets and reserves, without which it is impossible to obtain a loan today There are many issues that

accountants may encounter in practice for which no IFRS® Accounting Standard currently exists; one example is cryptocurrencies. For example, as no IFRS Accounting Standard currently exists to explain how cryptocurrency should be accounted for, accountants have no alternative but to refer to existing IFRS Accounting Standards. Cryptocurrency is an intangible digital token that is recorded using a distributed ledger infrastructure, often referred to as a blockchain. These tokens provide various rights of use. For example, cryptocurrency is designed as a medium of exchange. Other digital tokens provide rights to the use other assets or services, or can represent ownership interests. These tokens are owned by an entity that owns the key that lets it create a new entry in the ledger. Access to the ledger allows the re-assignment of the ownership of the token. These tokens are not stored on an entity's IT system as the entity only stores the keys to the Blockchain (as opposed to the token itself). They represent specific amounts of digital resources which the entity has the right to control, and whose control can be reassigned to third parties. As there is so much judgement and uncertainty involved in the recognition and measurement of cryptocurrencies, a certain amount of disclosure is required to inform users in their economic decision-making. Presentation of Financial Statements, requires an entity to disclose judgements that its management has made regarding its accounting for holdings of assets, in this case cryptocurrencies, if those are part of the judgements that had the most significant effect on the amounts recognised in the financial statements. Events after the Reporting Period requires an entity to disclose any material non-adjusting events. This would include whether changes in the fair value of cryptocurrency after the reporting period are of such significance that non-disclosure could influence the economic decisions that users of financial statements make on the basis of the financial statements

A well-known audit company in the field of cryptoasset assessment, Lukka Serves, has proposed a whole set of risk management measures in this area, which can become the real basis for programs for Artificial Intelligence and the formation of regulatory procedures to ensure stability and tax collection for state budgets (Lukka Serves. 2024).

Traditional finance, while sometimes viewed as the antithesis of crypto, utilizes core principles and tools which the crypto industry can begin to institute to a higher degree in order to protect the market as a whole. Many crypto transactions and products call themselves one thing, but when the lawyers and auditors look in, it is shown that the substance is not clear, or does not match the naming or description.

In simple terms, experts should weigh in before the product goes to market. The form and substance should both match, and be made crystal clear. Classifications that look beyond marketing to the underlying characteristics and components of the products are important.

In many jurisdictions (EU, Canada, Mexico, Switzerland, South Korea, Japan, etc.), cryptocurrency platforms are required to register or license, submit reports to the regulator and strictly comply with AML/KYC rules. Latvia also adopted such a decision legislatively in June 2024 (LSM.lv.2024). However, inspections by Lukka Serves of leading crypto exchanges showed that most do not impose strict enough requirements on their clients and only a minority of trading platforms comply with the standards, and the majority of the standards turned out to be incomplete and opaque. And only a few sites have licenses from regulators in the USA, Japan and Hong Kong.

Stablecoins, typically pegged 1:1 to the U.S. dollar, other currencies, as well as precious metals and even other stablecoins, afford the efficiency, security, and transparency of cryptocurrency without exposure to volatility we see in other crypto markets. By giving anyone in the world with an internet connection access to the stability of the U.S. dollar, stablecoins are a crucial solution for residents of countries facing currency volatility, both for preserving savings and even facilitating commerce. Many are also intrigued by stablecoins' potential to increase financial inclusion, in particular, by providing a convenient store of value for the unbanked and underbanked. While major cryptocurrencies like Bitcoin and Ether tend to dominate the headlines and offer gains that stablecoins lack, stablecoins

have surpassed all other types of cryptocurrencies in usage, representing over half of all transaction volume in recent months.

The persistent growing prominence of stablecoins in overall transaction activity show the high levels of utility this asset class has achieved with crypto users. Stablecoins have played a pivotal role in the broader adoption of cryptocurrency for everyday transactions outside of trading.

The share of transactions in stablecoins since 2022, having experienced a fall in 2023 after the crisis of a number of banks and exchanges in the United States, but is still gradually growing in 2024, increasing its share from 30 to 50% in the volume of all transactions in cryptocurrency. (The Chainalysis. 2024).

Fiat money purchases for stablecoins increased from \$15 billion to approximately \$42 billion from March 2023 to April 2024, indicating that stablecoin assets are becoming global assets. (The Chainalysis. 2024).

This rise in popularity of these stablecoins has brought opportunities for decentralized finance (DeFi). In this system, smart contracts create a completely new paradigm of financial interactions between clients who do not trust each other, but at the same time have the ability to interact without intermediaries in the form of financial organizations. In this ecosystem, various agents operate for the exchange of smart contracts! The system has proven that transaction participants have full control over their funds!

DeFi networks are global in reach and operation, with no defined jurisdiction and geographical location for their operations, which in turn increases jurisdictional uncertainty and challenges enforcement. This further obstructs oversight and regulatory compliance of such networks, particularly given the speed and ease with which financial service providers are able to change locations in response to actions of authorities. Greater international policy collaboration and discussion can help overcome such challenges at the cross-border level. The possible instability of stablecoins and the transfer of these risks to the primary financial market, which we will repeat relies on the existing institutional structure of the monetary system and which is defined through the various settlement platforms that are being developed and implemented to expand the settlement processes jointly or separately by public and private digital currency. In this regard, the expansion of the role of central banks in the settlement system, the not yet clear use of cash or CBDC electronic tokens replacing them, the maintenance of a stable exchange rate between electronic and cash, in which processes private digital money and the Big Date multinationals themselves, which are constantly building up assets and influence – do not give hope for the stability of the monetary credit system of the state. The DeFi market is growing rapidly and attracting an increasing number of retail investors, exposing them to high risks. The increased interest and adoption of crypto assets by institutional investors and other traditional financial service providers is leading to increased interconnectedness between traditional, centralized finance (CeFi) and the DeFi system through convergence points in areas of maximum profit. Moreover, the growing use of stablecoins, tokenized and digital assets make the boundaries of the two systems more permeable and increases the risks of secondary effects on the traditional financial system and the real economy. Such risks are exacerbated by the recent price movements of major crypto assets (BTC, ETH) and the re-utilization of profits in the DeFi space. Digital multinationals are not constrained by the borders of the states where they are based. For example, if Meta (Facebook) needs Indian WhatsApp users to pay with stablecoins backed by Chinese CBDCs, who can stop it? Today, the three biggest features of DeFi are:

1. Banking services similar to traditional ones;
2. Providing P2P lending and borrowing platforms;
3. Creation of new financial instruments, such as decentralized crypto exchange services, tokenization platforms, derivatives and forecast markets.

The most important feature for DeFi developers is easy composability or interoperability (they also say easy money), when in a DeFi system you can benefit from any individual projects by creating various combinations of financial products. Considering that cross-border payments are available in this DeFi ecosystem, the system itself does not have a single source of data, there is a good data protection system and censorship-resistant transactions. A complete DeFi system cannot be censored or shut down by authorities and major corporations.

The increasing dependence of financial services on the development of FinTech technologies can lead to system failures. Another disruption to the global payment system could be caused by the rise of the cryptocurrency market, which eliminates the need for an intermediary and a centralized authority. Under these conditions, the state came up with the idea of forming its own cryptocurrency CBDC. A CBDC is a central bank liability and is described as a digital form of a country's sovereign currency, issued by it and backed by government credit. In this context, the issuance of a CBDC, although it may require enormous costs to develop supporting technologies, will reduce costs in the long term and contribute to financial inclusion. The fact is that one of the fundamental issues in the implementation of the digital currency of central banks, CBDC, indicates that there are unprecedented opportunities to control customer transactions, whose accounts are opened directly with the Central Bank and have the opportunity to control processes related to money laundering, which will naturally improve tax collection and create social protection for the population and form an inclusive economy.

The difference between a CBDC and the “digital money” that consumers use using cards or mobile applications is that the responsibility lies with the Central Bank, and not some commercial bank.

There are three known CBDC options: wholesale (token-based) and two types of retail (token- and account-based). The differences lie in the degree of availability and the underlying technology. Retail CBDC is an accessible digital currency that can be used for retail transactions and other purposes, while wholesale CBDC has access restrictions as it is intended for banks and other financial institutions and is used for digital settlement of wholesale transactions.

There are three main types of CBDC architectures for retail (Baltgailis, J., & Menshikov, V. 2023). In all of them, the Central Bank is the only institution that issues and redeems CBDC. Under the so-called indirect, or two-tier, architecture, the central bank issues CBDC to consumers through intermediaries, which are mostly commercial banks. In this case, consumer-owned CBDCs represent claims on the intermediary, i.e. the commercial bank. In the other two types, consumers have direct demands on the Central Bank. In the direct CBDC model, the Central Bank processes all payments in real time and keeps records of all retail balances. The hybrid CBDC model combines elements of direct and indirect solutions. Consumers have direct claims to the Central Bank, but intermediaries process payments in real time.

The Central Bank has two main options: either directly distribute the currency, or delegate it to specific intermediaries represented by commercial banks. In the first case, clients will have an account directly with the Central Bank, where you manage your money, in the second case, the client will have an account with a commercial bank, and his money with the Central Bank is regulated by the commercial bank. Both options carry risks and benefits.

A situation that reflects the competition between CBDC and private currencies is fundamentally important. After all, if private currencies, such as stablecoins, will conquer the sphere of transactions between clients and become the cheapest and fastest method of payments, without special control by regulatory authorities, then the stability of CBDC, the possibility of exchanging them for fiat “electronic money” and cash at a rate of 1:1 may be disrupted and confidence in central banks undermined. It is not for nothing that the governments of China and India have banned the circulation of private cryptocurrencies on their territory, and this was justified precisely by the stability of national CBDCs.

This path to monetization is particularly evident in the example of asset tokenization. In essence, from existing financial fiat and digital assets, real services and tangible production create monetary

assets, that is, the essence of these assets themselves is removed and transformed into a new monetary quality, endowing them with the ability to be actively traded on digital platforms without intermediaries and where Big Data will play the main role and benefit. McKinsey estimates that tokenized market capitalization by asset class could reach around 2 trillion dollars by 2030 (excluding cryptocurrencies and stablecoins). The pessimistic and optimistic scenarios range from about 1 trillion to about 4 trillion dollars, respectively. This estimate excludes stablecoins, including tokenized deposits, wholesale stablecoins, and central bank digital currencies (CBDCs) to avoid double counting (McKinsey, 2024). Asset management giant BlackRock has even bigger tokenization challenges. Tokenization remains a central pillar of BlackRock's digital asset strategy. By tokenizing funds, BlackRock aims to deliver significant benefits to investors, including the ability to issue and trade assets on the blockchain, enhance access to on-chain offerings, enable instant and transparent settlements, and facilitate seamless transfers between platforms. The company has set an ambitious goal of tokenizing 10 trillion dollars worth of assets in partnership (Forbes, 2024).

Tokenization of Real-World Assets (RWA) involves converting rights to various assets—ranging from bonds and stocks to real estate and cultural properties—into blockchain-based digital tokens. This innovation promises to enhance liquidity, transparency, and accessibility, democratizing asset ownership by leveraging modern technologies (Forbes, 2024).

Blockchain technology plays a pivotal role in these digital transformations, acting as a secure and immutable ledger. It ensures that data is stored and recorded without the possibility of unauthorized changes, copying, or deletion. As a digital "book of trust," blockchain serves as a bridge between the physical and digital worlds. Through distributed ledger technologies, trust and transparency are redefined, allowing objects or rights from the physical world to be recorded digitally via unique identifiers. Tokenization imbues these objects with new properties that can be utilized in economic activities.

In a digital age where trust is paramount, several elements are critical for ensuring confidence in the digital environment: trust in content, identity, ownership, authenticity, and truth. Tokens will play a foundational role, representing physical assets in the digital realm while expanding their functional capabilities. Tokens will encapsulate identity and value within a digital protocol.

Blockchain, as a modern accounting system, differs from traditional systems in its approach to recording and managing data. Unlike classical systems, blockchain focuses on accounting for objects in the form of tokens, which are digital representations tied to distributed ledger technology. This system leverages advanced encryption, an open protocol, distributed information storage, and the ability to transfer digital data directly between addresses without intermediaries. These features ensure reliability, transparency, and efficiency in transactions involving tokens, setting blockchain apart as a revolutionary technological solution for the digital economy.

The purpose of tokenization of backed assets is to create a more accessible and liquid way of investing in these assets. Due to tokenization, assets are divided into small shares represented by digital tokens, allowing investors to buy these shares at a lower cost. Tokenized assets pave the way for a much easier process of trading and transferring ownership since tokens can be easily transferred and traded on digital platforms. Proper oversight and supervision will be a prerequisite for this endeavour. In embracing evolution and change, central banks and the private sector should follow key guiding principles to ensure that the monetary system harnesses innovation for the public interest (BIS, 2023):

- firstly, the tried and tested division of roles between the public and private sector in the two-tiered system remains the cornerstone;
- the second principle is upholding a competitive level playing field that promotes innovation and financial inclusion;
- thirdly, the future monetary system needs to meet the highest standards of data security and privacy, while ensuring system integrity by guarding against illicit activity such as money laundering, financing of terrorism and fraud.

The results and discussion: In general, any entrepreneur should start working in combination on the CeFi and DeFi money markets now. The problem is that with the advent of state money in the form of CBDC, this money will be issued only by central banks and can only be operated by opening accounts with the Central Bank. Therefore, having presented in Figure 2, the maximum possible scheme of the future system of monetary settlements, we are ready to discuss the following points:

1. When opening an account with the Central Bank, all monetary transactions of clients will be under the control of the state, including tax authorities. This will certainly complicate the work of clients, as they will have to constantly respond to enquiries from state authorities on possible money laundering operations and other law enforcement issues. At the same time, the problem of CBDC issuance technologies being considered for certain terms, after which the money of these particular funds ceases to be a payment mechanism, which may cause problems for the company with financing and mutual settlements, may cause even greater complexity (Bank of Canada. 2021). The ideas with temporary money were actively promoted at the beginning of the last century and this mechanism can be actively used in the fight against inflation (Gesell, S. 1918).

2. Working with fiat money can be complicated by the government's abandonment of cash. Sweden's active attempts to eliminate cash from circulation have failed so far, as more than a million people in Sweden are not yet ready, primarily for technical reasons, to switch to electronic money (Barrons. 2024). A number of countries have passed constitutional laws prohibiting public authorities from abandoning cash (Manuel A. Bautista-González. 2022, Domin M. 2023). However, fiat money accounts will be settled through commercial banks for as long as the two-tier banking system shown in Figure 2 is in place in a given country, but it is assumed that with the transition to digital currencies it is possible for each country to form a one-tier banking system in which commercial banks will no longer exist as intermediaries, so their owners are currently trying to switch to FinTech technologies to ensure that they can enter a more modern type of monetary relationship.

3. If companies move to a combined level of both CeFi and DeFi settlement, Artificial Intelligence (AI) systems will have to be set up and operated for deeper analytics, and given the complicated nature of obtaining audit opinions on balance sheets that include private digital funds, companies must be prepared to provide extensive information on the handling of private digital currencies, the principles of earning and using these currencies, otherwise they will run into problems with tax and other governmental authorities

4. Central Banks claim that fiat and digital state money will be exchanged at a 1:1 exchange rate in settlements. But the settlement systems of private and public banks may differ in terms of speed, fees and related services. And this is already a competitive pressure on the process of currency exchange and there are no clear decisions on this issue provided by state banks, how the stability of the state currency will be solved. To take these risks into account, businesses should follow the advice of renowned risk expert Nassim Taleb, who warned that complex systems survive through reserves and redundancy rather than through loans and optimization (Taleb N.N. 2007).

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RESEARCH IN LAW

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IMPLEMENTATION OF THE MAIN THEORETICAL PROVISIONS ON THE RIGHTS AND RESPONSIBILITIES OF MINOR PARTICIPANTS OF THE EUROPEAN CRIMINAL PROCEEDINGS (USING THE EXAMPLE OF THE REPUBLIC OF LATVIA) IN THE INVESTIGATION OF CRIMES

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Abstract. The article is devoted to the research of current issues related to the legal status of minor participants of the European criminal proceedings (using the example of the Republic of Latvia). Their rights and responsibilities during investigative actions during the investigation of criminal proceedings (criminal cases) are considered, an analysis of the conceptual characteristics of participants in criminal proceedings is carried out, the features of their legal status are determined, and practical examples are given.

The issues of improving the institution of participants in criminal proceedings are relevant for this research. The author focuses in the article on guarantees of compliance with the rights and obligations of participants in criminal proceedings, which definitely entails compliance with human rights and freedoms.

The introduction of new participants in criminal proceedings, including minors, into European legal acts, including the Latvian Criminal Procedure Law, the expansion of their rights and obligations, contribute to the further improvement of their legal status at all stages of criminal proceedings.

Key words: human rights, minor, criminal proceeding, criminal liability of minors, sexual exploitation of women and children.

The goal of the research. The purpose of this article is to characterize and analyze the legal status of participants in European Criminal Procedure Law (using the example of the Republic of Latvia).

Introduction. Since 1 October 2005, the Criminal Procedure Law (hereinafter referred to as the CPL) has been in force in Latvia, the goal of which, in accordance with Article 1, is to establish such a procedure for criminal proceedings that ensures the effective application of norms of the Criminal Law and the fair regulation of criminal-legal relations without unjustified interference in the life of an individual. Along with adults, minors participate in criminal proceedings (criminal cases), for whom a special legal procedure has been established during interrogation and other criminal procedural actions during the investigation of crimes.

Literature review. Latvian scientists such as Arija Meikališa, Kristīne Strada-Rosenberga, Sandra Kaija, Anrijs Kavalieris, Andrejs Vilks, Irena Nesterova and others have dedicated their scientific articles to the study of issues related to participants in criminal proceedings, including minors. They examine criminal procedural and tactical issues related to the legal status of these participants.

Methodology. The research was carried out in the field of criminal law; the following research methods were used: comparative legal, dialectical, logical-legal, analytical, statistical, study of the regulatory framework.

Results and discussion. Article 91 of the Satversme (Constitution of the Republic of Latvia) states that all people in Latvia are equal before the law and the courts, and human rights are implemented without any discrimination (Satversme).

Participants in criminal proceedings are persons endowed with procedural rights of the CPL and have procedural obligations. The CPL regulates persons involved in criminal proceedings (officials conducting criminal proceedings), persons exercising defense, the victim and his/her representation, and other persons involved in criminal proceedings. They, in the course of exercising their rights and fulfilling their duties, enter into criminal-procedural relations.

Along with adults, minors participate in criminal proceedings (criminal cases). According to Article 11 of the Criminal Law of Latvia (hereinafter referred to as CL), an individual who has reached the age of 14 at the time of committing a criminal act is subject to criminal liability (Criminal Law). A minor, i.e., a person who has not reached the age of 14, is not subject to criminal liability.

Most crimes committed by minors have age-specific characteristics. We consider it necessary to note that the behavior of minors (teenagers) has a number of peculiarities. These can include a lack of life experience, minors having a low level of self-criticism, cannot always assess life circumstances in accordance with reality, increased emotional excitability, suggestibility, unbalanced arousal, etc.

A person is considered to have reached a certain age on the day following his/her birthday. If age is determined as a result of a forensic medical examination, the person's birthday is considered to be the last day of the year determined by the expert. When setting the minimum or maximum age, the court is guided by the minimum age of such a person suggested by the expert (Liholaja 2021, p. 281).

Persons directing the process – the investigator, the prosecutor, the judge – must have knowledge of the current state of age examination. There is an objective X-ray method. That is used to determine age and is considered by specialists to be objective, providing sufficiently accurate results.

The peculiarities of criminal liability of minors are expressed in the fact that the types of punishments that can be applied to minors are limited, the punishment is assigned taking into account the specifics of the subject of the criminal act, the court can release the minor from the assigned punishment by applying compulsory educational measures to him.

Article 152 of the CPL regulates the specifics of interrogating a minor. The term "minor" is understood in accordance with the Law on the Protection of Children's Rights: "In the field of administrative offenses and criminal law, all relevant legal norms applicable to minors are applied to a person under the age of 18" (Law on the Protection of Children's Rights).

Latvian professor Arija Meikalisha points out that the term "minor" applies to all individuals under the age of 18. If a person reaches the age of 18 during the proceedings, there is no longer a strict obligation under the CPL to apply the specific features of interrogating a minor, regardless of the age at which they are involved in the proceedings, etc. However, since all norms relating to the interrogation of minors are fundamentally related to additional protection and maximum respect for the interests of the minor, it is probably not unreasonable to apply them in practice even after the formal age of majority has been reached (Meikalisha 2019, p. 500). The same approach is also indicated in Directive (EU) 2016/800 of the European Parliament and of the Council of 11 May 2016 on procedural safeguards for children who are suspects or accused persons in criminal proceedings (Directive 2016/800).

The specific features of the interrogation of a minor can be divided into three large groups:

- 1) those that apply to any minor in any procedural status,
- 2) those that apply to minor witnesses who do not have the right to defense,
- 3) those that apply only to certain categories of minors, namely, only to minors who have not reached the age of 14 and minors who have been recognized as victims of violence committed by a person on whom the victim is materially or otherwise dependent, of human trafficking, or of a criminal offense directed against a person's morality or sexual integrity (Meikalisha 2019, p. 501).

In the field of substantive Criminal Law, the EU has the competence to adopt directives providing for minimum rules for the definition of criminal offenses and sanctions in relation to particularly serious crimes with a cross-border dimension, mainly in the following areas: terrorism, trafficking in human beings and sexual exploitation of women and children, illicit drug trafficking, illicit arms

trafficking, money laundering, corruption, counterfeiting of means of payment, computer crime, and organized crime (Nesterova 2015, p. 147). The aforementioned crimes are specified in Article 83, Part 1 of the Treaty on the Functioning of the European Union (Treaty on the Functioning of the European Union).

In the field of substantive Criminal Law, a number of directives have been adopted. One of the recently adopted directives is the European Parliament and Council Directive 2011/36/EU of April 5, 2011, on the prevention and combating of trafficking in human beings and the protection of its victims (Directive 2011/36/EU).

The course of the interrogation of a minor victim and witness shall be recorded in sound and image if this is necessary for the minor to achieve the goal of the criminal proceedings. The course of the interrogation of a minor who has been recognized as a victim of violence committed by a person on whom the victim is materially or otherwise dependent, of human trafficking, or of a criminal offense against a person's morals or sexual integrity shall be recorded in sound and image, except in cases where this is contrary to the best interests of the minor or interferes with the achievement of the goal of the criminal proceedings.

Recording a child's testimony on video not only allows you to obtain information about what happened but also simultaneously shows the child's reactions and emotional state during the interrogation. Unlike a written protocol, which can inaccurately formulate the investigator's questions and the child's answers or in the so-called desired form, a video accurately reflects the child's language and the course of the interrogation, which can help eliminate doubts about one or another victimized child's response and the description of the events that took place (Ceļmale 2016).

If video equipment is used to record a scene, the same principles must be followed as when using a camera, namely from the general to the specific. The person who is filming the scene of the event must comment on each shot during the filming process.

All necessary prerequisites must be provided so that the captured image supports objective reality; lighting must not transform the object; the shooting location must exclude the possibility of perspective distortions, etc.

Before the recording, certain preparatory work must be done, which includes clarifying the tasks with the help of the video recording, selecting the appropriate technical means, and, if necessary, involving competent specialists.

Of great importance in this work is the creation of a scenario, which should note which objects and episodes should be depicted, in what order it is desirable to do it, what shooting techniques should be used, from what locations, and in what way to record. It is advisable to mark the shooting locations on crime scene plans or diagrams.

When analyzing the provisions of Part 2 of Article 152 of the CPL, it should be noted that the teacher's task is not to assist the investigator in recording testimony. The right of the person directing the proceedings, the investigator, the prosecutor is to record the testimony of a minor participant in criminal proceedings, after which the persons participating in the investigative action are familiarized with the protocols. As a rule, in practice, when studying the protocols of investigative actions in criminal cases, the teacher has the right to make comments on the reliability and completeness of the records made and to clarify and supplement the protocol. Then this protocol is signed by the teacher.

However, we see a slightly different position. In criminal proceedings (criminal cases), the teacher should be interrogated and involved in the investigation as a witness. Thus, the investigator must, for example, interrogate minor participants in criminal proceedings who have the right to defense: the person against whom criminal proceedings have been initiated, the detainee, the suspect, and also perform other investigative actions with the named participants in the criminal proceedings. In this case, the teacher is able to characterize the minor's personality, how the minor relates to studies, classmates, and his hobbies.

As for such a specialist as a psychologist, then, based on the practical experience of the author, such a specialist, possessing scientific knowledge in the field of psychology of minors, has professional skills in communicating with them; he provides the investigator with invaluable assistance in a criminal case. This assistance may be expressed in establishing psychological contact between the investigator and the minor.

An important circumstance is assisting the investigator in formulating questions to the minor during the course of investigative actions.

In practice, during the investigation of criminal proceedings, a teacher or psychologist is often brought in to conduct investigative actions with minor participants in criminal proceedings. Their participation allows the person directing the process to conduct investigative actions effectively and, subsequently, to use the results as evidence in the criminal case. An important factor is the assistance of the specified specialists to the investigator in formulating questions during investigative actions.

It is important to point out that both teachers and psychologists have their own requirements for holding a position, but in addition to them, if these persons are invited as specialists in the interrogation of a minor, they are also subject to the requirement expressed in Article 51 of the Law on the Protection of the Children's Rights regarding the need for specialized knowledge in the field of children's rights protection (Kaija 2018, p. 262).

Article 153 of the CPL describes indirect interrogation of a minor, or interrogation through the mediation of a psychologist.

If the interrogator disagrees with the psychologist's opinion, direct interrogation may be conducted only by decision of the investigating judge during pre-trial proceedings and by court decision during trial. If the person directing the process agrees with the psychologist's opinion, he or she will organize an indirect interrogation.

If the person being interrogated has not reached the age of 14, it is the psychologist who explains the information provided to this person, i.e., the necessity of the ongoing activities, the significance of the information provided by the minor. The psychologist finds out the personal data of the person being interrogated, as well as asks the person directing the proceedings questions in an appropriate form. If necessary, the psychologist informs the interrogator of the need for a break. A minor under the age of 14 does not sign the interrogation protocol, if one is required and written at all.

If the person being interrogated has reached the age of 14, the activities of the person directing the proceedings and the psychologist are regulated by Section 153, Part Four of the CPL. In accordance with the content and nature of the action to be performed, the person directing the process is the one who performs the action, i.e., informs the person through a psychologist about the nature of the action, clarifies personal data, and informs the minor about rights and obligations, as well as responsibility. In turn, the psychologist is the one who asks the minor the questions of the person directing the proceedings, if necessary, paraphrasing them in an appropriate form, and also informs the person directing the proceedings about a break, if one is necessary (Meikališa 2019, p. 506).

Investigative actions, including interrogation of minors (children), have special specifics. In this case, the investigator, prosecutor, and judge must prepare, collect information about this minor, his friends, the environment at home and at school. For example, in criminal cases where violence was used against minor victims, increased attention and kindness should be shown.

If children are under 14 years old, it is best to work with them at home, in a childcare facility, and, since children get tired more quickly, take more frequent breaks. All evidence in a criminal case is always recorded in the form of protocols of investigative actions.

The content of evidence in a criminal case consists of criminal-legal facts, and its form consists of criminal-procedural facts in the form of protocols of investigative actions. Thus, both from the point of view of content and from the point of view of form of evidence, these are facts, or each criminal evidence is a unity of criminal-legal and criminal-procedural facts (Dombrovsky 2011, p. 77).

The investigative action protocol is one of the forms of recording investigative actions. Article 151¹ of the CPL regulates issues related to the peculiarities of the interrogation of a particularly protected victim in pre-trial criminal proceedings.

The victim, who is particularly protected, as well as the specific features of the conduct of procedural actions with him, were included in the CPL at the beginning of 2016, with the introduction of Directive 2012/29/EU of the European Parliament and of the Council of 25 October 2012 establishing minimum standards on the rights, support, and protection of victims of crime, and replacing Council Framework Decision 2001/220/JHA (Directive 2012/29/EU).

The inclusion of new participants in the process, including minors, in the CPL contributes to the further improvement of the system of rights and obligations of participants in criminal proceedings, including minors.

Conclusions. The conducted research, devoted to the main theoretical characteristics of the legal status of participants in criminal proceedings, emphasizes the relevance of the topic. Further development of the system of procedural guarantees and legitimate interests of participants in criminal proceedings, including minors, is one of the key areas for improving the Criminal Procedure Law.

Observance of the rights of a person involved in criminal proceedings is based on the constitutional principles of equality of citizens before the law.

One of the final conclusions may be the exclusion of the concept of a teacher from criminal procedural norms, leaving the concept of a psychologist.

Article 140 of the CPL regulates the performance of procedural actions using technical means. For criminal cases in which investigative actions are conducted with the participation of minors, it is expedient to apply technical means more widely.

The detection of each crime and the effectiveness of the investigation largely depend on how familiar and skilled those directing the process are with scientific methods, applying modern scientific and technical means and techniques in the acquisition, research, and evaluation of evidence.

When conducting such investigative actions with the participation of minor victims, witnesses, detainees, suspects, etc., such as verification of testimony on site, investigative experiments, identification, and other investigative actions, the participation of specialists from various fields not only improves the quality of their implementation but also provides the opportunity to obtain new evidence in a criminal case.

It can also be concluded that:

- Video increases the possibilities of recording events and phenomena. They are recorded in dynamics, accurately capturing the time of development of events and the speed of movement of people and objects; the volume of objects is also better depicted;
- Recording a child's testimony on video allows not only to obtain information about what happened but also to simultaneously show the child's reactions and emotional state during interrogation;
- If video equipment is used to record an inspection of the scene of the incident, the same principles must be followed as when using a camera, namely from the general to the specific. The person who records the scene of the incident on video must comment on each shot taken during the recording process.

The use of scientific and technical methods is permissible only if it is provided for or permitted by the CPL.

Persons directing the process are regularly required to improve their knowledge of the current state of expertise, including such expertise as age expertise, which is especially important in relation to minors.

The conclusions drawn, suggestions, and further research of the problems related to the legal status of minor participants in criminal proceedings, the improvement of the norms of the CPL will allow the observation of the rights of participants in criminal proceedings and human rights during the investigation of criminal proceedings (criminal cases).

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CHARACTERISTICS OF INSURANCE ACCESSORIES

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Abstract. Insurance is a necessary element of modern society, it allows not only to provide compensation for the damage caused to the policy holder, but also to protect him from possible insured risks. The relevance of the article is due to the need to classify insurance as a means of ensuring the fulfilment of obligations. The use of insurance as a means of securing obligations in legal doctrine is still debatable, and there is no unified position among legal scholars as to whether insurance is recognised as a security for the performance of obligations, which would make it possible to determine its accessory nature. At the same time, the possibilities of insurance of the risk of liability for breach of contractual obligations are considered, when insurance becomes dependent on the main obligation. The author studies the classification of forms of security, analyses the specifics of insurance and its types. This helps to reveal the potential of using insurance as security for the principal obligation. The article reveals how the specificities of certain types of insurance contracts, revealing the signs of their accessory nature, the relevant conclusions are made as to whether the insurance contract can act as collateral (related) security of the main obligation, corresponding to the signs of accessory nature.

Key words: accessory, guarantee, insurance, insurer, policy holder, surety.

Introduction. Insurance is the assumption by the policy holder of the risk of possible losses (Insurance and Reinsurance Law of Latvia 2015, art.1). Insurance involves pooling funds from many insured entities (known as exposures) to pay for the losses that only some insureds may incur. The insured entities are therefore protected from risk for a fee, with the fee being dependent upon the frequency and severity of the event occurring. In order to be an insurable risk, the risk insured against must meet certain characteristics. Insurance as a financial intermediary is a commercial enterprise and a major part of the financial services industry, but individual entities can also self-insure through saving money for possible future losses (Gollier 2003). Insurance is a necessary element of modern society; it allows not only to compensate for the damage caused to the policy holder, but also to protect the policy holder from possible risks. The policy holder pays a premium to an insurance company ("insurer") under an insurance policy, which is generally an integrated contract, meaning that it includes all forms associated with the agreement between the insured and insurer (Wollner 1999). According to the legislation, an insurer, when concluding an insurance contract, shall issue a confirmation of the conclusion of the insurance contract – an insurance policy. If there are no signatures of the parties on the insurance policy, it shall not affect the validity of the insurance contract, provided that the provisions for coming into effect of the insurance contract have been complied with (Insurance Contract Law 2018, art.19). In turn, insurance contract is agreement between an insurer and policy holder in accordance with which the policy holder undertakes the obligations to pay insurance premium in the manner, time periods and amount laid down in the contract, as well as

to fulfil other obligations laid down in the contract, and the insurer undertakes obligations to disburse the insurance benefit to the person indicated in the contract in conformity with the insurance contract upon the occurrence of the insurance event, and also to fulfil other obligations laid down in the contract (Insurance Contract Law 2018, art.1, paragraph 7).

In return, the insurance company promises to pay a certain type of compensation (cover) in the case of an occurrence of an insured event. The use of insurance as a means of securing obligations is still debatable in legal doctrine, and there is no unified position among legal scholars as to whether insurance is recognised as a security for the performance of obligations, which would allow determining the accessory nature of insurance. At the same time, the possibilities of insurance of the risk of liability for breach of contractual obligations are considered, when insurance becomes dependent on the main obligation.

Literature review. Among the scientists who have studied the issues of insurance science, should note the contribution of: Smith A., Keynes D.M., Samuelson P.E., Arrow K.J., Mowbray A.H., Mossin J., Raviv A., Blanchard R.H., Wollner K.S., Gollier C., Hoffman F.L., Borscheid P., Haueter N.-V., Viccars P.J.C., Kevin L. G., Stevens J., Zweifel P., Eisen R., Spann A.K. and others. Among Latvian scientists on Insurance law are Alfejeva J. and Mantrovs V. However, the issue of accessory nature of insurance in legal science has not been comprehensively studied.

The goal of the research. In connection with the debatability of the issue of attributing insurance to the methods of securing the performance of obligations, the issue of determining the security features of contractual liability insurance is relevant, which will make it possible to identify the signs of accessory nature of specific types of insurance.

Material and research methods. The complex of interrelated methods of research was used to solve the set tasks, such as: theoretical, analysis, synthesis, deduktion, comparison, generalization and others.

The results and discussion. Based on the classification of contracts, K. Torgans highlights related (accessory) contracts (Torgans 2018, p. 36), i.e. contracts that depend on and are related to the contract of the main obligation. Accessory obligations are security obligations in relation to the main obligation. The principle that the accessory obligation follows the principal obligation (*accessorium sequitur principale*) is used to characterise the doctrine of security in general (Steven 2009, p. 21). Such understanding of the concept of accessory nature in the legal doctrine gives it essential and mandatory features of any security method. These methods are always legally complementary, since they do not arise on their own, but on a certain basis and to secure an existing principal obligation. Therefore, accessory nature is understood as a functional expression of collateralisation.

It is generally recognised in the legal literature that accessory nature is manifested at all stages of the existence of obligations, from their origin to termination, and accessory nature is characterised by the following features:

- 1) occurrence of accessory nature;
- 2) accessory nature of the scope of the claim;
- 3) adherence of the accessory nature to the main obligation;
- 4) termination of the accessory nature;
- 5) enforcement of the accessory obligation by examining these aspects separately from each other (Kaser 1971, p. 457).

Thus, accessory nature exists at all stages of the existence of an obligation (emergence, transfer, proper or enforced fulfilment, termination), therefore, the signs of accessory nature should be clarified separately, establishing whether the corresponding security of the obligation possesses all the mentioned signs of accessory nature or only part of them, or does not possess these signs at all.

Accessory means of securing the fulfilment of obligations are civil law tools that have stimulating and compensating effect, providing the creditor with additional protection of its property interests.

Based on a number of studies, it is possible to identify protective and stimulating properties characteristic of these functions, which are most often pointed out by researchers:

- 1) *Protective* – provides for the protection of the creditor's rights and interests in the event of a debtor's non-performance of obligations;
- 2) *Stimulating* – aims to force the debtor to fulfil its obligations, realising the occurrence of unfavourable consequences;
- 3) *Compensatory* – provides for the creditor's right to claim liens and damages in the event of a debtor's non-performance of obligations.

In insurance law, the issue of accessory succession to the main claim is decided depending on the type of insurance. An insurance contract has a certain independent legal nature; such a contract can be concluded in the absence of an underlying obligation. The insurance contract or agreement is a contract whereby the insurer promises to pay benefits to the insured or on their behalf to a third party if certain defined events occur. Subject to the "fortuity principle", the event must be uncertain. The uncertainty can be either as to when the event will happen (e.g. in a life insurance policy, the time of the insured's death is uncertain) or as to if it will happen at all (e.g. in a fire insurance policy, whether or not a fire will occur at all) (Mowbray, Blanchard 1961, p. 52). The law applicable to the regulation of contractual relations arising from an insurance contract is determined in accordance with the Rome I Regulation of the European Union (EC Regulation No 593/2008, 2008). In Latvia the legal regulation of contractual relations is realised in accordance with the Insurance Contract Law (Insurance Contract Law of Latvia 2018).

There is still no consensus as to whether the termination of additional obligations arising from insurance is related to the termination of the underlying obligation. An insurance contract does not have such an additional feature as termination – an insurance contract is terminated not because the obligation secured by it has ceased, but because the insurance risk has ceased to exist. Only voluntary insurance of the borrower against the risk of his obligations is allowed as an additional method of securing the fulfilment of loan obligations.

The protective function in contractual liability insurance is fulfilled by the insurance indemnity for the losses incurred. The function of compensation in contractual liability insurance is fulfilled by the insurance indemnity, which cannot exceed the amount of the creditor's (beneficiary's) claim against the policy holder according to our law – it is when the insured is deceased. For security obligations, the reason is the related nature of these obligations and the main claim, while in property and guarantee insurance the reason is its compensatory nature.

1. Guarantee or surety insurance. Guarantee or surety insurance is applied in Latvia, which provides insurance protection against risks of commercial activities due to non-fulfilment of contractual obligations. (Insurance and Reinsurance Law of Latvia 2015, art.19, paragraph 14-16). The most common types of surety insurance are the following:

- 1) Tender guarantee (in procurement),
- 2) Bid security,
- 3) Guarantee of prepayment (advance payment),
- 4) Guarantee of fulfilment of a performance contract:
 - a) performance of credit obligations;
 - b) obligations arising from commercial pledge (for preservation, prohibition of alienation, etc.);
 - c) payments of value added tax, excise tax, customs payments, etc.
- 5) Guarantee of performance of contracting services (works);
- 6) Guarantee of warranty period.

Under loan agreements, the insurer does not make an insurance payment in connection with the debtor's delay in fulfilling its loan obligations, but in connection with the occurrence of an insured event, regardless of whether the debtor is in breach of its insurance obligations.

However, liability insurance certainly fulfils a guarantee function. In accordance with the contract, the creditor simultaneously becomes a beneficiary under the insurance contract, and in the event of the debtor's failure to fulfil its obligations, it has the right to apply to the insurer for payment of insurance compensation, which becomes the fulfilment of the obligation.

Guarantee insurance is provided in favour of the insurer who is the client under the contract of work performance or service provision, but the insurance contract is concluded with the insured whose obligations are insured and who is the contractor or service provider under the contract of work performance or service provision. Consequently, warranty insurance is an additional guarantee of the obligations assumed by the contractor or service provider – in the event of default, the insurer covers losses resulting from the default in accordance with the insurance rules.

The rules of the Insurance Contract Law of Latvia (Insurance Contract Law of Latvia 2018) and the provisions of the Civil Law on Surety shall apply to the guarantee insurance contract. Surety is a contractual obligation to be liable to the creditor for the debt of a third party, without, however, releasing the latter from the debt (Civil Code of the Republic of Latvia 1937, art.1692). In a contract of guarantee insurance, the creditor is the customer under the contract of work performance or service provision, and as a party to the insurance contract is the insured – the person to whom the insurance indemnity is paid. Such sureties are irrevocable and may be with or without conditions. For example, the insurance contract may contain a condition that the insurance indemnity shall be paid only upon the insolvency, liquidation or bankruptcy of the contractor or service provider, as well as the sum insured and the limit of the insurance period.

In a warranty insurance contract, the surety (guarantor) is the insurer and the debtor is the contractor or service provider who is the insured under the insurance contract. The rules of the Civil Law provide that when a claim is brought against a guarantor, it may require the creditor to first address it to the principal debtor, if recovery from him can be equally successful. However, this obligation falls away if the insurer has clearly waived it (Civil Code of the Republic of Latvia 1937, art.1702). By such a waiver, the fact that the surety assumes the obligation as the debtor himself. The service customer has no such obligation, even if a surety or guarantee of the first claim has been issued. Consequently, the surety (guarantee) for non-performance of the mentioned obligations is a collateral (accessory) contract having the accessory nature in relation to the main contract (subcontract, rendering of services, etc.) and has two properties characteristic of accessory nature – protective and compensatory.

2. Insurance of commercial collateral under loan agreement. Practically, business risk insurance is taken out to protect against risks, in accordance with the rules of the Commercial Pledge Law of Latvia (Commercial Pledge Law of Latvia 1998, art.34), in case of alienation of pledged property without the authorisation of the commercial pledgee. In addition, guarantee insurance or surety can be used in such types of activities and sectors where the regulatory enactments define a guarantee policy as mandatory, for example: tour operator's guarantee, customs guarantee, excise guarantee, waste manager's guarantee, construction guarantee.

The rule of following the insurance contract in business risk insurance and liability insurance does not apply, as the insured risk in these types of insurance is related to the activities of a specific policy holder. With the change of the policy holder, the degree of risk is subject to change, because when concluding the insurance contract, the insurer assesses the risk on the basis of the data about the original policy holder. The insurer cannot extend the same data to the new policy holder. Since the degree of risk has changed, the insurance contract cannot be valid on the same terms as before.

Consequently, it can be concluded that the types of insurance that fulfil the security function meet the criterion of the accessory nature of the scope of the claim. In property insurance, the sum insured limiting the insurer's obligation shall not exceed the insurable value, i.e. the actual value of the property. In all types of property and grant insurance, the insurer's obligation is limited to compensa-

ting for actual losses in accordance with the principle of compensation arising from an insured event (Insurance Contract Law of Latvia 2018, art.1, paragraph 18).

3. Insurance of creditor's civil liability. In accordance with the requirements of the Regulations of the Cabinet of Ministers on Consumer Credit (Regulations of the Cabinet of Ministers of Latvia No. 691, 2016), when pledging movable property against a loan, the lender shall ensure storage of the transferred pledge. For this purpose, the creditor's liability for the preservation of the pledge during the term of the loan agreement shall be insured against the creditor's civil liability for damage caused by the creditor to the pledge in storage. Thus, insurance for the preservation of collateral concluded in connection with another contract (primarily a loan contract) can be perceived within the framework of the doctrine of related transactions (*linked contracts*).

Insurance complies with the criterion of accessory nature of arising, according to which only a debt that has already arisen can be secured. This criterion is observed, for example, in the insurance of the subject of pledge. But this criterion is not fulfilled in the case of insurance of liability under a contract: at the time of conclusion of the contract it is not known whether the obligations under the contract will be duly fulfilled or will be violated. Only in the latter case the liability of the policy holder and the insurer's obligation to pay the insurance indemnity will arise.

4. Insurance of immovable property and debtor's liability. In order to fulfil the obligations under the loan agreement, which is secured by a mortgage, paragraph 2.11. of the mentioned Regulations of the Cabinet of Ministers stipulates that the consumer shall be informed about the mandatory insurance of the pledge – property, if the conclusion of the agreement is necessary to obtain a loan. Clause 56.15. of the mentioned Regulation stipulates that the loan agreement shall clearly and briefly specify (unless otherwise stipulated for certain types of loan agreements) the collateral and insurance. Paragraph 2.1.8.1. of Annex No. 2 to the Regulation "European Standard Information for loan agreements for the purchase of real estate or loan agreements, the repayment of which is secured by a mortgage of immovable property" defines the requirements for the inclusion in consumer credit agreements of obligations such as the obligation to insure real estate, purchase life insurance – life insurance of the loan recipient, etc.

Consequently, in order to fulfil the obligation to insure real estate and mortgage insurance, it is necessary to conclude a relevant insurance contract, which in this case is recognised as a side (additional) contract to the contract of the main obligation – the loan agreement. The insurance contract has the function of guaranteeing or strengthening the obligation, which affects the main obligation as an auxiliary means of fulfilment of the obligation.

The defined effect of an insurance contract is based on the creditor's security interest, i.e. its legitimate interest in establishing a guarantee for proper performance under the underlying contract and when the interest in the preservation of the property is transferred, the rights and obligations under the insurance contract are transferred.

Therefore, the property insurance contract may be a way of securing the fulfilment of obligations and has features of accessory nature. Hence, it can be concluded that in case of breach of the main obligation, an additional obligation arises and is terminated upon its fulfilment.

5. Accessory nature of termination of insurance obligation. The invalidity of the contract of the main obligation entails the invalidity of the contract of commercial pledge (accessory pledge), and the invalidity of the accessory pledge, on the contrary, cannot lead to the invalidity of the main one. These two provisions are inherently imperative. An insurance contract must be recognised as invalid upon invalidity of the main obligation, it must also, as a general rule, terminate upon termination of the main obligation. It should be noted that an insurance contract is terminated not because some obligation secured by it has ceased, but because the insured risk has ceased to exist. The insured risk is a necessary element of the insurance contract. This element is inherent in the insurance contract and not in any other type of contract. Therefore, as far as the termination of the obligation is concerned,

the insurance contract is not accessory. If the obligations under the contract are fulfilled ahead of schedule, the related pledges and the insurances established thereunder also become null and void.

Some of the differences between insurance and traditional collateral relate to the termination of the obligation by novation. Traditional collateral is terminated in this case. In contractual liability insurance, novation alone does not terminate the insurance contract. The resolution of this issue depends on how the insured risk is formulated in the insurance contract. If it is related to a specific obligation that has terminated, the insurance contract will also terminate, and the basis for this will be the accessory nature of insurance. If the risk is formulated as a liability of any kind arising in connection with a certain contract or even more so in connection with a certain activity of the policy holder, then novation may be a ground for termination of the insurance contract, as the new obligation may not correspond to the insured risk.

Thus, when terminating an obligation, an insurance obligation may meet the accessory nature, as it may terminate following the main obligation if the scope of the insurance risk under the insurance contract coincides with the scope of liability under this main obligation.

Conclusions. Based on the results of the research, several conclusions can be drawn regarding the accessory nature of insurance.

1. As a general rule, insurance is not contractual security. It can be perceived as quasi-security or security in a broad sense, so it is wrong to extend to all types of insurance the general rules on security obligations.

2. Surety (guarantee) for non-performance of obligations is a collateral (accessory) contract having the accessory nature in relation to the main contract (subcontract, rendering of services, etc.) and has two properties characteristic of accessory nature – protective and compensatory.

3. Types of insurance that fulfil the security function meet the criterion of the accessory nature of the scope of the claim. In property insurance, the sum insured limiting the insurer's obligation shall not exceed the insurable value, i.e. the actual value of the property. In all types of property and grant insurance, the insurer's obligation is limited to compensating for actual losses in accordance with the principle of compensation arising from an insured event.

4. The property insurance contract may be a way of securing the fulfilment of obligations and has features of accessory nature. Independent property consequences may be secured by insurance contracts, and the payment of insurance benefits may be linked to a breach of the main obligation. Hence, it can be concluded that in case of breach of the main obligation, an additional obligation arises and is terminated upon its fulfilment.

5. The issue of accessory succession to the main claim is decided depending on the type of insurance. The rule of succession of the insurance contract to the main obligation does not apply to business risk insurance and civil liability insurance due to the fact that the insured risk under these types of insurance is related to the activity of a specific person - the policy holder.

6. The claim limitation for insurance disputes is established imperatively and applies independently of the claim limitation for the main obligation.

7. Parties interested in using insurance as collateral may bring the above types of insurance contracts closer to the classical collateralisation method. For this purpose, in particular, the description of the insured risk under the insurance contract shall coincide exactly with the secured obligation. In this case, upon termination of the obligation, the insurance risk is excluded and the insurance contract is also terminated.

8. If the termination of the main obligation has not resulted in the payment of insurance indemnity due to the absence of risks for which the termination of the main obligation should be recognised as an insured event, it is possible to use the concept of conditional accessory nature, whereby payment for non-performance or improper performance will not be made against all risks that may occur, but only against those specified in the agreement on securing the main obligation. The possibility of

specifying in an additional (related) obligation the conditions under which this agreement is valid or terminates after the main one will enable the development of insurance as a method of securing the fulfilment of an obligation.

9. An insurance contract is not automatically invalidated if the main obligation is invalidated.

10. Upon termination of the main obligation, the insurance obligation may meet the accessory nature, as it may terminate following the main obligation if the scope of the insurance risk under the insurance contract coincides with the scope of liability under this main obligation.

11. Rights under an insurance contract do not pass together with the rights under the underlying obligation. The limitation period for insurance disputes is established imperatively and applies independently of the limitation period for the main obligation.

12. Arbitrarily extending the security theory to insurance contracts that do not meet the characteristics of security for obligations is a mistake in view of the fact that only certain types of insurance have sufficient features of accessory nature.

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APPLICATION OF CONCLUSIVE ACTIONS IN COMMERCIAL RELATIONS (CHALLENGES AND PRACTICE)

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Abstract. Cooperation between business partners, customers, and other market participants often depends not only on words, but is sometimes expressed through behaviour or silence. A conclusive action is the action that is associated with an unspoken willingness to conclude, continue, change or terminate a contract. The use of conclusive actions is an integral part of modern business. From an economic perspective, conclusive actions are an important legal instrument in commercial relations, as they allow entrepreneurs to conduct transactions without the need to formalize each act. This type of transaction is most often chosen when it is the best way for various reasons.

The authors of the article paid attention to the concept of conclusive actions, their legal basis and the features of their practical application. Inaccurate interpretation of conclusive actions can lead to errors made by business people, non-compliance with contracts, and economic losses. The specification of relevant actions makes it possible to create a set of general principles, including various types of legal situations that arise during the organization and implementation of commercial actions.

Key words: conclusive actions, commercial actions, written contract, oral contract, business partners, legal basis.

Introduction. The purpose of this article is to examine the concept and types of conclusive action, the way it affects the effectiveness of commercial relations, and specific features of its use in the execution of commercial transactions. The interaction between business partners, clients, and other market participants often depends not only on verbal offers but also on their behaviour or even silence. Conclusive action refers to actions that demonstrate a non-verbal readiness to conclude, continue, modify, or terminate a contract. These actions are widely used in various industries, such as sales, services, rentals, construction, finance, and e-commerce. Their use is an integral part of modern business, as they allow for the identification and interpretation of legal relations even in the absence of a formal agreement (Graustīņš 2020). From an economic perspective, conclusive actions conduct is an important legal tool in commercial relations, as it enables entrepreneurs to carry out transactions without the need to formalize their action (How to conclude... 2023). It is assumed that the contract exists, but no written or verbal confirmation is required (Will 2024). For example, if an employee consistently performs their work duties and receives compensation for their performance, this is considered a conclusive action which confirms continuation of the employment relations (Men, Verčič 2021). The application of such action relates to situations where the parties act or behave as if a written or verbal contract had been concluded between them, and its application implies that the contract or agreement can be considered established not only in written or verbal form but also through the context of the actions or behaviour of the parties. In particular, regarding a loan agreement, regulatory acts do not specifically define the form it must take. Therefore, it can be concluded in a written form, verbally, or through conclusive actions. As a result, such a contract, established in a free form between two parties, will be legally binding in the event of a dispute (Briede 2024). This type of contract is often chosen when, for various reasons, it is the best option. However, a conclusive form for the contract is sometimes also used by unscrupulous entrepreneurs (Fridrihsone, 2017). In the event of a dispute, such actions are significant as they can serve as evidence of the conclusion of the con-

tract and the acceptance of its terms, even if there was no explicit formal agreement (oral or written). In the case of one party refusing to fulfil its contractual obligations, the actions taken can serve as evidence of the contract's conclusion and compel the party to fulfil its obligations under that contract.

In ancient Greece and Rome, it was supposed that contracts could be concluded not only in oral or written forms but also through a silent consent or action: “*manu datio*” – the transfer of an object, and “*stipulation*” – through unilateral actions, such as an oath or handshake (Apsitis 2015, p. 32). In the Middle Ages, with the society development, conclusive actions became more widely used when numerous trade transactions were conducted, including the exchange of goods. In cities and at trade fairs, it was common practice in trade to conclude contracts using symbolic actions and various gestures, such as handshakes, which meant “Agreed!”. Merchants who did not speak the same language used facial expressions and gestures to conclude a deal. The deal was considered concluded in case when one party offered their goods, and the other showed their agreement. Such an agreement had legal effect.

In modern times, this tradition is preserved in the form of conclusive actions. In the civil law of most countries, they are recognized as one of the ways to conclude contracts and express the parties' intentions. International legal norms and conventions, such as the Vienna Convention (1980) on the Law of Treaties, recognize that a contract can also be concluded through conclusive actions if they clearly reflect the will and intention of the parties (Lunenburg 2010). According to paragraph 3 of Article 18 of this convention, acceptance of an offer can be expressed through actions that indicate consent (Apvienoto Nāciju ... 1980). The Roman law also influences Latvian legislation. Thus, the Labor Law stipulates that employment relations can be terminated based on the actual actions of the employee and the employer, rather than solely on the basis of a written agreement (Darba Likums 2002, Article 115 Paragraph 5). The Civil Law allows for the expression of a person's will in a legal transaction through actions that are considered silent declarations of intent. These actions must be such that one can reliably infer the existence of intent and its characteristic features: features bearing the same meaning as words (Civillikums 1937, Article 1428).

The need for a separate examination of this type of entrepreneurs' actions is prompted by the following reasons:

- 1) the presence of numerous shortcomings in the application of conclusive actions: both psychological and legal
- 2) specific requirements for the regulatory framework
- 3) errors made by legislators in defining the types of conclusive actions
- 4) existing difficulties for business people in determining the situational nature of conclusive actions
- 5) peculiarities of the types, content, conclusion, modification, and termination of conclusive actions
- 6) errors made by business people in using conclusive actions regarding whether their partners' actions are truly conclusive
- 7) peculiarities of interaction between conclusive contractual relations with “traditional” (written and oral) contracts.

The Concept of Conclusive Actions. Scientists and dictionaries use the terms “conclusive actions”, “conclusive evidence of an agreement” or “conclusive conduct”. These terms are essentially synonymous and do not differ in the legal domain. The term “conclusive actions” is used in civil law as a characteristic feature of one of the forms of concluding transactions (Pakhomov, 2011). A contract is typically concluded by providing explicit consent, such as through signing it. However, a contract can also be concluded or performed without words, through actions or silence, and such actions are considered one of the ways of concluding a contract. This means that a contract is considered concluded or performed based on the behaviour of the parties, even if no verbal or written agreements were used (Implied contract 2021). According to the definition given in the explanatory

dictionary “Thesaurus”, “A conclusive action is an action that results in the conclusion of a contract; it is manifested through an unspoken willingness to conclude a contract” (Tezaurs. Konkludenta ... 2024). Other dictionaries provide the following definition: “Conclusive actions – in civil law, actions of a person expressing their will to establish legal relations (for example, to make a transaction), but not in the form of an oral or written expression of will, rather through behaviour that clearly indicates such intent” (Slovar ... 2023). It is also possible to say about an unspoken willingness to conclude a contract and the indirect expression of the will of the parties to the transaction (Kas ir konkludentu ... 2023), or that it refers to “actions without words or other direct means of expression, which prove the existence of the will to conclude a contract” (Milberga 2020). Therefore, in certain situations, work should begin before the client and the supplier conclude a written contract (Immediate ... 2022).

Conclusive actions (from the Latin for conclusion, to conclude) are actions (and inactions) of persons in which their behaviour reveals a desire and intention to enter into certain legal relations, but not by expressing their will verbally or in writing. However, such intent can be inferred from that behaviour. This concept, considered by E. Černova and D. Malinovskis, refers to the most complex part of transaction regulation – the stage prior to the conclusion of the contract (Černova, Malinovskis 2018). The complexity of this stage involves not only its uncertainty but also the constantly changing conditions of the environment.

Such behaviour can have the same binding force as a written agreement. Such researchers as G.Hadson, G.Mārtiņš, J.Smith, V.Belovs, M.Pahomovs, M.Johnson, and S.Brown share this viewpoint.

The physical and physiological basis for conclusive actions includes the following elements:

- gestures (e.g. a handshake)
- facial expressions (e.g. a smile)
- body language
- tone of voice
- gaze
- appearance
- other non-verbal forms of communication – indirect actions (signals or commands) or “verbal”

actions that have legal significance, such as silence.

In G. Lobanov’s opinion, silence is considered a conclusive action if it is provided for by law, business practice, or arises from previous business relations between the parties (Lobanov 2024). According to the Civil Law, will is expressed silently when it is conveyed without the immediate intention of expressing will in that sense. An action considered a silent expression of will should be such that it allows for a reliable conclusion about the existence of that will (Civillikums 1937, Article 1428). Silence is one of the most complex forms of conclusive actions. In Latvia, it is no coincidence that the Cabinet of Ministers adopted a resolution on an action plan for the implementation and application of the “silence-consent” principle in the administrative practices of responsible institutions (Ministru kabineta rīkojums ... 2012), since under the Civil Law, silence is not, in itself, consent or dissent (Civillikums 1937, Article 1430), or as they say in France: “ça dépend”.

The Nature of Conclusive Actions. Psychologically, these actions are based on the principles of trust and expectation, and essentially, conclusive actions can be viewed as:

- a silent declaration of intent or expression of will that leads to an agreement
- one of the forms of concluding a contract, a way of creating or altering legal obligations between parties even without the use of words or written agreements, where one party acts as if they have already agreed to a certain action or contract, regardless of whether they intended to do so or not
- behaviour of the parties from which an intention to conclude a contract or assume certain obligations is clearly inferred
- a legal tool in the commercial field that ensures the fulfilment and protection of the parties’ obligations even without formal contracts

- a situation where a contract or legal relationship is created or altered based on the actions of both parties, but the parties acted as if the contract had already been concluded. Thus, the written form of the contract is considered to be complied with, including when amendments are made, if the written offer to conclude the contract is accepted in accordance with Articles 39 and 41 of the Labor Law of the Republic of Latvia. Or, for example, according to Paragraph 3 of Article 408 of the Civil Law of the Republic of Belarus, which states that this is considered an acceptance if a person who receives the offer performs actions to fulfil the conditions of the contract specified in it (such as shipping goods, providing services, performing work, making the corresponding payment, etc.) within the period established for its acceptance, unless otherwise provided by law or specified in the offer (Kasir "konkludentu darbības" ... 2024).

- the silent consent principle, which allows for the determination of the existence of contractual obligations based on the actual behaviour of the parties rather than on words or written documents. This principle is based on the assumption that the parties act as if they have agreed to a certain course of action or the proposed terms.

- a legal category that refers to the conclusion of contracts and, hence, the creation of obligations between two or more parties

- a legal concept that denotes situations where a person's actions or silence may be considered as a consent to an action or offer, or to the conclusion of a contract

- a legal fact, which, like any legal phenomenon, is characterized by a system of various functions through which the corresponding effect is achieved by using the relevant category. These functions include informational functions, time-saving functions, management functions, and competency functions.

As one of the legal concepts, conclusive actions are interpreted and applied differently across various legal systems, regions, and situations.

Conclusive actions can be taken not only by individuals, but also by legal entities. Specifically, if one company regularly delivers certain goods or products to another company. Despite the fact that there is no official written contract between these companies, the second company consistently accepts the goods and pays the invoices.

Types of Conclusive Actions. The following conclusive actions can be identified:

- by forms of expression: there are visual and auditory actions: gestures, signals, and actions. A smile, a handshake, a nod, and respectful behaviour can play an important role in communication with clients. Gestures of a stockbroker. The "thumbs up" gesture is used not only in the electronic environment but also as a sign of approval in real life (Budkēviča 2023). In general, fingers and hands can be used for a wide variety of professional gestures, which are often very characteristic and unambiguous in their positive or negative connotations.

- by their role in the mechanism of legal regulation: for the purposes of concluding, extending, altering, and terminating a contract.

- by the method of consolidation within the existing legal system:

- 1) obligatory conclusive actions stipulated by legal acts. For example, if an employer allows an employee to continue working after their shift has ended, the employer cannot later claim that they do not wish to pay the employee because the hours worked exceeded the agreed shift (Darba Likums 2002, Article 68). Or, according to the Civil Law, a silently accepted compensation for the custodian occurs if, under the circumstances, free storage was not intended (Civillikums 1937, Article 1969).

- 2) conclusive actions carried out in accordance with legal customs. Thus, in the rental business, actions can occur without signing a lease agreement, but by accepting the keys to the rented premises or making the first rent payment. Or the broker's commission rate that is "standard" in the area. However, the broker's right to such a reward appears at the moment the transaction is concluded, even without any mention of it (Lobanov 2022, Article 70, Paragraph 1).

- silence regarding an offer or acceptance of an offer: if someone proposes a deal or makes an offer, and the other person remains silent and does not protest, this can often be interpreted as a silent acceptance of that offer. For example, unsuitable goods or substandard services: if a person receives such goods or services and does not react to their poor quality, this can be interpreted as a silent consent and the conclusion of a contract for those goods and services (Patērētāju tiesību ... 1999, Article 4). Silence can be considered consent if a person's actions indicate that they understand and agree to the proposed terms (Austen-Baker, Qi Zhou 2023).

- operations on the Internet, especially in the field of e-commerce. For example, orders placed when a user purchases a product or service on such platforms as eBay or Amazon and makes a payment. It serves as compelling evidence that they agree to the seller's terms and are willing to receive the product or service at the specified price (Zainutdynova, 2020). When a buyer receives a product or service and does not file a complaint with the seller, it can be regarded as undisputed consent and confirmation that the product has been received and matches the description (Ministru kabineta Noteikumi ... 2024, Article 19). Before making a purchase, the buyer may need to agree to the terms proposed by the platform or the seller (Patērētāja ... 2016). If the buyer proceeds with the purchase and does not object to the current terms, it can be considered as a final acceptance and the conclusion of the contract.

- it is also possible to engage in conclusive actions, conclusive behaviour and conclusive deception, where someone can be deliberately misled without verbal statements. Conclusive behaviour is such behaviour that can lead to the conclusion of an employment contract or another agreement. In cases of convincing deceit, a person does not lie literally or verbally, but through actions and indirect expressions of deception. It is often used by professional fraudsters who are experienced psychologists (they dress in uniforms, bring children or a bag of food with them, involve attractive women or respectable elderly people in their actions). If it is an essential deception (Civillikums 1937, Article 1444), it cancels the entire transaction, as it should be assumed that the person who was deceived did not give their consent to the deal at all, and thus the transaction never actually took place (Civillikums 1937, Article 1444).

- conclusive actions are often encountered in mobile and computer programmes, where users, by using the application or platform functions, perform actions that indicate their agreement with the terms or contracts with the application developer or operator. When a user downloads an application and creates an account, it typically involves accepting the application terms and conditions, as well as its privacy policy (Mobilo ... 2017). The user's subsequent actions, such as logging in or regular use of the application, further confirm this consent. If a user makes a purchase or subscribes within the application, it signifies their agreement to the terms of the contract related to those purchases.

- receiving regular services. If a company regularly receives services and does not protest against them, it may indicate that the company considers these services accepted and its obligations fulfilled. According to Miller: "Regular delivery and acceptance of goods can constitute a final contract if it indicates the agreement of both parties to the sale and purchase of the goods" (Miller 2020, p. 56).

- activities for arranging the premises and preparing good projects. For example, the desire to buy something in a store that is nicely designed and well-organized is stronger as there are conditions such as convenient product placement in well-lit areas that foster positive emotions. Thus, in a grocery shop, this might include the smell of bread, vegetables covered with droplets of water to create a sense of freshness, and a soft, pleasant music playing – all these elements implicitly contribute to the positive impression of the shop. Offices and office equipment bear a similar effect on clients.

- a proper dress code can also be very significant, as it demonstrates the attitude towards potential clients: a willingness to engage and enter into a contract. As it has already been mentioned above, criminals can use the dress code, too. For example, a fraudster may wear the uniform of a specific profession (such as a sailor or a police officer) to enter into a house, while a thief may impersonate a mailman or a plumber.

- payment of a fine by the offender (for example, a motorist), which indicates their agreement with the penalty imposed. These actions mean that the actions of law enforcement agencies are not appealable. Or the payment of interest by the debtor in case of a delay, even if the specific terms of the contract do not mention any interest (Ellis 2019). In addition, there are not only contractually specified interest rates but also statutory interest rates (Civillikums 1937, Article 1765) that do not require special documentation or mention in the contract.

- a designated place for storing clothes (such as a coat rack located in a hallway or reception area, etc.) constitutes a public offer, while leaving clothes in the designated area represents acceptance of this offer

- acceptance or rejection of an inheritance: the intention to accept an inheritance can be expressed either explicitly, orally, or in writing, or through silent actions that, under the appropriate circumstances, can only be interpreted as the fact that the individual acknowledges themselves as an heir (Civillikums 1937, Article 691). In Latvia, an heir should express their intention to accept the inheritance within one year (Civillikums 1937, Article 693). If they do not do so, it also signifies the use of a conclusive action in the form of silence.

- public transport fare. By becoming a passenger and registering with the validator, a person demonstrates through their actions that they agree to the rules set forth by the traffic management (Sabiedriskā 2007, Article 13, Paragraph 7). The passenger, through such conclusive actions, has entered into an adhesion contract with the traffic management authority.

- the conclusion of a power of attorney can occur silently if someone intentionally allows a third party to manage their affairs (Civillikums 1937, Article 2290). If a person knows that they need to handle another person's affairs but does not object to it, this signifies their consent to enter into a power of attorney agreement.

- the employee's failure to fulfil their work duties and the employer's inability to restore the employment relations may be considered sufficient grounds for terminating the employment relations (Civillikums 1937, Article 2193; 9, Article 101, Paragraph 1).

Challenges of Applying Conclusive Actions. Conclusive actions are not applicable in all cases. Just like written or verbal contracts, conclusive agreements should comply with certain legal requirements, be clearly understood, and provable. If an agreement was concluded through conclusive actions, there are usually no issues as long as both parties fulfil all the terms of the contract.

However, potential challenges may include:

- 1) conclusive actions can be interpreted in different ways. It depends on the specific situation, subjective intentions of both parties, and provisions of the law. Misinterpretation of non-verbal signals can lead to misunderstandings, conflicts, improper execution of the contract, as well as ineffective application of the law, creating difficulties in the legal relations between the contracting parties.

- 2) conclusive actions are often subject to ambiguity. Disputes may arise regarding whether a person truly agreed to the terms or the agreement if their consent was not clearly expressed. For example, gestures or facial expressions that may mean one thing in one culture can be interpreted quite differently in another culture, for instance, a nod of the head in Latvia and Bulgaria (intercultural issues).

- 3) if the conclusive actions were not expressed clearly enough, the court may not recognize the contract as concluded between the parties, and it will not have legal force.

- 4) negative perception. Some non-verbal signals may evoke negative associations for clients, which can adversely affect the company's image. An improperly chosen tone of voice, inappropriate facial expressions, or unsuitable clothing can give the client the impression of the lack of professionalism or even cause dissatisfaction.

- 5) if the law prescribes a specific form of expression of will, then a silent expression of will, even if it is really clear, is insufficient. For example, in real estate transactions that require corroboration, such as the registration of land and buildings in the land registry (Tezaurs. Koroborācija ... 2024; Civillikums 1937, Article 1477)

6) the application of conclusive actions may require additional clarifications, resulting in the conclusion of the contract being delayed or even cancelled. Thus, if a sales contract specifies that at least one party is obligated to fulfil their obligation on a specific day or within a certain period, and there is a clearly expressed intent from the parties, the agreed deadline is an integral part of such a contract (Komerclikums 2002, Article 410, Paragraph 1)

7) conclusive actions can be a basis for disputes when questions arise about whether these actions are sufficient to create a binding contract or to conclude, terminate, or amend a contract.

8) in the event of a dispute, it will be more difficult to prove and consider the validity of transactions made on the basis of conclusive actions.

9) disputes sometimes arise regarding whether such actions are directly evidential or not, and which situations are considered relevant to this concept.

10) if the meaning of the conclusive actions differs from that of a written contract, they may also be a basis for dispute and create the need for a court decision on the interpretation and application of the contract.

11) conclusive actions are not based on clearly defined laws or rules. It can lead to legal uncertainty and instability due to the lack of clear definitions regarding what specific behaviour can be considered the basis for concluding, amending, or terminating a contract.

Methods for Resolving Problems Associated with the Application of Conclusive Actions.

Trust and understanding serve as the basis for the application of this type of actions in commercial activities. They enable specific actions to be taken to create legal obligations. However, in order to prevent or reduce the possible negative effects of applying these activities, there are various methods that can be used in commercial practice. They include:

1) careful validation of the contract terms and use of additional documentation. It can help prove the existence of the contract and its content in the event of confusion, disputes, or court inquiries. For business negotiations to be considered an offer, they should contain sufficiently specific and clearly expressed essential terms of the contract.

2) it is important to clearly understand that a party intends to conclude or amend a contract and carefully evaluate each specific situation. For conclusive actions to be considered a form of acceptance, they should be performed under the terms specified in the contract.

3) for the sake of security, it is always important to ensure that all participants are in agreement, have clear arrangements for cooperation, and share mutual understanding.

4) judicial practice and case law are essential elements in the process of legal interpretation of conclusive actions. Court decisions and the creation of precedents help clarify which situations are considered concluded contracts and which criteria establish the existence and use of conclusive actions.

5) business people should be informed about communication techniques to avoid misunderstandings and potential legal disputes. In order to successfully use conclusive actions in business, it is important not only to recognize and interpret non-verbal signals, but also to skilfully adjust communication and interactions according to the situation and the needs of the other party.

6) the court often relies on the past experience of the parties' relations. If their commercial practice continues for a long time, repeatedly, and both parties are satisfied with such developments, the court may consider that both parties have a conclusive agreement to continue such activities.

7) in order to successfully overcome the problems and risks associated with the use of conclusive actions, special attention should be paid to cultural and cross-cultural differences, as well as to regular training for staff on effective non-verbal communication, including professional gestures and communication skills with clients. This may include recognizing non-verbal signals, improving facial expressions and body language, adjusting tone of voice, etc.

8) objective assessment of the specific situations and circumstances in which the actions took place. This includes evaluating the context of the party's behaviour, as well as considering such factors as market rules and norms, commercial customs, judicial practices, and legal precedents.

9) the presence of direct and indirect evidence will be used to resolve the dispute regarding the existence and binding nature of the conclusive action. This may include written contracts, various documents, letters, audio or video recordings of communication, information in emails, and other tangible evidence reflecting the actions and behaviour of both parties.

10) there are legal ways to protect contract participants from potential negative consequences of conclusive actions:

- a preliminary agreement on the use of such actions
- signing and agreeing to contracts that specifically regulate conclusive actions
- studying and applying known information about conclusive actions and the consequences of their application
- legal assistance and consultations from lawyers, social psychologists, and specialists in cross-cultural issues.

In order to implement these methods in practice, it is important to conduct a comprehensive legal review before deciding on actions that can be considered conclusive and to understand the legal consequences and risks associated with such actions.

11) regular communication between the contracting parties should take place in order to avoid ambiguities and misunderstandings

12) conclusive actions in commercial practice depend on the specific circumstances of each case and require careful assessment of their factual and legal aspects, specifically, the situation in which the conclusive actions took place and how they may affect the legal relations

13) the use of artificial intelligence for analysing and interpreting conclusive actions, enhancing their accuracy, and preventing their misuse.

Conclusions.

1) Conclusive actions are a significant element of commercial relations; they provide a flexible mechanism for concluding and interpreting contracts in commercial dealings, allowing for agreements to be made even without words or written documents, which requires additional attention from business people.

2) Through conclusive actions, companies can establish long-term and cost-effective relations with clients and partners. Such actions create obligations as well as contribute to maintaining strong commercial relations which are crucial for secure business connections.

3) Despite the fact that conclusive actions are recognized and used in many countries, their application may vary depending on local legal systems, judicial practices, and traditions. It is also important to consider the cultural nuances and context in which the interaction takes place, as some gestures or statements may be interpreted differently across various cultures and countries. However, regardless of the legal system, conclusive actions are an important tool for simplifying and accelerating business processes.

4) It is reasonable to amend Article 1428 of the Civil Law, which states, “The will may be expressed both explicitly and implicitly”. The word “implicitly” should be removed from this article and replaced with “or through conclusive actions”.

5) The use of conclusive actions has a significant positive effect; however, it is essential to consider the negative consequences and to apply these actions legally and prudently in order to avoid potential disputes in the future. The negative side of the use of conclusive actions is that they can result in legal issues if used beyond legal and cultural norms.

6) Disputes regarding conclusive actions are usually resolved through the courts or another dispute resolution body, taking into account the available evidence and other factors. These actions are significant because they can serve as evidence of the conclusion of a contract and the acceptance or rejection of the contract terms.

7) In order to prevent or reduce the negative consequences of conclusive actions, various methods and techniques can be applied, e.g. supplementary written documentation and enhanced communication between the contracting parties.

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POPULAR INITIATIVE IN LATVIA

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Abstract. Article 78 of the Latvian Constitution provides for the popular initiative, i.e., the right of not less than one tenth of the electorate to submit a fully elaborated draft law for consideration of the parliament. If the parliament does not adopt it without change as to its content, a referendum is held. Such regulation was characteristic in Europe at 1922, when the Latvian Constitution was adopted, but it is distinctive today, as in other European states submission of a draft law signed by the voters to the parliament usually does not create an obligation of the parliament to adopt the law or to hold a referendum. Since 2012, at least 10 000 Latvian citizens have the right to hand in a collective submission to the Latvian parliament. The collective submission is a form of direct democracy in the broadest sense, however, it is different from the popular initiative. It is up-to-date and simpler mechanism than popular initiative and subsequent referendum provided for in Article 78 of the Latvian Constitution, and it gives a small number of Latvian citizens opportunity to put a significant for them topic in the agenda of the parliament.

Key words: direct democracy; popular initiative; referendum; collective submission; Latvian Constitution (Satversme); Latvian parliament (Saeima).

Introduction. The Latvian Constitution is among the ten oldest valid constitutions in Europe (Balodis, Pleps 2023, p. 85) and the oldest in Eastern and Central Europe still in force. It was adopted by the Constitutional Assembly of Latvia on 15 February 1922. After the 1934 *coup d'état* the Constitution was suspended. On 17 June 1940 the Soviet Union occupied Latvia. The Constitution of 1922 was reintroduced after the restoration of independence partly on 4 May 1990 (the Supreme Soviet of LSSR declaration On the Restoration of Independence of the Republic of Latvia, 1990) and fully on 21 August 1991 (Law On the Statehood of the Republic of Latvia 1991).

Thus the Latvian Constitution mainly contains regulation characteristic for Europe in 1922, and after the restoration of independence it was supplemented by new up-to-date regulation.

The goal of the research. The purpose of this article is to analyse regulation of the popular initiative in Latvia and its implementation and to compare it with the popular initiative in a number of other European states, and on this basis draw conclusions on positive sides and shortcomings of the Latvian regulation. The Article analyses whether the collective submission to the parliament can be considered a form of popular initiative, and compares the collective submission and the popular initiative. The purpose is also to evaluate the results and effectiveness of the use of relatively new regulation on collective submission in Latvian practice.

Literature review. In the Latvian constitutional theory, main findings on regulation of popular initiative and referendums of the Latvian Constitution (Satversme) of 1922 were made already by Kārlis Dišlers (Dišlers 1921, 1923, 1929, 1930, 1933, 2004). Afterwards, provisions of the Latvian Constitution on popular initiative and referendums were analysed by commentaries to the Constitution (Balodis, R. (ed), 2023), and by a number of articles (Pastars, Pleps, 2004, 2007), including those of the author of this article (Nikulceva 2009, 2010, 2012, 2013, 2024). The collective submission to the Latvian parliament is never analysed from the legal viewpoint.

Research methods. The methodological basis of the article is theoretical, analysis, synthesis, comparison, generalization and provisions that reveal conceptual approaches to the researched issues.

1. Notions of popular initiative and referendum

The popular initiative and the referendum are two forms of modern direct democracy, which is an integral part of the legal systems of European states. The referendum is a mechanism for submitting an issue, a decision, or a law that is being considered or passed by a governmental body to the people for a vote (Suksi 1993, p. 6; Butler, Ranney 1994, p. 1; Nikulceva 2013, p. 24). The popular initiative is a request by a certain number of voters to a governmental body to adopt, amend or repeal a law or implement a certain action (Dišlers 1930, p. 111; Suksi 1993, p. 8). In a referendum, the people decide on an issue put to the vote, so the purpose of a referendum is to make a decision on an issue that a public body is examining, or to correct a decision already made by such body. The purpose of a popular initiative is to indicate a matter on which it is necessary to adopt a law or implement another action of a public body, that is, a popular initiative points to inaction of a public body (Nikulceva 2013, p. 5).

Unlike representative democracy, a popular initiative and a referendum are characterized by an extremely wide variety of forms. In Europe, there are no two states with exactly the same regulation of direct democracy, each state has its own, different system (Nikulceva 2010). How effective direct democracy is, depends on both the legal framework and the political environment in a state.

The Latvian Constitution provides for a popular initiative and seven different types of referendums: in Article 72 – optional veto referendum; in Article 77 – mandatory constitutional referendum on Articles 1, 2, 3, 4, 6, and 77 of the Constitution; in Article 68 – mandatory referendum on the European Union membership and optional referendum on substantial changes in terms of Latvian membership in the European Union; in Article 78 – popular initiative and “automatic” referendum; in Articles 14 and 48 of the Constitution – referendum on dissolution of the parliament (Balodis 2023, p. 259, 260). Institutes of direct democracy of the Latvian Constitution, including those provided for in Article 78, are inspired by the Constitution of the German Reich (1919), called also the Weimar Constitution (Šilde 1976, p. 363).

2. Popular initiative provided by Article 78 of the Latvian Constitution

According to Article 64 of the Constitution of Latvia “The Saeima [the parliament], and also the people, have the right to legislate, in accordance with the procedures, and to the extent, provided for by this Constitution.” Article 65 of the Constitution names subjects, who have the right of legislative initiative, and one of such subjects is the electorate: “Draft laws may be submitted to the Saeima by the President, the Cabinet (the government) or committees of the Saeima, by not less than five members of the Saeima, or, in accordance with the procedures and in the cases provided for in this Constitution, by one-tenth of the electorate.”

Article 78 of the Constitution establishes the procedure for implementation of the popular initiative: „Electors, in number comprising not less than one tenth of the electorate, have the right to submit a fully elaborated draft of an amendment to the Constitution or of a law to the President, who shall present it to the Saeima. If the Saeima does not adopt it without change as to its content, it shall then be submitted to national referendum”.

Thus, Article 78 of the Latvian Constitution contains two legal institutes: the popular initiative and the following referendum if the draft law submitted by the electorate has not been adopted by the parliament without amendments. This type of referendum in the Latvian constitutional theory is described as “automatic referendum” (Dišlers 1930, p. 112).

Prof. Kārlis Dišlers explains that in the case provided for in Article 78 of the Constitution, the popular vote takes place or does not take place depending on whether the parliament accepts or does not accept the law proposed by the people without changes in terms of content. In this case, the people’s vote may not take place at all, so we are not dealing with a mandatory referendum here; but if the people’s vote takes place, it is not at the people’s own initiative, so it is not an optional referendum. Since the popular vote in this case is set depending on the parliament’s approval or disapproval of the law proposed by the people, and takes place automatically, this type of referendum could be called

an automatic referendum (Dišlers 1930, p. 112). However, similar type of referendum in Switzerland is considered being a mandatory referendum (Nikuļceva 2013, p. 122).

Article 79 of the Latvian Constitution provides for the number of required votes depending on whether a referendum takes place on a draft amendment to the Constitution or on a draft law. With regard to draft amendments to the Constitution, no participation quorum is specified, but at least half of the electorate must vote in favour (approval quorum). A draft law is adopted at the referendum if the number of voters is at least half of the number of voters as participated in the previous parliamentary election and if the majority has voted in favour of the draft law.

Alongside with the Constitution, the popular initiative and the referendums are regulated by the law “On National Referendums, Legislative Initiatives and European Citizens' Initiative” (before 20 September 2012 the name of the law was “On Referendum and Popular Initiative”). The procedure of collecting voters' signatures were substantially changed by amendments of 8 November 2012 to this law. Before, for “steps” could be identified in the process of the popular initiative and following “automatic” referendum:

- 1) not less than 10 000 citizens of Latvia entitled to vote, whose signatures have been certified by a public notary, must submit a fully elaborated draft law to the Central Election Commission;
- 2) the Central Election Commission organizes the collection of voters' signatures. If at least one-tenth of voters' signatures have been collected, the draft law is submitted to the parliament;
- 3) the parliament adopts the draft law without amendments according to the content (step 4 does not follow) or does not adopt the draft law without amendments according to the content;
- 4) a referendum on the draft law is held.

On 2012, the amendments to the Law “On National Referendums, Legislative Initiatives and European Citizens' Initiative” has been adopted, changing this procedure. For the collection of voters' signatures on a draft law or a draft amendment to the Constitution an initiative group shall be created, which can be a political party or an association of political parties or an association of not less than ten voters. A draft law or a draft amendment to the Constitution for which signatures are to be collected must be registered with the Central Election Commission. The signatures of voters can be certified not only by public notaries, but also by municipal authorities, and signatures can also be collected electronically. If the initiative group collects all necessary one-tenth of all voters' signatures, the draft law is submitted to the parliament, and steps 3 and 4 follow.

3. Popular initiative in Europe

In Austria, Hungary, Lithuania, Poland, Romania, Slovenia, Spain, and some other European states a certain number of citizens have the right to submit a draft law to the parliament (Nikuļceva, I., 2013: 137-140). Such right exists also in Finland, Estonia, in a number of states of the USA, as well as provided at the level of the European Union (Balodis 2023, p. 283). However, usually dismissal of a popular initiative by the parliament is not followed by a referendum. In most European states submission of a draft law signed by the voters to the parliament does not create an obligation of the parliament to adopt the law or to hold a referendum (Nikuļceva 2009). The parliament is under the obligation to consider the draft law submitted by the electorate, but it is entitled at own discretion to adopt it, to reject it, or to adopt a law on the same matter but with different content.

Only in Switzerland, at the national level, it is provided that if the parliament (the Federal Assembly) does not accept the amendments to the Constitution submitted by the voters without significant changes (Federal Constitution of the Swiss Confederation, 1999: Article 139) referendum will be held, however, the regulation is much more flexible than in Latvia, as the voters may vote both on the draft amendments to the Constitution submitted by the voters and on the alternative law (counter-proposal) adopted by the parliament. If the parliament has adopted an alternative law, voters vote in a popular vote on both draft amendments to the Constitution, as well as on which of the two laws should enter into force if both are supported (Federal Constitution of the Swiss Confederation, 1999: Article 139b).

A similar system as in Latvia exists in Germany at the level of several states (Länder), that is, if the state parliament does not accept a popular initiative submitted by the voters, a referendum must be held, however, in German states, similarly to Switzerland, the state parliament (Landtag) has the right to submit an alternative law to the referendum (Kaufmann, Waters 2024, p. 64).

4. Popular initiatives and “automatic” referendums held in Latvia

On 30 March 2000, 12 337 Latvian citizens submitted to the Central Election Commission the draft law “Amendments to the Energy Law”. The draft law was aimed at keeping a national energy supply company in the state ownership. The Central Election Commission organised collection of voters’ signatures. In fact, 307 330 voters or 22,9 % of the number of the eligible voters supported the draft law, thus it was submitted to the parliament. The parliament adopted this draft law submitted by the voters without changes in content (Information of the Central Election Commission, 2000).

The necessary number of signatures of at least one-tenth of the voters was also collected for the draft laws “Amendments to the Constitution of the Republic of Latvia” and “Amendments to the law “On state pensions””. The first law was directed to include in the Constitution the right of citizens to initiate dissolution of the parliament. The second draft law provided for increase of old age pensions. Since the parliament did not adopt these laws without changes in content, on 2 August 2008 and 23 August 2008, respectively, referendums were held. In both cases, the required number of votes was not reached (Information of the Central Election Commission, 2008). Although 608 847 voters on 2 August 2008 voted “for”, the draft law “Amendments to the Constitution of the Republic of Latvia” was not adopted in the popular vote. In order amendments to the Constitution be adopted by a referendum, at least 757 468 voters, or half of all eligible citizens, had to vote “for” in accordance with Article 79 of the Constitution (Information of the Central Election Commission, 2008).

On 9 September 2011, the draft law “Amendments to the Constitution of the Republic of Latvia” signed by 12 533 voters was submitted to the Central Election Commission. The draft law provided for the amendment of Articles 4, 18, 21, 101, and 104 of the Constitution, including the provision on the Russian language as the second state language along with the Latvian language. The Central Election Commission organised collection of signatures, and 187 378 voters or 12,14% of the number of all voters signed the draft law. On 22 December 2011, the parliament rejected these amendments to the Constitution. Therefore, the draft law “Amendments to the Constitution of the Republic of Latvia” was put to the referendum, which took place on 18 February 2012. 1 098 921 voters or 71,13% of all eligible voters took part in the referendum. 24,88% of the voters voted “for”, while 74,8% voted “against” (53,19% of all voters) (Information of the Central Election Commission 2012). For the adoption of amendments to the Constitution, Article 79 of the Constitution provides for approval (not participation) quorum, that is, at least half of all eligible voters must vote “for”, regardless of how many voters participate. Therefore, this referendum has formally ended without a result. However, more than half of all eligible voters voted “against”, thus voters have actually confirmed that Latvian is the only state language in Latvia. For the first time in the history of Latvia, a specific opinion (even if it was “against”) was expressed by the majority of all voters.

Thus the popular initiative and “automatic” referendum provided for in Article 78 of the Constitution have only given a positive result once, when the parliament adopted the draft law “Amendments to the Energy Law” submitted by the voters in 2000. “Automatic” referendums have never given a positive result, because a quorum requirement has never been reached.

Since the 2012 amendments to the Law “On National Referendums, Legislative Initiatives and European Citizens' Initiative” 29 popular initiatives have been registered by the Central Election Commission, but the required number of signatures – at least one tenth of the electorate – within 12 months has never been collected (Information of the Central Election Commission. Initiatives for which the collection of signatures has ended; Initiatives registered for signature collection).

5. Collective submission to the Latvian parliament- notion and regulation

Since 19 January 2012, Article 131.³ of the Rules of Order of Saeima (Rules of Order of Saeima, 1994) provides the right for not less than 10 000 Latvian citizens who have reached the age of 16 to submit a collective submission to the parliament.

The Rules of Order of Saeima does not mention issues on which a collective submission can be handed in, however, it should be taken into account that the parliament is a legislator, so the collective submission must concern an issue that can be resolved through legislation. The main difference from the popular initiative is that, within the framework of the popular initiative, the voters submit an already prepared draft law, while the collective submission is formulated in a free form and includes an idea about an issue that can be resolved by the law. Collective submission is considered being a “submission”, that is, “a document, which includes a request, complaint, proposal or enquiry within the competence of the institution” (The Latvian Law on Submissions 2007, Article 2). Thus, the collective submission is different from the popular initiative. However, the collective submission may be considered as a form of direct democracy in its broadest sense.

After receiving such a collective submission by the parliament, it is transferred it to the Mandates, Ethics and Submissions Committee of the parliament for initial consideration. At the meeting of the Committee, a representative of the submitters has the right to substantiate the collective submission and participate in the discussion. After evaluating the submission, the Committee prepares a report and a draft decision of the parliament. Next, the parliament can transfer the collective submission to one of the parliament’s committees for consideration, drafting of a law, or it can be rejected.

6. Collective submission in Latvian practice

Since 2012, 155 collective submissions have been submitted to the Latvian parliament, of which 49 collective submissions were made during the current parliament (Saeima information. Collective submissions 2024). Collective submissions concern different topics, such as: registration of cohabiting persons; national military service as voluntary; reduction of the working week to four days; the ban on holding a position in state institutions and running in elections for persons who support Russian aggression; ban on flavoured e-cigarettes; prohibition for a person who does not have a higher education be elected to the parliament; provide that the President of the State is elected by the citizens of Latvia; the right of parents of large families to retire earlier; revision of loan interest rates; 5% value added tax (hereinafter – VAT) rate for agricultural products specific to Latvia; banning the use of personal smart devices in schools. The collective submissions are about a wide variety of topics: constitutional issues, health, social protection, education, and financial issues. In some cases, collective submissions reflect the social and political current events of the time, but in some cases, the parliament is invited to decide on issues that have not being on its agenda.

Of 155 collective submissions, the parliament has accepted 54 by adopting the corresponding law. In other cases, the parliament has rejected a collective submission or it is under consideration. The acceptance of a collective submission does not mean that the law adopted by the parliament includes exactly the kind of regulation that the authors of the submission wanted, however, the issue has been resolved. For example, on 3 November 2023, the parliament received a collective submission for maintaining the existing 5% VAT rate for agricultural products specific to Latvia (Saeima information. Collective submissions, 2024). After examining the issue in the Mandates, Ethics and Submissions Committee and then in the Budget and Finance (Taxes) Committee, a corresponding draft law was prepared, and on 7 December 2023, the parliament adopted amendments to the Value Added Tax Law, determining in 2024 to these agricultural products the reduced VAT rate of 12% (instead of 5%). Thus, the goal of setting a reduced VAT rate for agricultural products was achieved, however, it was not set 5% that the applicants wanted. The matter of the VAT rate for agricultural products was actual at the end of 2023, because in 2023 this rate was 5%, but in 2024 it was planned to return to the general 21% VAT rate.

Conclusions. In modern Europe, direct democracy is often added to representative democracy. Article 78 of the Latvian Constitution includes historical institutes of direct democracy, characteristic for European constitutions in the period of time between the first and the second world wars. Today, in most European states submission to a parliament of a draft law signed by a number of voters does not create an obligation for the parliament to necessarily pass the law or hold a referendum.

Taking into account the complexity of laws nowadays, it is almost impossible for the voters to develop such a draft law or amendments to the Constitution that the parliament could accept without amendments. Today the popular initiative is aimed at instructing the legislator to regulate an issue in a certain way, it is not aimed to require the legislator adopting the exact wording of the law submitted by the voters.

The number of voters required to sign the draft law by Article 78 of the Constitution – at least one-tenth of the electorate – is very high. It is advised that the right to submit a draft law or a constitutional amendment should be given to a number of voters that does not exceed two percent of the total number of voters (Pallinger 2007). High barriers to popular initiative create undue advantages for well-organized groups of society. On the other hand, low requirements for the number of voters' signatures, among other things, promote the integration of minorities in society and ensure diversity, ignore fewer interests and needs, and leave fewer problems unresolved (Pallinger 2007, p. 59, 68). In Latvia, the threshold defined in Article 78 of the Constitution – not less than one-tenth of voters' signatures – is very high. In the entire period of time since the amendments to the law "On National Referendums, Legislative Initiatives and European Citizens' Initiative" on 8 November 2012, which establish that the voters themselves must collect all necessary signatures of at least one-tenth of the electorate, these necessary signatures never has been collected.

The Latvian Constitution provides for a very high quorum requirement. The required quorum is not reached in any of referendums held in accordance with Article 78 of the Constitution. In Latvia, the prevailing opinion is that a small number of voters cannot be provided by the right to overrule the parliament elected by a bigger number of voters. However, today those citizens, who are active, decide. The number of voters in referendums is also usually less than in parliamentary elections. This is true for different countries (Butler, Ranney 1994, p. 17; Kobach 1993, p. 84).

The collective submission to the Latvian parliament is a more up-to-date and simpler mechanism than the popular initiative and the subsequent referendum provided for in Article 78 of the Latvian Constitution. Although the majority of collective submissions have not resulted in a law passed by the parliament, it has given a positive result in about a third of cases. The regulation provided for in Article 78 of the Constitution has given a positive result only once, when the parliament adopted the draft law "Amendments to the Energy Law" submitted by the voters in 2000. Referendums on draft laws submitted by the voters but rejected by the parliament have never given a result, because the quorum requirements had not been reached.

Since the amendments to the law of 8 November 2012, no collection of voters' signatures according to Article 78 of the Latvian Constitution, has been successful. For the collective submission it is necessary to collect only 10,000 signatures, which is easy to reach, and there are many collective submissions handed in to the parliament.

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CHARACTERISTICS OF WORK MOTIVATION OF EMPLOYEES IN ORGANIZATIONS DURING CRISIS CONDITIONS

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Abstract. This scientific article delves into the examination of how crisis situations affect the work motivation of employees within an organization. The research is grounded in the analysis of theoretical aspects of motivation, the influence of crises on employee incentive mechanisms, and an exploration of employees' attitudes towards various work motivation factors. Encompassing four diverse organizations offering a range of business services, this research aims to determine the impact of crises on employee work motivation across varying contexts.

Data were collected through surveys administered to employees, managers, and leading specialists within these organizations. The surveys were conducted anonymously, adhering to strict confidentiality policies. The survey process consisted of two phases, with 89 out of 117 employees participating in the initial phase and 84 in the subsequent stage.

The findings of the study underscore the importance of effectively managing employee motivation during crises. This involves the swift adaptation of the motivation system, considering both material and non-material incentives, particularly for key specialists. Effective management of salaries and bonuses remains paramount. Furthermore, intangible factors such as involvement in corporate processes, assuming additional responsibilities, and fostering career growth significantly influence employee motivation during times of crisis. Interpersonal relationships and the recognition of employee accomplishments also assume substantial roles in enhancing motivation.

Key words: work motivation, employees, motivation factors, crisis, organizations, survey

Introduction. Modern society is currently experiencing an ongoing wave of crisis events, including financial crises, economic recessions, pandemics, political instabilities, and other circumstances that induce uncertainty, profoundly impacting organizations and their employees. According to the International Monetary Fund, the number of economic recessions and natural disasters continues to rise, presenting significant challenges for businesses and society as a whole (IMF, 2022). The economic consequences of global crises can remain noticeable for an extended period, and the restoration of stability in organizations may take years. Crisis phenomena compel organizations not only to reconsider established personnel management methods but also to seek new approaches for motivating their employees.

Crisis situations not only structurally change organizations but also give rise to psychosocial difficulties, introducing uncertainty and sudden changes into the work environment. For example, measures taken to combat the pandemic, such as self-isolation, restrictions on mass gatherings, and workplace and school closures, have created an environment that significantly affected both employees and organizations (Pourron, 2020). The International Labour Organization noted in 2021 that workers facing prolonged working hours, reduced leisure time, and concerns about their safety experienced burnout. Those transitioning to remote work felt a sense of isolation and encountered blurred bounda-

ries between the workplace and home environment (ILO Monitor, 2021). In such circumstances, employee motivation, whether they worked on-site or from home, faced serious challenges.

In times of crisis, organizations also face the threat of losing qualified employees (Smirnov, 2007). Moreover, during such periods, organizational leadership often resorts to a directive management style, which is frequently perceived by employees as disrespectful and dismissive of their opinions. This negatively affects the organization's reputation and complicates the recruitment of new talent, who tend to avoid working for the organization due to the risks posed to their professional reputation. Effective motivation management in such situations can contribute to staff retention and organizational sustainability. Many researchers emphasize the importance of work motivation as an element of human resource management that influences performance and organizational competitiveness (Csákay et al., 2021; Uka & Prendi, 2021; Lohela-Karlsson et al., 2022; Azar & Shafaghi, 2013). For instance, a study by Rozi & Sunarsi (2019) identified a significant correlation (0.69) between motivation and employee performance. Work motivation becomes a driving force that sustains employee activity and morale, enabling successful crisis management and organizational development.

However, in crisis situations, tried-and-true methods of work motivation do not always work effectively due to significant organizational changes and employees' psychological states. Uncertainty about the future, stress, emotional difficulties, insecurity, and fear induced by the crisis can alter employees' perception of motivation methods and systems that were successful in more stable times.

The aim of this research is to analyze employee work motivation in an organization during times of crisis. Special attention is given to analyzing factors influencing work motivation and their role in situations of uncertainty and instability. Effective motivation management in such situations can contribute to maintaining high productivity and organizational stability.

To achieve this goal, the following questions were formulated: RQ1: What is employee work motivation, and what factors influence it? RQ2: What peculiarities exist in employee work motivation in crisis conditions?

RQ3: What interventions can organizations implement to enhance employee work motivation during times of crisis?

Literature review. In research dedicated to organizations, the motivation of employees in crisis situations holds a special place (Gigauri, 2020). Crisis circumstances can create additional challenges for personnel, which, in turn, lead to changes in motivational factors and mechanisms. The term "crisis" has various definitions (Wang and Hutchins, 2008), but at its core lies the idea that a crisis can emerge suddenly and have a substantial impact on both the internal and external aspects of organizations due to various events. The most comprehensive definition of a crisis is provided by Deming (2000), who defines it as any deviation from the standard functioning mode of a system or a specific element within it. Such deviations can trigger a stress reaction among an organization's employees. A crisis is characterized by the necessity of making non-standard decisions, harnessing the professional and personal potential of the personnel, and experiencing both positive and negative consequences for the organization. Factors contributing to a crisis in an organization may include low labor productivity, customer attrition, difficulties in achieving the organizational goals, high staff turnover, violations of labor discipline, and challenges in personnel recruitment. Understanding the specifics of crisis situations and the employee needs in this context allows organizational leaders to manage employee work motivation more effectively and create a stable and productive work environment during times of uncertainty.

This is particularly important as employee motivation directly influences labor productivity within the organization, ultimately affecting overall performance (Mujeeb & Ahmad, 2011; Adeyeye, 2021). A decline in employee motivation leads to a decrease in job satisfaction. The loss of job satisfaction affects an employee's state, leading to reduced readiness for effective work, irritability, a tendency towards conflicts, decreased interest in their job, and reluctance to cooperate with company manage-

ment and colleagues (Sandiford & Divers, 2011). It's essential to note that reduced motivation or its absence cannot be fully compensated for by other organizational or technical components.

The definition of work motivation can vary depending on different approaches in the fields of organizational psychology and management. Motivation is often regarded as a process that explains the intensity, direction, and persistence of an individual's efforts toward achieving goals (Robbins et al., 2009). Cox and co-authors (2005) define motivation as providing incentives for action to satisfy needs or desires. A well-motivated employee often works more efficiently and productively than an unmotivated one, thereby creating greater value for the organization (Vlacsekova & Mura, 2017; Stachová et al., 2018; Knapkova, Martinkovicova, & Kascakova, 2020; Morkoviciute & Edriulaitiene, 2020; Paais & Pattiruhu, 2020; AlQersh et al., 2022).

Work motivation in management is a tool that helps a manager maintain the productivity and efficiency of employees (Palm et al., 2020). At the core of good work motivation lies the right behavior of the leader with employees, providing appropriate compensation and working conditions (Muliani et al., 2019). Motivation and incentivization of work are necessary both to attract qualified specialists and to retain existing employees in the organization, motivating them to carefully fulfill their work duties (Mineva, 2020).

Work motivation is a key aspect, not only from a managerial perspective but also from a socio-psychological point of view, and it requires special attention (Gagne et al., 2010; Robbins et al., 2009). In times of crisis, employees of organizations face various challenges, including stress, burnout, emotional tension, and fear. The organizational and external environment can also be characterized by the presence of both reliable information and misinformation. For example, crisis situations caused by disease outbreaks, terrorist attacks, or natural disasters can affect not only the structural and operational aspects of the organization but also significantly impact the human factor (Wang & Hutchins, 2008).

In the field of personnel management, motivation is commonly categorized into two main types: intrinsic and extrinsic motivation. Intrinsic motivation refers to inspiring employees based on their personal internal drives and desires, including factors such as personal fulfillment, enjoyment of the work itself, and a sense of purpose. Extrinsic motivation, on the other hand, relies on external factors such as rewards, recognition, or bonuses to motivate employees to perform specific tasks. Hattie and colleagues' research (2020) identifies four important dimensions of motivation. Among them are personality factors, such as personal expectations and self-belief in one's abilities (self-efficacy), social aspects, including the influence of modelling and comparison with others, and cognitive aspects, such as self-regulation. Other dimensions include the goals employees set for themselves and the perceived costs and benefits.

The motivation of each employee depends on a multitude of factors. Internal aspects include individual personality traits, work habits, and internal needs. External factors include the standard of living, moral and value systems, both within the organization and in society, as well as various aspects of relationships within the organization (Rahimić, Resić & Kožo, 2012). Additionally, external factors such as working conditions, leadership and management, and the peculiarities of organizational culture should also be considered. Vavra and et al. (2021) identify seven key motivational aspects, including workplace safety, fair compensation, social security and benefits, work climate, basic rights and freedoms, corporate image, and equal opportunities. According to Machova et al. (2022), one of the most common motivational factors is salary and bonuses. However, Badjrami and et al. (2021) emphasize that job security or the lack thereof can also significantly influence employee motivation. When organizational leaders are informed about the factors influencing employee motivation, they can take appropriate measures to enhance workplace productivity. This, in turn, contributes to the overall economic growth of the company (Cantele & Zardini, 2018; Stacho et al., 2020).

A well-designed and crisis-adapted employee motivation system is crucial for organizational success. Such a system not only satisfies employees' internal needs and values but also encourages high

performance, professional skill development, and increased work efficiency. Research confirms that motivated employees exhibit several characteristics that contribute to both personal and professional growth. They are inclined toward autonomy and freedom in their work, exhibit greater determination, and make more effective use of opportunities for development compared to less motivated colleagues. Such employees also demonstrate a higher commitment to their work and the organization as a whole (Vansteenkiste, Lens & Deci, 2007). However, it is essential to consider that many incentive methods can become obsolete over time, as employees may no longer perceive them as effective means of motivation.

In times of crisis, it is crucial for the motivation system to be adapted to the specificity of crisis and organizational conditions, considering that motivational factors can change rapidly in such situations. Sometimes, more attention is given to support measures that are relevant to the current situation, such as psychological support, flexible work schedules, and the possibility of remote work, which can help employees cope with uncertainty and stress, thereby enhancing their motivation and productivity.

The employee motivation system may encompass various incentives tailored to the needs of the staff, especially key specialists, such as bonuses, rewards, opportunities for professional growth, and more. These measures can serve as powerful motivators for employees, encouraging them to increase their productivity during a crisis. It is crucial for the organization to demonstrate flexibility and adaptability to changing circumstances, thus maintaining a high level of motivation among the staff and ensuring stability and success during periods of uncertainty.

Crisis conditions also emphasize the importance of finding a balance between the interests of the organization and its employees to keep both parties motivated (Pritchard, 1995; Mefi & Asoba, 2021). For example, during the COVID-19 pandemic, employees primarily aimed at ensuring their health and survival, while organizations sought stability and survival in crisis conditions. Bandura's (2001) social-cognitive theory suggests viewing individuals as agents capable of managing their actions and influencing the organization. Therefore, it is essential to consider the intentionality and self-regulation of employees. Employees are likely to self-regulate their behavior and analyze the situation in the context of a crisis.

Management support should typically be integrated into the company's policies and rules during a crisis, enabling leadership to formulate clear strategies and maintain employee motivation (Wolor et al., 2020). Additionally, it is essential for the leadership to conduct regular reviews and assess the effectiveness of implemented measures to support and motivate employees during a crisis, allowing for quick adjustments in response to changing circumstances and staff needs.

Research Methodology. The aim of this research is to investigate the peculiarities of employee work motivation within an organization during times of crisis. This study encompasses the examination of theoretical aspects of work motivation and assesses how a crisis influences the processes of motivating employees within an organization.

To conduct this research, four organizations offering diverse business services were meticulously selected. The spectrum of services included leasing, financial consulting, personnel recruitment and training, logistics and freight transportation, IT support, and more. This selection was driven by the overarching goal of encompassing various business sectors and gaining comprehensive insights into how a crisis impacts employee motivation in distinct contexts.

During the research, surveys were conducted among employees of the organizations, as well as among departmental managers and leading specialists. The aim of the survey was to identify the main reasons for changes in employee work motivation, determine the most significant factors influencing work motivation, and propose possible ways to improve the situation. To adhere to ethical standards, the survey was conducted anonymously, aligning with data privacy and protection policies, with participation being entirely voluntary. Additionally, an analysis was conducted to comprehend the level of motivational activity within these organizations before the onset of the crisis and the subsequent

changes that transpired during its development. Furthermore, financial reports from the previous year were analyzed to gain a better understanding of the crisis's impact on the organization.

The data collection process involved two distinct stages of surveys, with survey questionnaires being disseminated to organization employees via email. In the first survey, which consisted of 11 questions, 89 people participated (out of a total of 117 personnel in the organizations). In the second survey, which had 16 questions, 84 people participated.

The obtained results were analyzed, and based on these findings, conclusions were drawn, and recommendations were developed to improve the situation within the organization.

Research Results. The research of employee motivation within an organization was conducted under the challenging conditions of a crisis, including the impact of the COVID-19 pandemic, which significantly altered the work environment and conditions. The swift transition to remote work, self-isolation, increased workloads, and uncertainty about the future created significant challenges for employee motivation. It is in this context that conducting the research became extremely important, as it allowed us to identify how these factors affect employee motivation and, consequently, work productivity in organizations. Furthermore, the research enabled the authors to ascertain the influence of various factors that most frequently affected employee performance. To understand the primary reasons for changes and improvements in the situation, employee satisfaction with working conditions was also examined.

The analysis of motivation systems in the examined organizations reveals that, prior to the crisis, various methods of incentivizing and motivating employees existed, primarily focused on financial incentives such as performance-based bonuses, long-service benefits, an extensive social package, annual bonuses, meal subsidies, fitness compensations, and others. However, due to the crisis situation, organizations encountered financial difficulties, leading to a reduction in personnel expenses. This manifested as a decrease in motivational components and changes in work schedules, including the transition to remote work, among other measures. The crisis conditions also resulted in an increased workload for employees, difficulties in delineating the boundary between personal and working time, and challenges in communication with colleagues. Additionally, measures such as salary indexation cancellation, employee salary reductions, bonus cuts, and the suspension of the development and implementation of social packages were observed. Financial statement analysis indicates a decline in profits in these organizations, confirming that they are facing a serious crisis.

During the research, two surveys were conducted among employees, senior specialists, and department managers. In the first survey, 89 respondents participated, accounting for 76.1% of the total personnel of organizations, while in the second survey, there were 84 respondents (71.8%). The first study revealed that many respondents have significant work experience within their organizations: 32.3% have more than four years of experience, 16.9% have worked for 3-4 years, 30.3% for two years, and 20.2% for less than one year. As for their job positions, 49.4% identify themselves as specialists, 27% as senior specialists, 14.6% as junior specialists, and 9% hold managerial and leadership positions. The survey results provide valuable insights that deepen our understanding of the specific factors motivating employees during times of uncertainty and change. A significant majority of respondents, 89.9%, identified salary as a primary motivational factor. This is unsurprising, considering the economic instability brought about by crisis conditions, including the pandemic, and the increased financial demands placed on many employees. Additionally, 79.8% of respondents highly valued additional payments in the form of bonuses and incentives. This suggests that employees desire recognition and rewards for their work during crisis conditions, which can significantly boost their productivity.

The survey results also highlight the importance of investment in professional development, with 50.6% of respondents expressing interest in this area. Furthermore, the organization's commitment to its employees is highly regarded, emphasizing the significance of staff development, training, and

recognizing employees as valuable assets to the organization. An expanded social package, including additional benefits, medical insurance, and other bonuses that enhance employees' quality of life, was identified as a significant motivational factor for 61.8% of employees. These material incentives play a crucial role in maintaining employee motivation during periods of uncertainty.

When it comes to non-material motivators, 71.9% of respondents expressed an interest in career advancement. This indicates that even in times of uncertainty, many employees aspire to develop and progress within the organization. Additionally, 51.7% of employees expressed a desire to increase their influence and level of responsibility, indicating their eagerness to make a greater contribution to the organization's activities.

Furthermore, 46.1% of those surveyed expressed a willingness to take on more responsibility and have a greater impact. This fact highlights employees' inclination to actively participate in business processes and assume higher levels of responsibility during times of crisis, which can sustain their motivation and contribute to achieving the organization's objectives.

Finally, 37.1% of respondents consider praise from their managers the most effective form of moral encouragement. This underscores the importance of recognizing and rewarding employees' efforts and achievements during times of crisis, which can promote stronger motivation and enhance overall team effectiveness.

These results underscore the importance of considering both material and non-material factors in employee motivation during periods of instability. They caution organizations against focusing too narrowly on one aspect of motivation, advocating for more flexible management practices to maintain high levels of employee motivation.

The research results further indicate that, despite positive trends, certain issues exist that could adversely affect productivity within the organizations. These problems should not be underestimated, as they may lead to a slowdown in business processes and a reduction in overall effectiveness. According to 36.9% of respondents, one of the primary difficulties is the inefficiency of communication with colleagues in remote settings. The lack of physical presence in the office can compromise the quality of information exchange and collaboration. Organizing virtual meetings and conferences presents challenges for 19% of employees, which can impede decision-making and collaborative efforts.

Over half of respondents (54.8%) identified issues related to separating work and personal time. This indicates that remote work can pose challenges in establishing boundaries between working hours and leisure time, potentially leading to overwork and anxiety, thereby impacting employees' health and work-life balance. However, only a small percentage of employees (3.6%) report feeling isolated while working remotely, and even fewer (2.4%) encounter no issues (Figure 1).

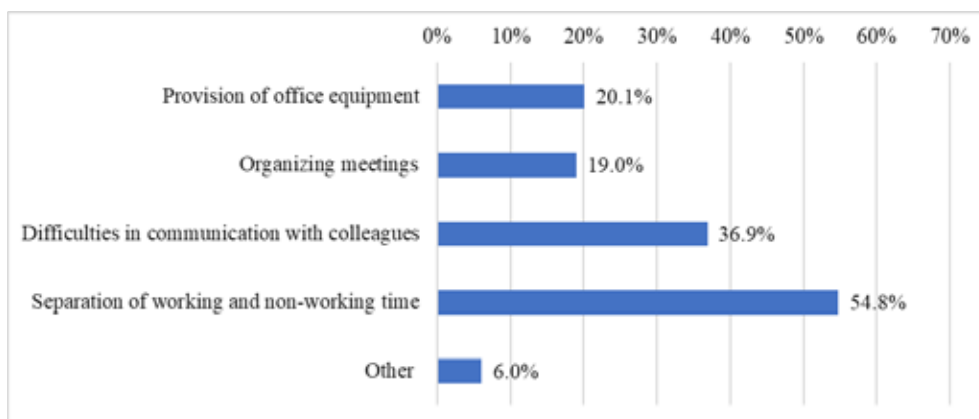


Fig. 1. Problems employees face when working remotely (N = 84)

This may suggest that the remote work setup is effectively organized or that employees have significant experience in remote work environments. These findings underscore the importance of organization support and adaptation strategies to ensure a successful transition to remote work in challenging circumstances.

Notably, 56% of employees reported that the quality of their work remained unchanged after transitioning to remote work. Additionally, 20.2% of employees reported an improvement in the quality of their work. This suggests that remote work did not significantly affect the quality of professional performance for most workers (Figure 2).

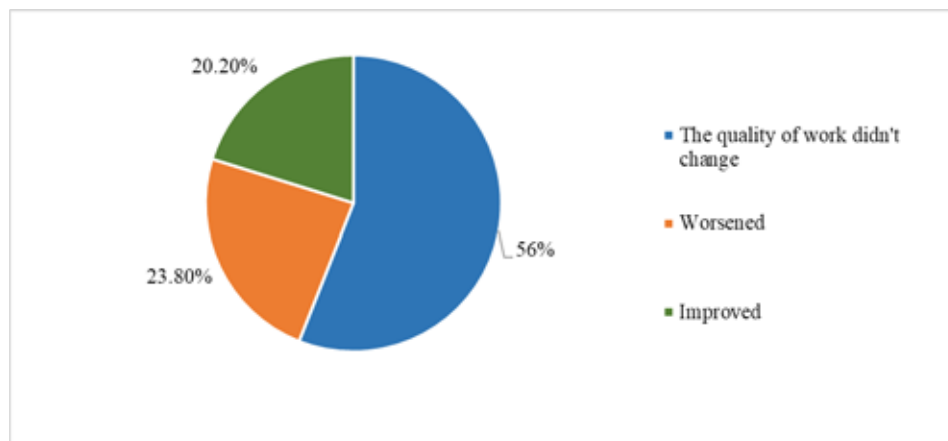


Fig. 2. The Impact of Remote Work on Work Quality (N = 84)

However, it is worth noting that 23.8% of respondents reported a deterioration in the quality of their work. This could be due to factors, such as difficulties adapting to new conditions or inadequate organization of remote work.

This conclusion has significant implications for organizations considering the long-term implementation of remote work. It suggests that, with proper conditions and effective remote work organization, organizations can maintain consistent task quality even in changing work environments during crises.

During the survey, we also examined the most preferred non-material forms of employee incentivization, which included praise from supervisors, recognition as the best employee, opportunities for career advancement, increased levels of influence and responsibility, as well as the provision of additional leave and similar measures. Interestingly, a significant majority of respondents, specifically 82.1%, identified career growth as the optimal form of moral incentivization. Additionally, 41.7% of respondents considered increased influence and responsibility within the organization a key form of moral incentivization (Figure 3). This may indicate employees' desire for a more active role in decision-making processes and increased responsibility, potentially boosting motivation and their overall contribution to their work.

These results emphasize the importance of providing employees with opportunities for growth and development, as well as enhancing their influence within the organization as a means of motivation.

As part of the analysis, factors that may influence employees' decisions to change jobs and leave their current organization were also examined. The survey revealed that 40.8% of respondents identified a long commute as a key factor influencing their decision to leave the organization. For many employees, a long and inconvenient commute to the workplace can significantly impact their comfort and motivation. Another significant factor affecting potential employee turnover is monotonous work, highlighted by 38.4% of respondents. Interestingly, 32.4% of respondents would consider changing jobs due to poor working conditions (Figure 4).

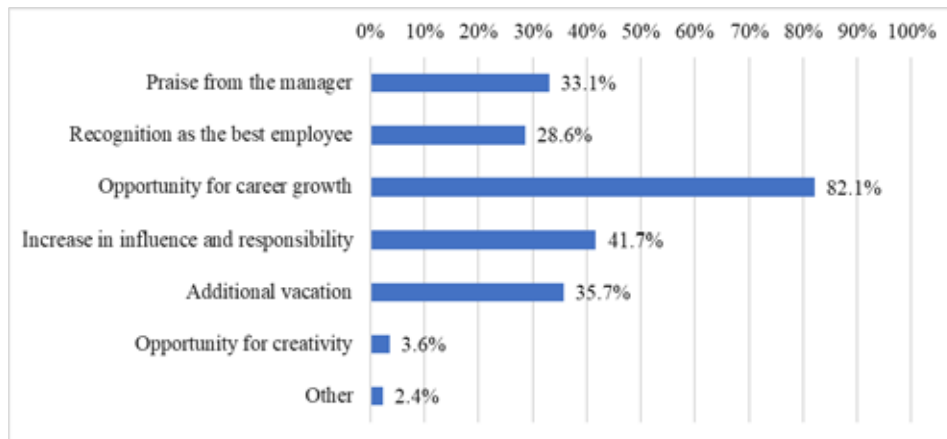


Fig. 3. Preferred non-material employee incentive forms (N = 84)



Fig. 4. Factors influencing employee job change decisions (N = 84)

These findings emphasize the importance of organizations paying attention not only to motivational factors but also to conditions that can impact employees' decisions to stay or leave the organization.

The analysis of the survey results revealed several key factors that employees consider important for long-term collaboration with the organization, as illustrated in Figure 5.

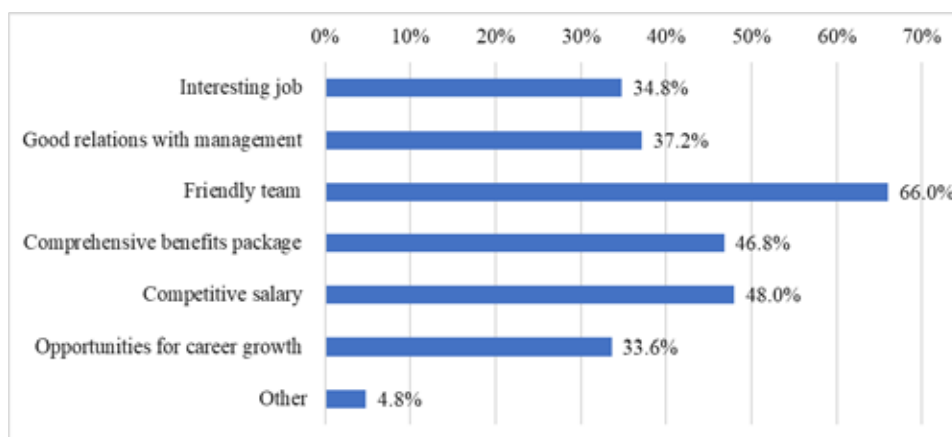


Fig. 5. Factors influencing long-term work in an organization (N = 84)

The most crucial aspect, identified by 66% of respondents, is a friendly atmosphere within the team. This indicates that employees highly value a comfortable and supportive work environment where they enjoy working. Salary also plays a significant role in long-term collaboration, with 48% of respondents highlighting its importance. This underscores the significance of offering fair and competitive compensation to retain qualified employees within the organization.

A comprehensive benefits package is also a key factor for 46.8% of respondents, including additional bonuses and privileges that can improve employees' quality of life and strengthen their connection with the organization. Good relations with management were identified by 37.2% of respondents as a significant factor for long-term employment in the organization. This confirms that interactions with management, including communication and leadership skills, play a substantial role in retaining employees. Additionally, respondents were asked to indicate incentive methods not currently offered by their current employers. Among them, 19.2% of respondents expressed interest in medical insurance, while 13.2% saw value in gifts as an additional form of encouragement.

The analysis underscores the importance of not only material incentives but also creating a pleasant work atmosphere, providing fair compensation, and offering social benefits to retain employees in the long term. It also highlights potential areas for improvement, such as providing medical insurance and gifts as additional incentive measures.

Discussion. It should be noted that the results of the authors' research are in line with the study conducted by Zavadsky, Hitka & Potkany (2015), who also investigated employee motivation during periods of crisis and uncertainty in 2008 and 2013. Their work highlights that employee motivation is significantly influenced by changes in the economic situation, and employees become more oriented toward material incentives and interpersonal relationships. Similarly, Marko & Planinc (2012) confirm that financial incentives are the most crucial motivating factor during economic crises.

It is important to note that in crisis conditions, there is often a gap between employees' expectations regarding their salary and the actual payments. This gap can lead to feelings of dissatisfaction and a sense of unfair evaluation of labor results, which, in turn, reduces employee motivation. The study also identified non-material motivation factors, such as the desire for increased responsibility and career growth, which are also important components of employee motivation.

In the study conducted by Mefi and Asoba (2021), particular emphasis is placed on the significance of recognizing and involving employees, as well as setting specific goals for them. The need for expanding employees' rights and opportunities, as well as providing social support, especially during crises like COVID-19, is also discussed. It is recommended to eliminate organizational hierarchies to facilitate more direct communication between employees and top management.

Wolor and co-authors (2020), for example, highlight the necessity of raising expectations for leadership in terms of their ability to effectively manage and motivate people. More frequent use of an individualized approach in interactions with subordinates is recommended. These recommendations also find reflection in our research findings.

However, we also emphasize employees' desire to actively participate in corporate processes and take on more responsibility as significant motivation factors, which may differ from the results of previous research.

In the study by Subrahmanyam and Henari (2022), a significant positive correlation was found between motivation, career growth, and employee performance (the Pearson coefficient was 0.823 at a significance level of $p < 0.01$). The research findings of the authors also confirm this relationship and draw attention to employees' inclination towards professional and career development within the organization, even in times of crisis. Furthermore, the study highlights employees' desire to further enhance their influence and level of responsibility within the organization as additional factors contributing to employee motivation.

Thus, the analysis of comparisons with studies by other authors in this field highlights both commonalities and discrepancies in our research findings, contributing to an enhanced comprehension of employee work motivation amidst crisis and uncertainty.

Conclusions. Based on the conducted research, the following main conclusions can be drawn:

- Crisis situations often significantly reduce employee motivation due to disruptions in familiar working conditions and the corporate environment. In such circumstances, employees begin to harbor concerns about their future job security and fear the possibility of job losses. Insufficient response to the challenges presented by the crisis may result in the departure of highly skilled professionals seeking more stable opportunities. As a result, the loss of such talents can exacerbate the organization's structural and operational challenges.
- In times of crisis, organizational leaders should promptly adapt the employee motivation system, taking into account both material and non-material incentives, particularly for key specialists. This will contribute to maintaining a high level of motivation and overall productivity among employees in departments of the organization.
- In organizations, even during times of crisis, competitive salary and bonus payments remain among the most significant motivational factors. These material incentives have a substantial impact on employee motivation in uncertain conditions. It is important for the organization to fairly and justly evaluate its employees' performance and appropriately reward them.
- Non-material factors, such as active involvement in corporate structures, additional responsibilities, and opportunities for career growth, have a significant impact on employee motivation during periods of crisis.
- Positive interpersonal relationships and the recognition of employees' achievements also play a crucial role. Support from management, active participation in corporate processes, and acknowledgment of successful results contribute to their engagement and well-being, thereby strengthening their motivation to work.
- The transition to remote work can pose challenges in terms of communication with colleagues and the separation of work and personal time, which affects employees' satisfaction levels and, consequently, their motivation.

The results of this study, the authors hope, will be valuable for both top executives of organizations and specialists in the field of human resource management (HR). The research underscores the significance of maintaining employee work motivation in times of crisis to preserve productivity and promote effective interaction between employees and organizational leadership.

Acknowledgment

During the study, employees, department heads, and leading specialists from four organizations were interviewed. They were informed about the study and provided voluntary consent.

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DOES FORGIVENESS/ UN FORGIVENESS LOOKS AS WHITE/BLACK FOR OUR SUBJECTIVE WELL-BEING

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Abstract. Research on resentment (unforgiveness) and forgiveness is presented in the scientific literature in a clear disparity with its real-life implications. While forgiveness has been studied for more than 40 years, the study of resentment is only at an initial stage. Therefore, our task was both a phenomenological study of these psychological phenomena and a test of the new PPS scale for diagnosing resentment and forgiveness and its connections with subjective (psychological) well-being. The results of the phenomenological study indicate that the key point in the transition from resentment to forgiveness is the motivation to maintain a relationship with the offender, the belief in the unintentional nature of the offense, as well as the presence of good intentions and repentance of the offender. The results of the correlation study showed the expected negative relationship between resentment and its components with subjective well-being and a positive relationship with ill-being. However, there was the absence of such a connection between resentment and physical health or depression, while forgiveness had no significant connection with subjective well-being. The latter finding differs from numerous studies and requires additional research using a more diverse methodology.

Key words: resentment (unforgiveness), forgiveness, dispositional forgiveness, emotional forgiveness, subjective well-being.

Introduction. According to the Christian tradition in the European culture, forgiveness is considered to be a definite positive way of coping with a moral transgression. Many studies show positive links between a disposition toward forgiveness and subjective well-being. In a semi-structured interview, non-believers and especially believers connected forgiveness of particular transgressions with feelings of improvement of their own opportunities and relationships, spiritual growth and the increased sense of meaning (Akhtar et al., 2017). Potentially, forgiveness can decrease hostility, anger, and desire for revenge, and increase compassion, sympathy, or pity for an offender (Enright and Fitzgibbons 2000; Wade and Worthington 2005).

These effects are quite understandable, considering that forgiveness therapy reduces depression, anxiety and stress and increases subjective well-being (Baskin and Enright 2004; Wade et al. 2013). A large survey conducted in the United States has shown the link between forgiveness of others, oneself, and by God and decreased odds of depression for women (Toussaint et al., 2008). For men such a link was significant only for forgiveness of oneself. However, this type of forgiveness cannot be considered prosocial or similar to the forgiveness of others.

The concept of forgiveness is differentiated based on the different targets (i.e., oneself, others, God) and the type of process of forgiveness (i.e., offering, feeling, or seeking; Toussaint & Webb, 2005). Of course, the differentiation of two dimensions of forgiveness – internal or external is very important (Baumeister, Exline, & Sommer, 1998). The latter presupposes the possibility of excusing

somebody as a conventional act, without the actual feeling of forgiveness and possibility of feeling forgiveness without the appropriate communication with the offender.

Some researchers have differentiated emotional forgiveness from decisional forgiveness. Emotional forgiveness presupposes “a decision to try to act differently toward the offender and, not seeking pay-back, treating the person as a valuable and valued person” (Worthington, 2020, p.4). Emotional forgiveness has the most significant health effect because it reduces stress-related problems (see Griffin et al., 2016). That is probably because emotional forgiveness takes away much of the power behind angry, anxious and sad rumination. Decisions to forgive most likely have the largest effect on relational wellbeing (Riek & Mania, 2012). That is probably because intentions to behave more positively can result in changed relational behaviors. Emotional changes due to emotional forgiveness tend to be more internal. Decisional forgiveness is likely to be more related to spiritual health than is emotional forgiveness (Davis et al., 2013; Worthington & Sandage, 2016).

However, even making a sincere decision to forgive, one may still feel emotionally unforgiving (e.g., angry, resentful, and hurt) toward the offender” (Lichtenfeld, Maier, Buechner, Capo, 2019, p. 3). According to Enright and the Human Development Study Group (1991), forgiveness is a multidimensional construct that contains dimensions of affect, behavior, and cognition (Toussaint & Webb, 2005). However, this differentiation does not seem productive in the study of forgiveness because it does not lend itself to isolating and measuring the behavioral component of forgiveness. This seems strange, because isn’t possible identify a behavioral component of internal forgiveness, if we accept the previous differentiation.

Forgiveness removes or minimizes the need for retribution, restitution, reconciliation, or a return to vulnerability by the victim (Rosenak & Harnden, 1992). Some studies show positive associations between dispositional forgiveness and life satisfaction (Allemand et al. 2012; Chan, 2013; Krause & Ellison 2003), but all these studies were focused on very specific target groups and areas of satisfaction, especially, participants of psychotherapeutic or consultation process.

Consequences of forgiveness may not only lead to minimization of tendency for retribution (Braithwaite, Selby, Fincham, 2011; McCullough, Rachal, Sandage, Worthington, Brown, & Hight, 1998), but also to repairing positive attitudes towards the transgressor (Fincham, 2009). Moreover, Hall and Fincham (2006) show that in a person who had experienced jealousy, negative attributions of partner’s transgressions (its attributions as internal, global, and repeated) may inhibit the forgiveness processes.

Data on forgiveness in marital relationships appear more conclusive. Partner-specific forgiveness was positively associated with life satisfaction, and this association was stronger than the association between general forgiveness and life satisfaction. Partner-specific and general forgiveness were positively related, as were spouses’ reports of partner-specific forgiveness (Karremans, Van Lange, Ouwerkerk, & Kluwer, 2003). Forgiveness was positively associated with marital satisfaction and communication in both the training and control groups. Couples in the forgiveness-based group showed a greater improvement in communication at follow-up than couples in the control group but did not differ from couples in the hope-focused group (Ripley & Worthington, 2002).

Also, it is possible to differentiate dispositional forgiveness and state forgiveness (e.g. Thompson et al., 2005; Eaton et al., 2006). Dispositional forgiveness refers to the general tendency to forgive independently of particular relationships and situations, while state (episodic) forgiveness is related to specific episodes when the target of the offense forgives the offender for a particular transgression (Berry et al., 2001; Brown, 2003; Paleari et al., 2009). Low dispositional forgiveness does not exclude state forgiveness but decreases its probability and requires more justification for the offender. For example, we feel a jolt on the bus that arouses our indignation, but upon looking back we see the man with a big backpack who accidentally bumped into us. The fact that our indignation has disappeared can be interpreted as emotional state forgiveness.

Dispositional forgiveness is more interesting and more attractive for researchers as the target of study. In particular, the study on gender and age differences in dispositional forgiveness in Poland and Italy show higher levels of forgiveness among male participants and older participants (Cabras, Kaleta, Mroz, Loi, Sechi, 2022). Some scholars believe that the disposition to forgive is more strongly associated with a quality of life than a single act of forgiveness (Munoz Sastre et al., 2003, Thompson et al., 2005).

In the metaanalysis we should take into account the very positive connotation of forgiveness in Christian culture. The majority of forgiveness studies were conducted at Catholic universities and were largely focused on argumentation of this positive significance. This does not mean that all previous data on forgiveness were falsified, but some of studies used very specific samples, measures that were not valid or reliable, and did not take into account the internal dimension and diversity of forgiveness. The concept of “good Samaritan” forgiveness appears very attractive, but its alignment with reality remains unclear.

Some data show important gender differences on forgiveness. Fincham and colleagues’ (Fincham et al., 2002) research with 92 married Italian couples showed that responsibility attributions were the best predictor of forgiveness for women; however, empathy was a stronger predictor on forgiveness for men. In addition, Fincham et al.’s (2004) two-site study of forgiveness and conflict resolution behaviors suggested that three identified components of forgiveness played different roles for wives and husbands in predicting future conflict resolution. Specifically, wives’ positive forgiveness behaviors (e.g., benevolence) were most important in predicting the couple’s conflict resolution, whereas husbands’ negative forgiveness behaviors (i.e., retaliation, avoidance) mattered most.

Enright and Coyle (1998) proposed to divide the process of forgiveness into four broad phases: uncovering, decision, work, and deepening. Uncovering refers to the awareness of the problem and emotional pain following an offense, including anger and insight. Decision includes realizing the need for an alternate resolution. Work includes processes such as reframing, empathy, and acceptance of moral pain. Deepening includes finding meaning and universality. It is carefully pointed out that the overall process of forgiveness is not likely to be linear. In the earliest stages of the process (i.e., uncovering and decision), forgiveness may actually be related to poorer mental health. As one works through the later phases (i.e., work and deepening), the effects of forgiveness should become more beneficial. This representation appears more hypothetical because there is no empirical verification and, for example, it is not easy to assess the decision stage before the need is met.

Furthermore, scholars (Fincham et al., 2004; Rye et al., 2001, Worthington and Wade, 1999) have pointed out that forgiveness consists of two distinct domains – negative and positive. The negative aspect entails overcoming unforgiveness, namely, reducing the resentment and retaliatory or avoidant impulses (Wade & Worthington, 2003). Maintaining a considerable physical and psychological distance from the transgressor might, in fact, be an attempt to avoid an unacceptable self-image. Thus, overcoming unforgiveness can be seen as the successful abandonment of the negative self-view resulting in decreased avoidance motivation, which in turn removes an internal barrier to connecting with the perpetrator (Fincham et al., 2004).

Data show the mediating role of relationship features and transgressors’s apologies in the link between forgiveness and life satisfaction (Bono, McCullough, & Root, 2008). This means that we prefer to forgive our close friends and relatives more often than less close persons, especially if they ask us to excuse them for a transgression. Offenders who apologize, take responsibility for the harm they caused, express remorse, and engage in amends-making are more likely to be forgiven than those who do not (Fehr et al., 2010; Merolla & Zhang, 2011). However, even forgiveness of close partners can lead to negative consequences (McNulty, 2011).

Meanwhile, even superficial phenomenological analysis persuades us that resentment toward other’s transgressions is experienced more often than forgiveness of these transgressions.. Every act

of forgiveness can become an unique event in our mental life, but resentment is an everyday phenomenon that may transform into a latent condition or could become a subject-matter of life-long rumination. Some of these rumination topics later may lead to forgiveness. Such transformations do not occur frequently, but each case is reflected in our consciousness quite clearly. One of the factors influencing forgiveness is the victim's ability to differentiate between the offender's personality and their wrongful actions (Fincham, 2000).

According to some data, forgiveness without deservingness (did not apologize/make amends) does not ensure a high level of well-being. If a victim forgives when it is not deserved, the victim's well-being is equivalent to not forgiving at all (Strelan, McKee & Feather, 2016). In turn, unforgiveness or resentment may be connected with many negative processes, including the decrease of well-being. Stackhouse and colleagues view unforgiveness not as the polar opposite of forgiveness but as a distinct—though overlapping—construct (Jones Ross et al., 2018; Stackhouse et al., 2016, 2018). In part, this view rests on the assumption that unforgiveness can be reduced through means other than forgiving (e.g., cognitive reframing, exacting revenge; Worthington, 2001).

At the same time, the small proportions of forgiveness acts in the number of moral transgressions show the existence of some serious barriers to forgiveness. It isn't only emotional-ruminative elements with hard and long-term feelings, but also cognitive-evaluative elements that reasonably reject the value of forgiving in the particular situation and offenders' reconstrual that change own view of offender in a more negative fashion as a morally wrong person (Boon, Hojjat, Paulin, Stackhouse, 2022).

This doesn't reject recently proposed interpretation of resentment (unforgiveness) as the tertiary emotion including primary and secondary emotions (TenHouten, 2018). However, it is challenging to combine such a complicated phenomenon with the concept of emotion; especially, given the lack of data on the link between resentment and disgust, anger or contempt that author has considered as the basis of resentment. According to Worthington (2001) unforgiveness looks as a cold emotional complex that can result when people ruminate about experiences in which they have been wronged.

If the offender denies responsibility, refuses to show contrition, or declines to apologize, what is referred to as the 'injustice gap' widens (Davis et al., 2015). Eventually, this leads to cognitive reframing of the transgression as reasonable and essential for the offender. "Victims" may experience residual resentment (unforgiveness) despite having forgiven when they cannot forgive fully or have ambivalence in their attitudes toward the subject-matter of forgiveness (Boon et al., 2022) or fluctuations in their desires to forgive (McCullough et al., 2003). Perhaps, this ambivalence is more often revealed when forgiveness has communicative character only; external, but not internal. It could signify traces of previous resentment maintenance that can stay for a long time in the latent condition till the next open conflict with the offender.

Offenders who express excuses or remorse and make some amends are more likely to be forgiven than those who do not (Eaton, Struthers, 2006; Fehr et al., 2010; Merolla & Zhang, 2011). This suggests that the lack of remorse, excuse or amends can diminish victims willingness to forgive (e.g., Rapske et al., 2010; Younger et al., 2004). Additionally, the offender's actions (or the lack of these actions) can create some barriers to forgiveness, described as fear of one's dignity and trust in the offender loyalty, decreased self-esteem, the loss of control in communicative situation, denial of justice requirements, concerns that forgiving might fail to prevent further wrongdoing, moral outrage, and desires for vengeance (Pearce et al., 2018; Strelan et al., 2017). According to some studies, only apology-based-forgiveness leads to the victim's subjective well-being improvement, while forgiveness without an apology and remorse leads to the same low level of well-being as unforgiveness (Strelan et al., 2016).

Taking into account that resentment can be considered as a primary reaction on moral transgression, while forgiveness is the result of reappraising the transgression, that is a secondary phenomenon based on the same event – we can presuppose a definite but small overlap in the mental con-

tent of these phenomena. The first aim of our study was to specify the similarities and differences between forgiveness and resentment using phenomenology of these feelings. The second aim was to study links between forgiveness, resentment and subjective well-being. This variable is very important and generally accepted as an indicator of life quality and is useful for more effective strategies of psychological help and support elaboration.

Study 1. On the first stage of our phenomenological study 57 participants – second and third grade undergraduates (42 women and 15 men 20-52 years old; Av. Age – $M = 33.5$, $SD = 8.26$) wrote two autobiographical narratives on forgiveness and resentment (unforgiveness). Later qualitative analysis of these narratives was applied. All phrases were separated into content units that represent individualized specific information, simply sorting one unit out from another unit.

These units were successively enumerated and appropriate part of them was distributed into 14 categories (1) feeling of cheating (fraud), 2) blight on offender, 3) indignation, 4) desire to end the relationship, 5) desire to inflict vengeance for transgression, 6) astonishment, 7) understanding of the transgression's accidentality, 8) decreased self-esteem, 9) reduced contact with the offender, 10) belief in the offender's good intentions, 11) belief in offender's remorse, 12) feeling that the transgression was undeserved, 13) ruminations on the reasons for the transgression, 14) desire to maintain the relationships). All these categories were developed based on previous studies of forgiveness and resentment (Boon, Hojjat, Paulin, Stackhouse, 2022; Jones Ross, Boon, Stackhouse, 2017; McCullough et al., 2003; Pearce et al., 2018; Stackhouse, 2016; Stackhouse, et al., 2018; Strelan et al., 2016; Wade & Worthington, 2005).

Results. The results of the content units' distribution in two narratives on resentment (unforgiveness) and forgiveness are presented in the figure № 1.

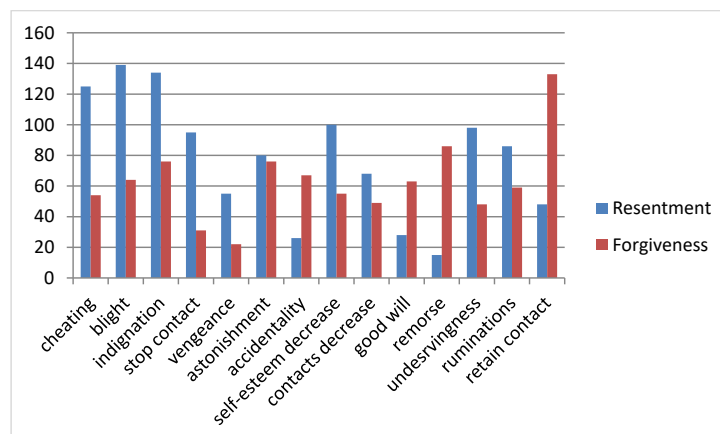


Fig. 1. Distribution of content units on forgiveness and resentment stories

In accordance with these data only the sixth category 'astonishment' shows similarity in both stories, while all other categories show significant differences for resentment and forgiveness. The chi-squared test of association $\chi^2 = 904.01$ ($p \leq .001$) shows general difference between resentment and forgiveness on the basis of the link between resentment/forgiveness and selected categories. Four categories were significantly higher (according to the number of content units) in forgiveness: 1) faith in transgression's accidentality, 2) belief in the offender's good intentions, 3) belief in the offender's remorse, 4) desire to maintain the relationship. This indicates that we have four main specific elements of forgiveness – relationships-preservation-motivation and three types of cognitive attributions directed on the decrease of offender's responsibility and guilt. If these elements predominate over other feelings and attributions we can expect forgiveness with higher probability. When other elements, excluding astonishment, predominate resentment is more likely to occur.

Study 2. Based on previous measures and studies of forgiveness and unforgiveness we elaborated new 65 items two-factor scale Pārdzīvojumu pēdas skala (PPS – Traces of our experiences scale) which includes a unitary scale of dispositional forgiveness and a multifaceted scale of dispositional resentment (unforgiveness), including such three subscales as emotional-ruminative unforgiveness, cognitive-evaluative unforgiveness, and offender reconstrual (Stackhouse, Jones Ross, & Boon, 2018). The subscale of forgiveness includes 16 items, such as – ‘If a person confesses to being guilty, we should forgive’, ‘Being late to an informal meeting is a venial sin’). Emotional-ruminative unforgiveness on resentment subscale includes 23 items, such as ‘My soul wounds of past offenses remain bleeding’, ‘I am obsessed with idea that my boss isn’t fair to me’), cognitive-evaluative unforgiveness includes 8 items (such as ‘It is impossible to forgive a person who intentionally discloses in Internet information on intimate life of me or my close persons’, ‘I cannot leave behind piggishness perpetrated by guests in my house’), offender reconstrual includes 6 items (as ‘I remember all persons who put me in the line of fire’, ‘it is highly unlikely that I will continue friendly relationships with person who have expressed xenophobic ideas’).

All subscales of the PPS questionnaire have sufficiently strong indices of reliability by internal consistency. Cronbach's Alpha is 0.88 for the general scale PPS, including 0.70 for the Inclination to forgiveness (13 items) and 0.91 for the Inclination to resentment (52 items) (see table. 1).

The aim of the study was to specify the links between resentment/forgiveness and subjective well-being. Based on previous studies, different connections with well-being can be expected not only for resentment and forgiveness but for three elements of resentment (Stackhouse, Ross, & Boon, 2016; 2018). At the same time, resentment as the subject-matter of psychological study is quite new (Breslav, 2020) and first measures of resentment (offense, unforgiveness) are unfledged. This means that the research aim will be inevitably supplemented by methodological aim – verification of the new measure of resentment.

The main hypothesis states that resentment and forgiveness have different links with well-being; resentment more negative, but forgiveness – positive link (Chan 2013; Krause & Ellison 2003). For more advanced measurement of well-being the multidimensional 39-item measure – BSW (Berne Questionnaire of Subjective Well-Being) was used, which includes different positive and negative aspects of well-being (Grob, 1991; Grob, Lüthi, Kaiser, Flammer, Mackinnon, & Wearing, 1991). This measure, initially developed for adolescents and later adapted for adults, demonstrates strong psychometric properties: – Cronbach's α for internal consistency ranges from 0.69 till 0.87 and results of confirmatory factor analysis align with expectations (Grob, 1995).

The 39-item measure of well-being with a 5-point scale includes two high order variables – Satisfaction and Ill-being and six specific variables: Positive Attitude toward Life (such as ‘I enjoy life more than most people do’); Problems (as ‘How often in the past few weeks did you worry because... you had problems with other people?’), Somatic Complaints (as ‘In the past few weeks have you had stomach ache? ... suffered from heart beating or heart pains?’); Self-Esteem (as ‘I am capable of doing things just as well as most other people’; Depressive Mood (as ‘I have lost interest in other people and do not concern myself with them’); and Joy in Life (as ‘In the past few weeks have you ... been pleased because you had achieved something? ‘).

35 women and 15 male Latvian residents aged 30 to 37 years participated in the study (M female = 33.1; M male = 34.1). All participants were surveyed online via email and social networks using Microsoft Word to presentation the two inventories. The time allocated for completing the inventories was controlled and all responses were collected on the same day they were sent out.

Results. The main data are represented in Figure 2. The tendency to forgive shows no significant correlations with well-being or ill-being. The tendency toward offense (resentment) shows a positive correlation with ill-being (.80) and with problems (.37) and a negative correlation with joy in life (- .45). Accordingly, all resentment components have similar significant negative correlations with

well-being and its components, as well as positive correlations with ill-being and with problems (mainly with other people), but not with depressive mood and somatic complaints.

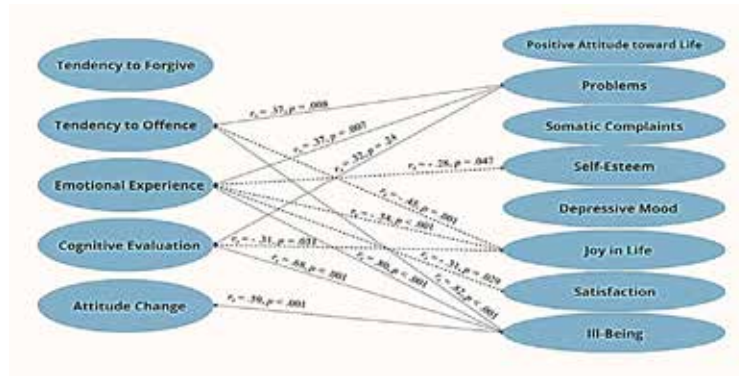


Fig. 2. Correlation table of the main variables in the PPS and BSW scales

Table 1

Data on the resentment and forgiveness scale (PPS) and subscales' reliability

	Cronbach's Alpha	Number of Items
General scale	.88	65
Inclination to forgiveness	.70	13
Inclination to resentment	.91	52
Emotional subscale of resentment	.87	23
Cognitive subscale of resentment	.78	8
Reappraisal of wrongdoer	.70	6

The internal consistency data (Cronbach's Alpha) indicate that our scale and subscales of resentment and forgiveness demonstrate sufficient reliability, with values ranging from 0.7 to 0.91.

Discussion. The results of the phenomenological study show a partial intercrossing of resentment and forgiveness features which appears to be an expected outcome. As mentioned previously, resentment is a primary reaction to a moral transgression, but forgiveness is a secondary reaction to a similar offense. The similarity in astonishment is easily understandable as obviously people unwittingly share a presumption of innocence. Namely, they expect more or less appropriate conduct in communicative situations from significant others. As a consequence, the moral transgression or something perceived as such by the offender creates the cognitive dissonance and surprise in both cases.

In the same way we can explain the high level of indignation in the forgiveness narrative as a natural reaction to moral transgression. It is understandable that the level of indignation is higher in cases of resentment, but in the forgiveness story it is higher than beliefs on good intentions but not on remorse of the offender. The key factor of the difference appears to be the motive to retain the relationship with the offender that links with a higher level of the faith in the randomness of misconduct, beliefs in the good intentions and in the remorse of the offender. This link is understandable taking into account that the remorse facilitates forgiveness (Eaton, & Struthers, 2006; Exline, & Baumeister, 2000). These beliefs can be considered part of emotion-focused coping with transgression, which is associated with forgiving (Konstam, Holmes, & Levine, 2003).

The results of the correlational study align with expectations in some aspects – the negative link between resentment and subjective well-being and the positive link with ill-being. However, they deviate from expectations in the lack of the associations between resentment and some subscales of ill-being (somatic complaints and depression), as well as the lack of the link between forgiveness and well-being.

The latter is understandable given that forgiveness is more strongly linked to well-being for people who reported being closer and more committed to their partners before the transgression, as well as among those whose partners apologized and made amends for the transgression (Bono, McCullough, & Root, 2008). At the same time, changes in attitude toward the partner appear to explain the link between forgiveness and well-being. This suggests that the negative changes in the attitude to the offender may weaken the link between forgiveness and well-being. In addition, if the victim perceives the offense as intentional such behaviors as apologies and restorative actions are experienced as less useful for forgiveness (Martinez-Diaz, et al., 2021).

We can see that the positive link of resentment with ill-being based mainly on 'the increase of problems' subscale, which reflects tensions in personal communications. This is understandable, given that the offender is typically part of one's closest social circle. But it is not the same on the link between resentment and somatic complaints or depression.

Conclusions. It is difficult to overstate the importance of studying the phenomena of resentment and forgiveness, as they can have significant and long-lasting effects on an individual's life. The phenomenological and correlational study conducted revealed new characteristics of these phenomena and shows the complexity of their role in an individual's life. While a significant number of previous studies have indicated a direct and indirect link between forgiveness and subjective or psychological well-being, our study did not confirm this.

At the same time, given the multidimensional nature of forgiveness, future studies should utilize multidimensional methodologies, unlike a single-measure methodology used in this study. Such studies would allow researches to control for the characteristics of the situation related to the offense, and provide an opportunity to analyze forgiveness as a multi-stage process. This study confirms the negative correlation between resentment and subjective well-being (in the area of communication problems), but did not confirm a positive link between forgiveness and well-being.

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NEURAL MARKERS OF ETHNIC IMPLICIT ATTITUDES OBTAINED BY TIME-FREQUENCY ANALYSIS OF DATA OF THE SUBLIMINAL EVALUATIVE PRIMING PROCEDURE: PILOT STUDY

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Abstract. To study implicit ethnic attitudes, subliminal evaluative priming procedure (SEP) is mostly used, but its neurocognitive correlates are insufficiently studied. The aim of research is to find the neural markers of implicit attitudes obtained by time-frequency (TF) analysis of the SEP procedure data with stimulus onset asynchrony (SOA) 200 ms and 300 ms. 9 participants identified themselves as belonging to an ethnic minority group. The SEP – TF plots analysis was conducted. Different frequency patterns were observed for different SOAs. E.g., SOA 300 ms likely associated with the preferred ethnic group in case of self-referential compatible stimulus groups and differed from SOA 200 ms patterns associated with the alternative incompatible stimulus group. The study experimentally substantiates the use of promising SEP methods in combination with the neurophysiological TF and ERP Electroencephalography analysis method.

Key words: Electroencephalography (EEG), Time-Frequency analysis (TF), Event-Related Potential (ERP), Subliminal evaluative priming, Implicit ethnic attitude.

Introduction

The concept of attitude could be characterized as a positive or negative evaluative reaction towards somebody or something which is expressed as an opinion, feeling or intended behavior. The attitude is the mental association in memory between an object and one's summary evaluation of that object (Fazio, 2007, Petty et al., 2009). The process of actualization of attitudes may require some efforts and be controlled or occur spontaneously and automatically. In the first case we can tell about the explicit attitudes, in the second case – about the implicit attitudes. The explicit attitudes have been understood as a product of primarily propositional, in fact logical processes, and the implicit ones – as a result of associative processes. The propositional processes are deliberate, conscious, slow, the associative processes – fast, automatic, unconscious. Implicit estimates are a reflection of mental associations, formed in the early stages of acquisition of the social experience (Plotka et al., 2016, 2017, De Hart et al., 2006; Rudman, 2004). The term “implicit” is applied to attitudes in three different ways: (1) when talking about the lack of awareness of the information processing operations that underlie attitudes, (2) when the attitude itself is implicit, and (3) when the attitude is implicitly measured. Physiological measures can address each of these issues. One of classic definitions of the term “attitude” is “a mental and neural state of readiness”. Physiological measures are useful for the measurement of implicit attitudes because implicit attitudes are independent of their subjective awareness by the research participant. Physiological measures do not typically require participants to be informed of the psychological construct of interest (Ito & Cacioppo, 2007). Physiological measures can be used in a manner similar to other indirect measures of implicit attitudes, such as response latency measures based on spreading of activation (Fazio et al., 1986, Ito & Kubota, 2024).

Modern implicit measures are based on measuring participants' reaction time (RT) when they perform various tasks and their attention is focused on performing these tasks rather than on the attitude object (Rudman, 2011). One of the main methods is the subliminal evaluative priming (SEP) procedure, which is based on the priming effect, understood as the influence of a preceding stimulus on the cognitive processing of a subsequent one. In all cases, the RT of participants was measured, on the basis of which the system of describing the measured implicit attitudes was built. The major task was to use RT to obtain information on the implicit attitude studied. This information is based on the hypothesis of Fazio and his co-authors (Fazio et al., 1986, p.231), from which it follows that if a person has a formed positive attitude towards the prime, then the response to positive target words will be faster, and to negative target words – slower than in the absence of the prime. Also, with the formed negative attitude towards the prime, the response to negative target words will be fast, and to positive ones – slow. We used the converse statement. If the response to positive target words is fast, and to negative target words is slow, then the attitude is positive. We assume that this lines up with reality. To describe the results of RT measurements using the SEP, three measures of implicit attitudes were developed: “Facilitation variable (R)”, described in Rudman's book (2011), characterizing the presence of the priming effect – the difference of RT with the priming stimulus and without it; “Attitude variable (RR)” – the difference between the facilitation variables for the target stimuli of different valence. The sign of this variable indicates the emotional orientation of the attitude, and its absolute value is the strength of the attitudes expressed in units of time; “Indices of implicit preference (RRR)” – the difference between the variables of attitudes for different primes. These three variables were developed and applied in our research of ethnic implicit attitudes using the SEP procedure (Plotka, 2016, 2017, 2023). We were studying implicit ethnic attitudes at different times of stimulus onset asynchrony (SOA). The variable RRR showed statistically significant correlations with explicit measures of attitudes and D-scores of the Implicit Association Test (IAT). The study of correlation graphs made it possible to make the assumption that for different SOA times there is a separate cognitive processing of context-related and basic associations related to the object of attitudes (Plotka et al., 2016, 2017). The analysis of SEP effects was conducted in terms of an approach based on the spread

of activation in a semantic network, which includes nodes for representing knowledge elements and the connections between them (Collins & Loftus, 1975; Collins & Quillian, 1969).

Other researchers have found that there is a relation between the results of implicit measurements (e.g., Implicit Association Test (IAT), SEP procedure) and their neural correlates, including those obtained as a result of measurements by electroencephalography (EEG) (Williams & Themanson, 2011; Healy et al., 2015; Perry, 2022; Huang et al., 2025). Nevertheless, neural correlates are not yet fully understood.

EEG is used to investigate the time windows of event-related potential (ERP) indicating brain regions in the implicit measurements. Various studies suggest that the late positive potential (LPP) is modulated by basic evaluative processes, and some studies suggest that in-/outgroup relative position affects ERP responses.

The LPP results show that later electrophysiological reactions may be coherent with implicit measures of attitudes, since, in indigenous participants, higher amplitudes that are related to stimuli (words) in an unfavorable context were observed for the ingroup. In research of the priming effect, it was demonstrated that the valence of a target word is categorized more quickly when the word is preceded by a prime word of the same valence (congruent trials) than by prime word of the opposite valence (incongruent trials) (Fazio et al., 1986; Chen et al., 2020). The research of neural correlates of this effect showed that more negativity to incongruent targets in two different ERP components, one corresponding to an N2 component (180-280 ms post stimulus) and one referred to by the authors as N400 component (480-680 ms) (Zhang et al., 2006). This result allows us to conclude that the N400 component is sensitive not only to semantic mismatches, but also affective mismatches, suggesting that affective priming shares a similar mechanism with semantic priming (Amodio & Bartholow, 2011). ERPs have been used in several studies to track the time course and level of engagement of various processes associated with the social categorization of faces. Early research examined different ERP responses as a function of a person's gender (Mouchetant-Rostaing et al., 2000). Observations of early ERP effects for race indicate that the certain aspects of social categorization process occur very rapidly and that these processes are relatively automatic, implicit (Ito et al., 2007). For the last decades in the field of social neuroscience, a lot of data have been obtained on the localization of brain processes, as well as the components of ERP that arise when activating implicit attitudes, including intergroup ones. ERP components that are sensitive to the racial ingroup/outgroup status of the stimuli presented, have been extensively studied. Among them there are N100 (Ito & Urland, 2003), P200 (Dickter & Bartholow, 2007), N200 (Kubota & Ito, 2007), P300 (Willadsen-Jensen & Ito, 2008), which selectively give a greater neural response to stimuli representing objects of ingroup or outgroup categories. Otherwise, these increased amplitudes of neural responses, at least in a number of cases, are related to the belonging of objects to intergroup categories or to the events of alternating ingroup and outgroup objects. N100 and P200 increase in response to the presentation of the outgroup object. N200 with a typical peak latency of 250 ms is incremented in response to objects of the ingroup category (Kubota & Ito, 2007). The value of N170 in the task of the ethnic IAT is noted as an early correlate of intergroup implicit attitudes (Ibanez et al., 2010).

However, all these data were obtained using face images of representatives of racial, more rarely – ethnic groups, while in our experiment words were used – names of ingroups and outgroups. In a few studies, the joint neural effect of semantically interacting images and words was studied in the task of the ethnic IAT (Ibanez et al., 2010). The registration of ERPs modulated by the presentation of primes – words (for the case of ethnic intergroup attitudes) and subsequent target evaluation adjectives in the task of SEP for various SOA has not been systematically carried out.

The obtained behavioral data require neurocognitive support, which has already been partially provided by preceding studies using neural response recording through EEG and magnetoencephalography techniques during the performance of various cognitive tasks aimed at assessing racial and ethnic

attitudes. These studies, in particular, identified such significant ERP components associated with the processing of racial and ethnic attitudes with associated perceptual and attentional processes as N100, N170, N200, N250, P300, N400. “We hope the combined use of ERP-EEG and both implicit and explicit behavioral measures will yield further insights into our understanding of this phenomenon by facilitating the investigation of more subtle forms of prejudice and of the cognitive processes recruited during social evaluation” (Manfredi et al., 2023, p. 14).

The correspondence between ERPs and behavioral measures of implicit attitudes was observed using the IAT procedure, but not with data from priming procedures, including SEP (e.g., Willadsen-Jensen et al., 2008, Ibanez et al., 2010). The research hypothesis stated in studies (Plotka et al., 2016, 2017) requires verification at the non-behavioral (neural) level.

ERPs can be considered to represent changes in the balance of excitatory and inhibitory synaptic input to the basal versus apical compartments of pyramidal cells, and best explained as the coincidence (synchrony) in time and space (apical vs. basal) of faster and slower ionic currents (Edwards et al., 2009).

Time–frequency analysis serves as a key method for studying event-related EEG signals, allowing monitoring fluctuations in neural oscillatory patterns that reflect synchronized/desynchronized activity across cortical networks. These oscillations – originating largely from postsynaptic potentials in pyramidal neurons – can be tracked simultaneously in time and frequency domains, revealing how specific brain regions dynamically engage during different cognitive or sensory events that is the main advantage of this method (Zhang et al., 2023).

Compared both ERP and TF methods have their own strong and weak sides, dealing with the same physiologically originating primary data but in different calculation methods. More advanced is TF method.

Thus, to study implicit attitudes the implicit measures (e.g., SEP and IAT) based on RT analysis are mainly used. The neurocognitive correlates of these behavioral measures, especially those based on SEP data, have been less extensively studied. Taking into consideration the scarcity of data on the mechanisms of activation of implicit intergroup attitudes and their neuronal correlates, there should be a need to confirm and further study of separate processing of ingroup and outgroup implicit and explicit attitudes with ERPs registration and Time-Frequency analysis. Thus, the importance of this study is beyond doubt.

The aim of research is to find the neural markers of ethnic implicit attitudes obtained by time-frequency analysis of data of the subliminal evaluative priming procedure in the pilot study. The present study explores the possibility of using electroencephalography time-frequency analysis as a tool to assess neural signals associated with measures of implicit ethnic attitudes in conjunction with the subliminal evaluative priming procedure.

Method

Participants

The study was performed with data from nine volunteer undergraduate students with the right leading hand from the psychology program of the Baltic International Academy, Riga aged from 24 to 32 years old. The formation of ethnic group is based on the self-determination of the participants, and all of them were native Russian speakers. There were no restrictions on the sex and education. The research was approved in accordance with the *Ethical Principles of Psychologists and Code of Conduct* (American Psychological Association [APA], 2017).

Measurements

The measurements were the modified procedure of subliminal evaluative priming (SEP) in a task of affective categorization (Plotka et al., 2016) with continuous EEG recording. The experiment was performed in a quiet room, and during recording, participants assumed a comfortable position in a chair.

Procedure of SEP in the Task of Affective Categorization

The implicit ethnic attitudes have been measured by the SEP experimental procedure.

The instruction appears on the monitor once before starting the procedure. The participants saw on the monitor their task: “To push “1” key as quickly as possible if the positive word appears, and “2” key if the negative appears”.

Then follows a sequence of displays and their duration:

- The fixation point (black cross in the middle of a white screen) – 1000 ms;
- Randomly presented Prime stimuli (“Russian” or “Latvian”), as well as empty screen: “base-line” – 17 ms. Participants did not see anything on the monitor due to the short (subliminal) exposure time. Prime stimuli activate an unconscious evaluative response that may influence the subsequent target;
- Backward mask: black lattice in the middle of a white screen, coincides with randomly presented intervals of stimulus onset asynchrony (SOA): 200 ms or 300 ms;
- Target stimuli: a clearly visible affective positive words (love, joy, happiness, kindness) and negative words (evil, anger, disgust, contempt) (Schlosberg, 1952). Duration: Until response or time-limited. The participant categorizes the target (“positive” and “negative”) via keypress.

Then the participant’s reaction time (RT) is recorded. The RT is the time between the start of “Target” and the participant’s pressing the corresponding key. The RT and the accuracy in categorizing the target words are dependent variables.

Inter-Trial Interval (ITI) (empty screen) (1000 ms) – provides a brief pause before the next trial (Wentura & Degner, 2010). It is the time between measuring the RT and starting the next trial. The ITI is critical for: “Resetting” the state of attention, minimizing the influence of the previous trial on the next one, preventing guessing of the stimulus presentation rhythm.

Black words (Arial font and size 50 pixels) were presented on a white screen. Stimulus words were presented on a 17” LCD resolution 1200x1024 monitor, and participants were seated approximately 100 cm away from it.

Apparatus. Stimulation software E-PRIME 2.0 Professional (Psychology Software Tools, <https://pstnet.com>) was used for stimulus presentation and response collection.

Procedure of EEG Recordings

EEG was recorded with a sample rate of 1000 Hz and cut-off frequencies of 0.1-50 Hz via 32 electrodes Ag/AgCl caps (MCScap, Medical Computer Systems Ltd) electrodes fixed to the scalp with electrolyte gel at electrode positions with impedances <5 kOhm using the 10-10 electrodes system, A1A2 electrodes as recording reference. NVX52 EEG amplifier with NeoRec software (Medical Computer Systems Ltd) was used.

EEG Data Processing and TF Data Processing

Data were analyzed using Matlab (The MathWorks, Inc., <https://se.mathworks.com>) based EEG software – EEGLAB (Delorme & Makeig, 2004) with some custom EEG data processing scripts.

Data preprocessing and further EEG analyses were performed with EEGLAB. 50 Hz noise in EEG signals was rejected using bandpass filters with a value of 50 Hz. Then, EEG signals with performance errors or remaining artifacts exceeding $\pm 120 \mu\text{V}$ in any channel were cleaned. The eye-blinked artifacts were rejected using the ICA procedure (EEGLAB tutorial, <https://eeglab.org/tutorials/>).

Data processing and statistics was performed in EEGLAB with a EEGLAB STUDY pipeline. Time Frequency (TF) method used in this experiment data analysis steps, with following values of the calculation – cycles 3 0.8, nfreqs of 100, and ntimesout of 200. Event Related Potential (ERP) calculated with baseline from -500 to 0 ms and time range from -500 to 1500 ms.

For analysis we used C3 electrode that are connected with motor actions performance as well as integrative decisions manifestation through motor acts – keyboard key’s press and therefore allows us to make a tiny connection with behavioral data calculated variables of the SEP such as R, RR and RRR.

Results and Discussion

SEP Variables

Initial Information for Each Participant: The number of valid observations, the mean (M) and the standard deviation (SD) of RT for fixed prime (“Latvian” or “Russian”), baseline, target valency (“positive” or “negative”) and SOA (200 ms and 300 ms). When processing data, the number of measurements can decrease: usually, measurements that do not fall within a “reasonable” range of values are discarded (in our study: $200 \text{ ms} \leq \text{RT} \leq 1500 \text{ ms}$). The results of incorrect performance of the participant’s task may also be discarded. The percentage of incorrect answers given by participants in the classification tasks does not exceed 3.13%. The initial number of observations was 6784, and after filtering the data, 6564 observations remained. A total of 3.24% of observations were deleted.

SEP Procedures with Fixed SOAs. To interpret the measures of implicit attitudes, the assumption of Fazio et al. (1986, p. 231) is used, from which it follows that if the subject has a positive attitude toward object, the reaction to positive target words will be faster, and for negative target words – slower than in the absence of prime. Also, when a negative attitude is formed, the reaction to negative target words will be fast, and to the positive ones – slow. We use the opposite statement. If the reaction to the positive target words is fast and to the negative target words is slow, then the attitude toward object is positive. We assume that this is true to fact.

Effect Sizes. We used the effect size Cohen’s d to detect the implicit effects (Cohen, 1988, p.67). Interpreting the absolute values of Cohen’s d effect sizes: 0.20 – the effect size is small, 0.50 – the effect size is medium, 0.80 – the effect size is large.

Facilitation Variables

Facilitation variable values $R = R(\text{Prime}, \text{Target Valency})$ are defined as follows (e.g., Rudman, 2011):

$$R = M(\text{Baseline}, \text{Target Valency}) - M(\text{Prime}, \text{Target Valency})$$

If the mean RT of a participant with the prime stimulus is shorter than without the prime stimulus, then the participant’s task is facilitated and $R > 0$.

If the participant’s mean RT with the prime stimulus is longer than without the prime stimulus, then the participant’s task is inhibited and $R < 0$.

For instance, fast reaction to positive words relatively to the basic rate $R = R(\text{Prime}, \text{Target Positive}) > 0$ indicates participant’s positive attitude. Slow response to the positive words relatively to the basic rate $R = R(\text{Prime}, \text{Target Positive}) < 0$ indicates non-positive attitude.

Fast reaction to negative words relatively to the basic rate $R = R(\text{Prime}, \text{Target Negative}) > 0$ indicates negative attitude. Slow response to the negative words relatively to the basic rate $R = R(\text{Prime}, \text{Target Negative}) < 0$ indicates non-negative attitude (Rudman, 2011).

The absolute value of the facilitation variable R characterizes the strength of facilitation or inhibition in units of time (for example, in milliseconds).

According to Rudman (2011), the term “facilitation score” is used to encompass both response facilitation and inhibition.

$R(\text{Latvian}, \text{Target Positive}) > 0$	Facilitation of solving the task of classifying positive target stimuli in the presence of “Latvian” prime.
$R(\text{Latvian}, \text{Target Negative}) > 0$	Facilitation of solving the task of classifying negative target stimuli in the presence of “Latvian” prime.
$R(\text{Russian}, \text{Target Positive}) > 0$	Facilitation of solving the task of classifying positive target stimuli in the presence of “Russian” prime.
$R(\text{Russian}, \text{Target Negative}) > 0$	Facilitation of solving the task of classifying negative target stimuli in the presence of “Russian” prime.

Figure 1 shows the participants' individual effects of facilitation or inhibition in the task of the classification of positive and negative target words in the presence of prime stimuli, revealed using Cohen's $d(R)$ effect size. Facilitation effects are observed at $d(R) > 0.2$, while inhibition effects are observed at $d(R) < -0.2$ (outside the grey strip; s. Figures 1, 3). These effects depend on the participants and are more pronounced at SOA = 300 ms.

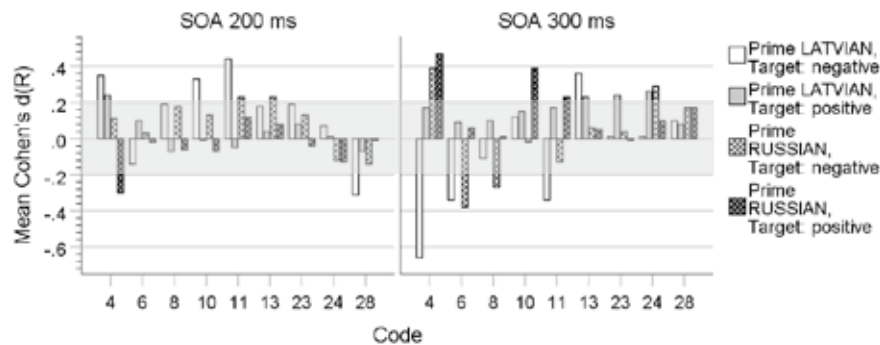


Fig. 1. Participations' Facilitation Variables: The Effect Sizes Cohen's $d(R)$

Table 1

Facilitation or Inhibition of the Task of Affective Classification of Target Stimuli in the Presence of the Prime Using One Sample t-test (N = 9, Test Value = 0)

SOA, ms	Prime	Target stimuli:	$d(R)$	M	SD	t	df	p -value (2-tailed)	The Effect
200	Latvian	negative	0.14	22.3	46.0	1.46	8	.18	not found
200	Latvian	positive	0.030	3.78	14.2	0.80	8	.45	not found
200	Russian	negative	0.087	16.8	27.1	1.86	8	.10	not found
200	Russian	positive	-0.048	-7.00	19.9	-1.06	8	.32	not found
300	Latvian	negative	-0.094	-17.7	60.7	-0.87	8	.41	not found
300	Latvian	positive	0.17	28.9	11.7	7.40	8	.000	facilitation
300	Russian	negative	0.017	-0.78	44.6	-0.052	8	.96	not found
300	Russian	positive	0.16	27.8	27.3	3.05	8	.016	facilitation

Table 1 shows both the mean values of Cohen's $d(R)$ effect sizes and the results of comparing the means of variable R with zero c using the One Sample t-test, showing the presence of a priming effect (Rudman, 2011). For the entire sample, the facilitation effect is observed at SOA = 300 ms with positive target stimuli, both for the "Russian" prime and the "Latvian" prime.

The mean values of facilitation and inhibition effects for the entire sample are shown in Figures 2–3. For a given sample, they depend on the valency of target stimuli, primes, and SOA.

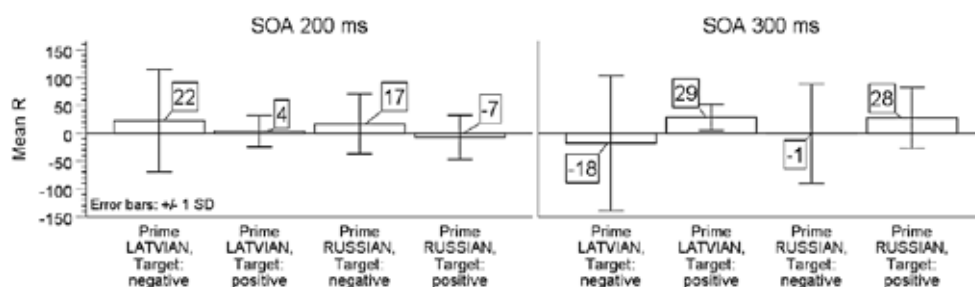


Fig. 2. The Means of Facilitation Scores

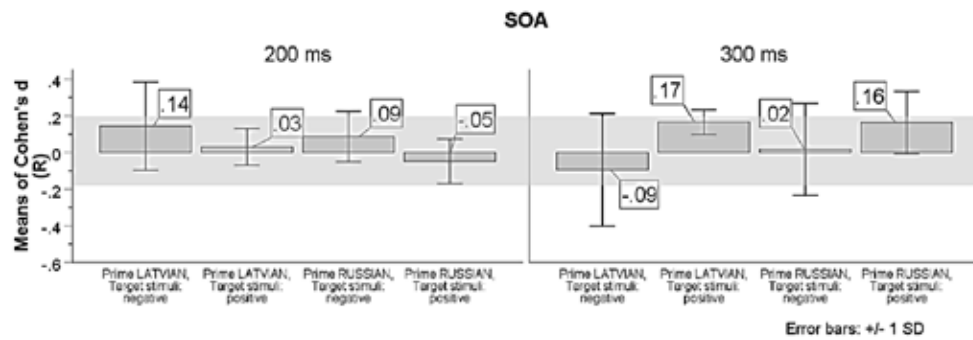


Fig. 3. Facilitation Scores: The Means of the Effect Sizes Cohen's $d(R)$

Attitude Variable RR

Each value of the *attitude variable* $RR = RR(Prime)$ at fixed primes is defined as the difference between the mean values of the facilitation variables:

$$RR = RR(Prime) = R(Prime, Target Positive) - R(Prime, Target Negative).$$

If $RR(Prime) > 0$, then the attitude is positive (in relation to prime).

If $RR(Prime) < 0$, then the attitude is negative.

When $RR(Prime) = 0$, the attitude is non-positive and non-negative (Plotka et al., 2016, 2023): it is possible that it is either ambivalent or unformed (s. Figures 4-6).

The absolute value RR characterizes the strength of the attitude in milliseconds.

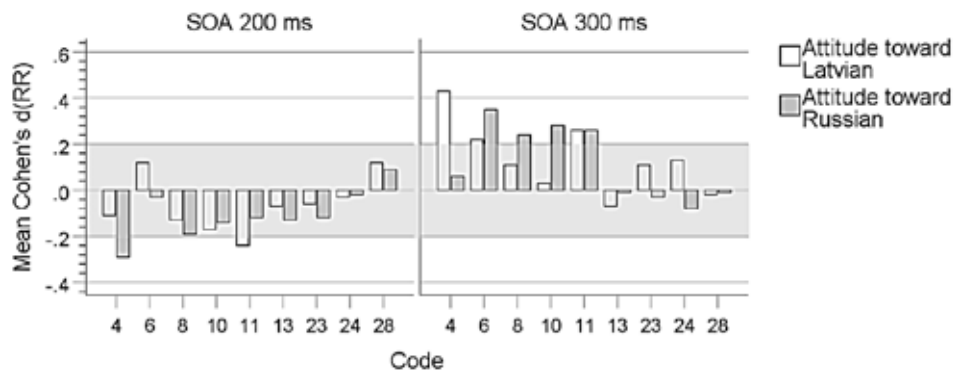


Fig. 4. Participations' Attitude Variable RR : The Effect Sizes Cohen's $d(RR)$

Figure 4 illustrates the in-group and out-group ethnic attitudes of participants, represented by Cohen's $d(RR)$ effect sizes. When $d > 0.2$, the attitude is positive, and when $d < -0.2$, the attitude is negative (outside the gray strip, s. Figure 4). Attitudes are more pronounced at $SOA = 300$ ms.

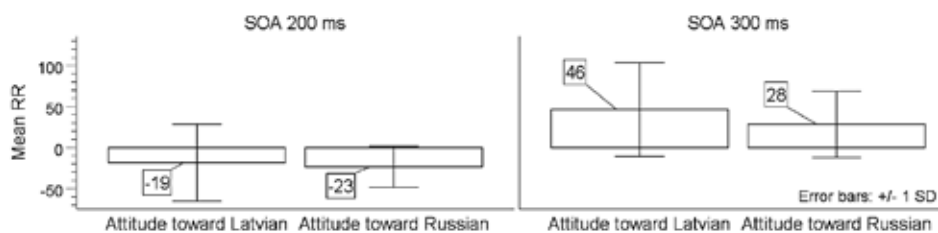


Fig. 5. The Means of Attitude Variable RR

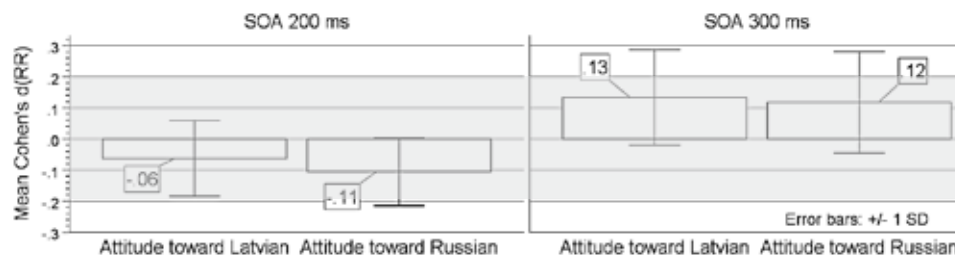


Fig. 6. The Means of Attitude Variable RR: The Effect Sizes Cohen's d(RR)

The second way to find the attitude is to compare the mean value of the *RR* variable with zero. Table 2 shows both the mean values of Cohen's *d(RR)* effect sizes and the results of comparing the means of variable *RR* with zero using the One Sample *t*-test. Table 2 shows that at SOA = 200 ms, there is a negative ingroup attitude toward Russians. At SOA = 300 ms, there is a positive outgroup attitude toward Latvians (s. Figures 5–6).

Table 2

The Ethnic Attitudes at Different SOA: One Sample *t*-test (N = 9, Test Value = 0)

SOA, ms	Prime	<i>d(RR)</i>	<i>M</i>	<i>SD</i>	<i>t</i>	df	<i>p</i> -value (2-tailed)	Attitude
200	<i>Latvian</i>	-0.063	-18.6	47.0	-1.18	8	.27	
200	<i>Russian</i>	-0.11	-23.3	25.3	-2.77	8	.024	negative
300	<i>Latvian</i>	0.13	46.4	57.2	2.44	8	.041	positive
300	<i>Russian</i>	0.12	28.4	40.4	2.11	8	.068	

Implicit Preference Variable RRR

Implicit preference variable, RRR, which is constructed on the basis of the third contrast according to Rudman (2011) and is the difference of the second order:

$$RRR = RRR(Russian) - RRR(Latvian).$$

If $RRR > 0$, there is an implicit preference for “Russian”. If $RRR < 0$, there is an implicit preference for “Latvian”.

The participants with codes 4 and 24 at SOA = 300 ms show the implicit preference of Latvians (Figure 7).

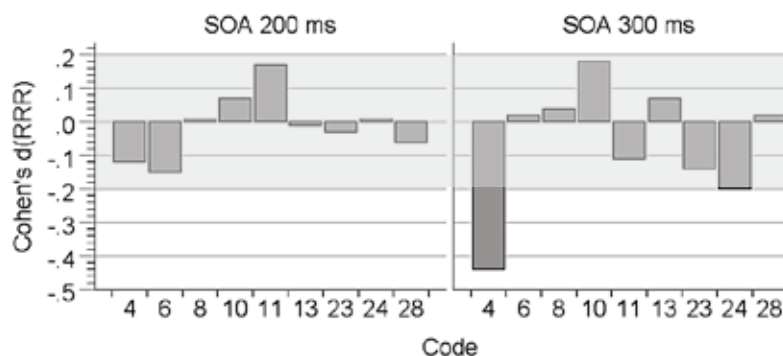


Fig. 7. Participations' Implicit Preference Variable, RRR: The Effect Sizes Cohen's d(RRR)

No implicit preferences were found in the entire sample (Table 3, Figures 8–9).

Table 3

The Implicit Preferences at Different SOA: One Sample t-test (N = 9, Test Value = 0)

SOA, ms	$d(RRR)$	M	SD	t	df	p -value 2-tailed
200	-0.012	-4.89	35.9	-0.41	8	0.69
300	-0.061	-17.7	57.7	-0.92	8	0.39

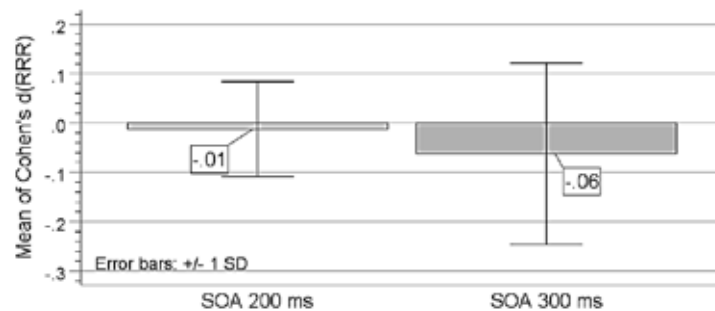


Fig. 8. The Means of Implicit Preference Variable RRR: the Effect Sizes Cohen's $d(RRR)$

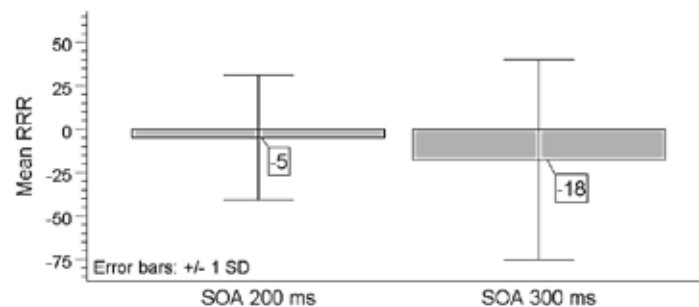


Fig. 9. The Means of Implicit Preference Variable RRR

EEG Results

TF and ERP analyses were performed for the selected electrode C3. Both quantitative and qualitative analyses were performed for the results obtained.

EEG recorded data were combined according to SEP experimental conditions: SOA (200 or 300 ms), primes (baseline, "Latvian", "Russian"), target words – positive or negative.

Using the EEGLAB Study function at the level of primary responses of ERP and TF, statistical analysis was performed using „exact” statistical threshold parameters or p -values for the entire sample.

For the calculated variables R, RR and RRR, TF data were presented in qualitative form for the entire sample.

Group Analysis Using ERP Method

With different primes and SOAs, no statistically significant differences between ERPs for positive and negative target stimuli were found.

Some statistically significant ERP differences were observed for both SOAs for the "Latvian" prime. At the 200 ms SOA, statistically significant ERP differences were observed in the time interval between 50 and 200 ms, suggesting a potential relationship with stimulus processing. For both SOAs, statistically significant ERP differences were found within 1000 ms after the participant's response (Figure 11).

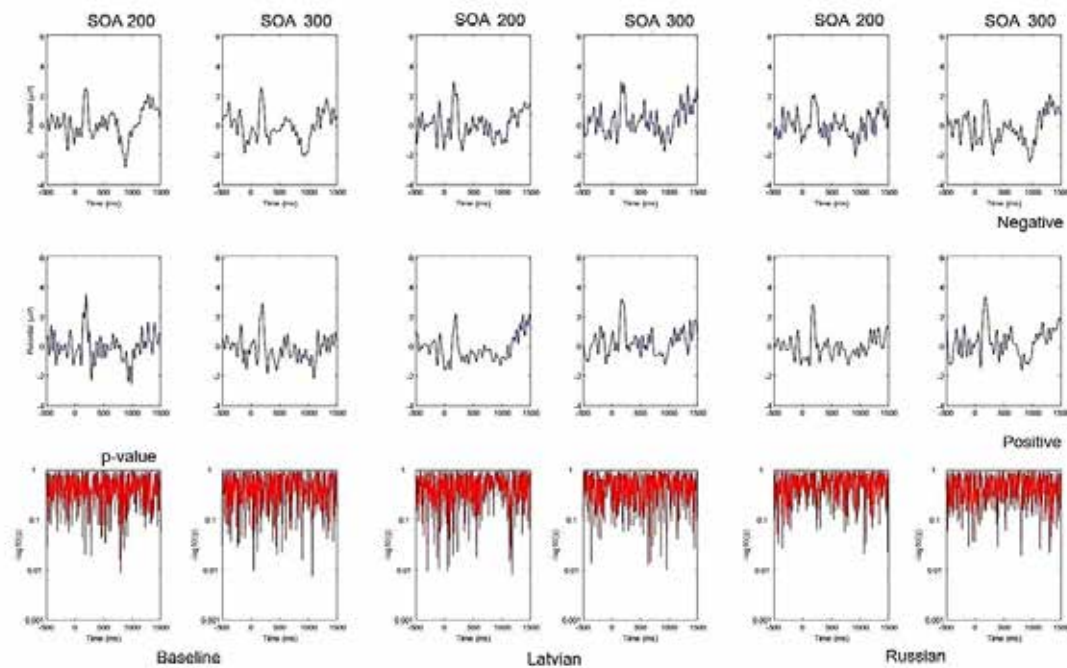


Fig. 10. C3 Electrode, ERP Plots of Different Stimulus Events (Baseline, Primes “Latvian” or “Russian”, Positive and Negative Target Words) with p-Values; x-Axis: Time (ms), y-Axis: Amplitude (mkV)

A spike with a duration of approximately 200 ms (N200) was observed across all experimental conditions for both SOAs (Figures 10–11), potentially reflecting processing of the stimulus stream.

Figure 11 illustrates the procedures for calculating ERP data for variables R, RR, and RRR.

When using the prime “Russian”, some ERP disturbances for variables R and RR are observed following the test subject’s key press (post-response) in the 800–1200 ms time window (Figure 11).

One possible explanation for the absence of a 200 ms ERP spike across all experimental conditions might lie in the specific calculation procedures applied to the SEP variables (R, RR, RRR) patterns.

The early response window (around 250 ms), characterized by increased gamma activity in visual processing areas, has been interpreted as reflecting a mechanism that supports the integration of individual perceptual features into coherent object representations (Tallon-Baudry & Bertrand, 1999). Increased gamma power may be linked to stronger activation of sensory networks during stimulus encoding, which can positively influence memory formation (Hanslmayr et al., 2009). In turn, stronger memory activation may enhance the semantic network associated with implicit attitudes, while reduced gamma activity may indicate the opposite effect.

Group Analysis Using TF Method

In the first step, each event data TF was calculated (Figure 12). Differences in EEG frequencies over time were observed at all experimental variables or event levels.

Baseline negative events under SOA 300 ms showed beta and low gamma wave power decreasing or inhibition during negative stimulus presentation and key press moments, which was different from baseline positive events in the TF patterns.

Another interesting pattern was discovered with SOA 200 ms and positive target stimuli: at the primes “Russian” and “Latvian,” gamma wave activation in the post-response period was more pronounced than at baseline.

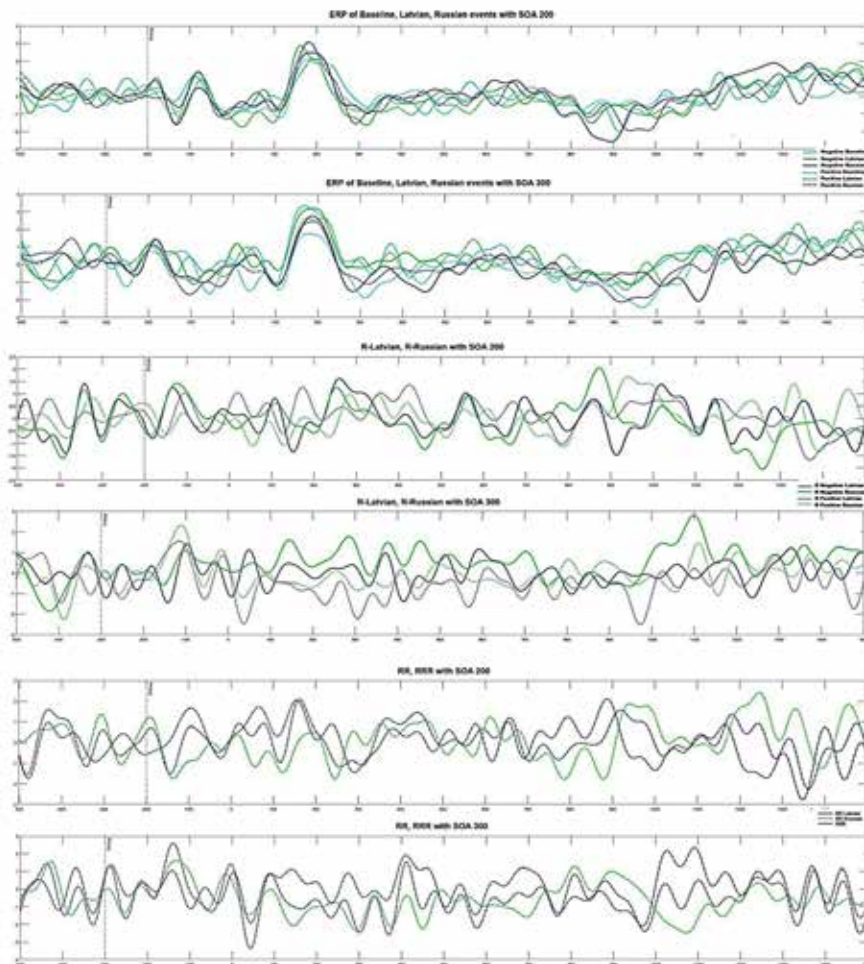


Fig. 11. C3 Electrode, ERP Plots, the R, RR, RRR Plots of Different Stimulus Events (Baseline, Primes “Latvian” or “Russian”, Positive and Negative Target Words); x-Axis: Time (ms), y-Axis: Amplitude (mkV)

At the 200 ms and 300 ms SOA and prime “Latvian”, gamma wave activation in the post-response period for a positive target stimulus differed more than baseline gamma wave activation for a negative target stimulus. This is consistent with the results obtained from behavioral implicit data for our pilot study.

The high differences in beta and gamma waves (15–48 Hz) in the post-response time period (800–1200 ms), especially in outgroup cases “Latvian” positive vs “Latvian” negative at SOA 200 ms ($p < .05$) were observed. At negative target stimuli, beta and gamma waves showed differences between SOA 300 ms and SOA 200 ms.

At prime “Latvian” and positive target stimuli, a tendency of differences in signal power at different SOAs was observed. This trend consists of desynchronization of theta waves (3–4 Hz) at SOA 300 ms in the time window up to about 500 ms and at 7 Hz in the time range between 550 and 1000 ms. In contrast, synchronization was observed in the low beta wave between 550 and 650 ms. Gamma wave desynchronization was observed at SOA 300 between 200 and 300 ms.

When processing negative target stimuli with prime “Latvian”, more pronounced differences in signal strength were observed than in other cases considered, especially in the response time range (approximately 700 ms).

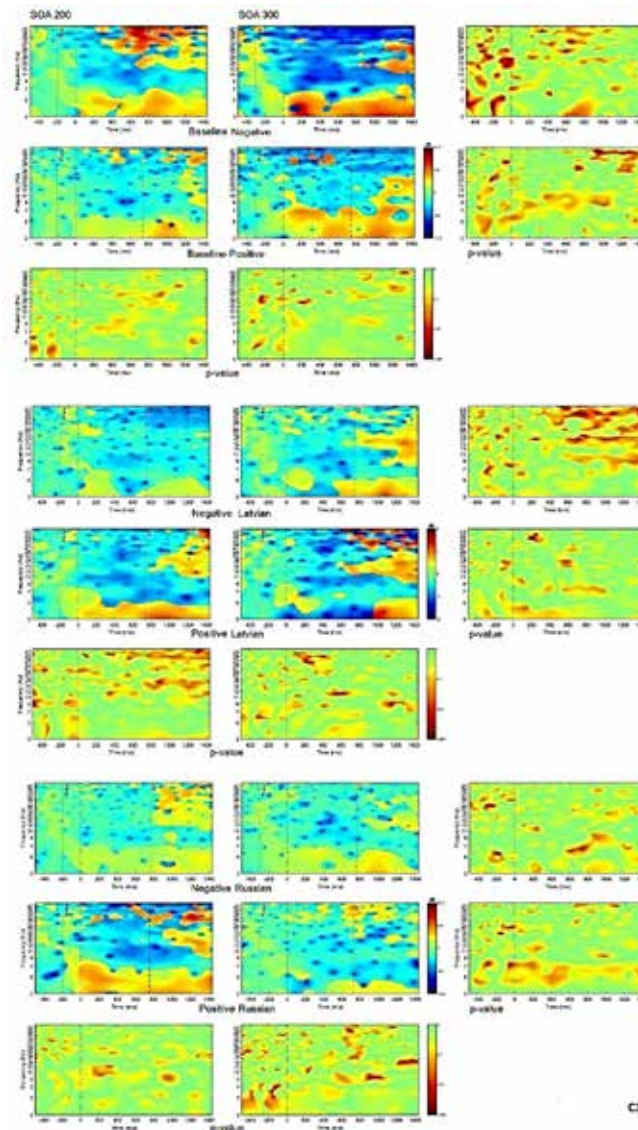


Fig. 12. C3 Electrode, TF Plots of Different Stimulus Events (Baseline, Primes “Latvian” or “Russian”, Positive and Negative Target Words) with p-Values; x-Axis: Time (ms), y-Axis: Frequency (Hz)

In the time window from 400 to 600 ms, a region of differences between the two synchronization conditions was identified in the frequency ranges, including the alpha, beta, and gamma wave ranges, which was observed until the end of the signal recording time.

Noteworthy is the drop in signal strength, especially in the range up to 600 ms, in the theta wave region at SOA 300 ms compared to SOA 200 ms in at the prime “Russian” and positive target words. At prime “Russian” and negative target words, the focus of similar differences in neural activity shifts to the upper theta and lower alpha regions beyond 600 ms.

Group Analysis TF Matrix for R, RR and RRR Calculation

In the second step, the TF matrix data were processed according to the definitions of the variables R, RR and RRR.

Figure 13 illustrates the process of calculating R, RR and RRR. The qualitative data, represented by the image of these variables obtained with the TF, shows that in the case of the 200 ms SOA,

the signal power at the positive target stimulus is lower than at the negative stimulus. This suggests that the negative target stimulus affects the RR values and, consequently, the RRR values.

The main effects were observed in beta and gamma waves at post-response time after 800 ms. Theta-delta wave synchronization was also observed at time intervals ranging from 400 to 800 ms at the prime “Latvian” and negative target stimulus in the TF patterns of R, RR and as a result in RRR.

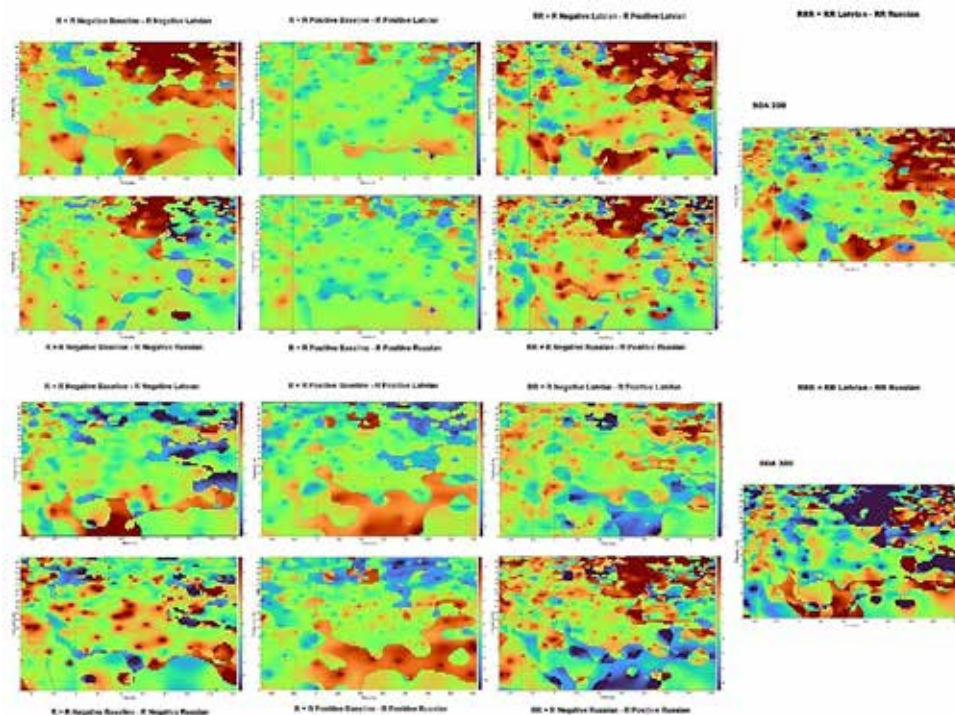


Fig. 13. C3 Electrode, TF Plots of R, RR, RRR Cases of Different Stimulus Events (Baseline, Primes “Latvian” or “Russian”, Positive and Negative Target Words); x-Axis: Time (ms), y-Axis: Frequency (Hz)

At SOA 300 ms, theta and delta waves synchronizations at both primes and positive target stimulus in the R-pattern were observed. But this is not expressed in RR and RRR patterns plots.

The main differences in the RRR pattern at different SOAs seem to be gamma waves with desynchronization at SOA 300 ms in the 400-800 ms time interval and synchronization at SOA 200 ms in the time interval after 800 ms. Similar synchronization of theta waves was observed in time intervals around 400-600 ms.

A comparative analysis of neural activity, calculated to obtain TF matrices in the case of RRR, revealed differences in neural responses to positive and negative target stimuli as well as to different primes. One notable feature was the emergence of lower gamma activity in the early response window (around 250 ms). Gamma desynchronization was observed in the case of the “Latvian” prime paired with a positive target stimulus at SOA 300 ms, while the “Russian” prime paired with a positive target stimulus showed gamma synchronization in the same time window.

Negative target stimuli paired with the “Latvian” prime exhibited gamma synchronization at SOA 300 ms, whereas those paired with the “Russian” prime did not show statistically significant changes in gamma power at this SOA.

In the experiment with this design, the processing of target words began at intervals after the presentation of the prime, to which the identified components of TF and ERP can correspond at the neural level. They can arise after 200 and 300 ms, as a stable neural response to the appearance of specific

stimuli. It manifests itself in the peak amplitude variation of a neural signal in a specific brain area, which is recorded by means of EEG. Since the presentation of the prime, this peak neural response can coincide with the moment of presentation of the target word. In this case, subsequent cognitive processing of the target stimulus may be affected by this response.

This assumption is important for interpreting the obtained TF results. Gamma desynchronization for the “Latvian”–positive stimulus combination at SOA 300 ms, along with synchronization at SOA 200 ms, may suggest stronger activation of implicit attitudes in the latter case. Similarly, gamma synchronization for the “Russian”–positive stimulus combination at SOA 300 ms, combined with a lack of significant gamma power changes in response to negative stimuli across SOAs, may reflect a greater role of implicit associative processes in semantic memory at SOA 300 ms.

These findings are consistent with previous behavioral data, which showed activation of an ingroup “pro-Russian” implicit attitude at SOA 300 ms and an outgroup “pro-Latvian” attitude at SOA 200 ms (Plotka et al., 2016). Thus, the data provide evidence for the presence of neural markers of implicit ethnic attitudes in the lower gamma range, within a time window of approximately 250 ms at SOAs of 200–300 ms. However, further research is needed to draw definitive conclusions.

Study limitation was a small number of participants and only one ethnic group. The analysis was restricted to qualitative assessment of time-frequency and event-related potential patterns in SEP components (R, RR, RRR).

We anticipate future investigations integrating both qualitative and quantitative analyses of SEP-related TF variables (R, RR, RRR). The experimental design may incorporate ethnically stratified participant groups and subgroups under various SOAs showing priming effects.

The results seem to show that at SOA 200 ms and SOA 300 ms, different frequency patterns were present in the time-frequency data. This may indicate a preference for an ethnic group in the case of outgroup-congruent stimuli at SOA 300 ms, differing from the corresponding patterns at SOA 200 ms, which are associated with the influence of stimuli congruent with an alternative outgroup. The obtained results align with previous studies (e.g., Plotka et al., 2016; Amodio & Cikara, 2021; Amodio & Bartholow, 2011; Kubota & Ito, 2007).

Conclusion

Researchers in implicit social cognition and social neuroscience have highlighted the importance of investigating relationships between behavioral implicit measures and non-behavioral measures obtained through EEG methodology (Williams & Themanson, 2011; Healy et al., 2015; Perry, 2022; Huang et al., 2025).

The correspondence between ERPs and behavioral measures of implicit attitudes has primarily been examined using IAT procedures, but not with data from subliminal priming experimental paradigms (e.g., Willadsen-Jensen et al., 2008; Ibanez et al., 2010). The hypothesis proposed in previous studies (Plotka et al., 2016, 2017) requires verification at the non-behavioral (neural) level.

The current pilot study achieved its aim of exploring the potential utility of electroencephalography time-frequency analysis for assessing neural signals associated with measures of implicit ethnic attitudes in combination with subliminal evaluative priming procedures.

Our findings suggest the feasibility of using TF patterns of SEP variables (facilitation, attitudes, implicit preference) for both qualitative and, potentially, quantitative analysis. The study also demonstrates the possibility of integrating behavioral and non-behavioral data within a unified research framework.

The employed electroencephalography methods appear promising for investigating implicit ethnic attitudes. The results reveal distinctive neurophysiological responses to specially designed stimulus combinations used for measuring implicit ethnic attitudes.

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SOCIOLOGY

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THREE SEAS: LESSONS FROM SOCIOLOGIST RESEARCH. COOPERATION BETWEEN LATVIAN AND CENTRAL EUROPEAN SCIENTISTS IN THE SOCIOLOGY OF ETHNICITY

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Abstract. Latvia has been a multicultural and multiethnic country throughout its long history. At the moment, the proportion of ethnic Latvians is approximately 62% of its population, and representatives of ethnic minorities - 38%. To a large extent, such ethnic diversity is the result of a long historical stay in other state formations, multi-ethnic empires and states. But during the periods of Latvian national statehood (1918–1940 and since 1991) there was an increase in the share of ethnic Latvians and a decrease in the share of ethnic minorities. For the Latvian state and society, this ethnic diversity has always been in the focus of public debate, political controversy and scientific interest. In this part of the monograph, the authors show the results of the interaction of scientists from Latvia and Central and Eastern Europe on the sociological analysis of the ethnic diversity of Latvia and its individual regions. The choice of this focus of analysis is due to the fact that Latvia, to one degree or another, has historically been included in the geopolitical space of Eastern Europe, which is now increasingly called the Three Seas region. Having a unique historical experience of integrating ethnic diversity, Latvia at the same time absorbs many political, cultural and intellectual practices that express the originality of the countries of the Three Seas region in the ethnic integration of their population. The authors provide data on joint scientific projects, organized scientific conferences. A brief analysis of scientific publications on multi-ethnicity in Latvia, prepared as a result of scientific interaction between Latvian sociologists and representatives of science from Central Europe, is given.

Key words: multicultural and multiethnic country, Central Europe, Latvian sociologists.

Introduction. Historical and geopolitical context for the importance of participatory ethnicity research in Central and Eastern Europe. The ethnic diversity of the region of Central and Eastern Europe has been the subject of analysis by many ethnologists of the region. For a long time, scientists have been analyzing the existence of large ethnic minorities in the countries of this region of Europe. Moreover, the presence of these groups is shown as a typological feature of these countries, without careful interest in which it is impossible to understand their dynamics, political, cultural and economic life, as well as a very complex and dramatic history (for example: Brubaker 2009; Csörgő, Vangelov, Vizi 2017; Kosinski 1969; Stroschein 2012; Szelényi 2007). It is difficult to understand the ethnic diversity of Central and Eastern Europe if one ignores the fact that in many nation-states of this region some ethnic minorities are objectively or subjectively associated with representatives of the former imperial ethnic groups that dominated politically, economically and culturally in these coun-

tries before restoration or acquisition by them. state independence after the First World War and after the collapse of the multinational USSR, Yugoslavia and Czechoslovakia in the early 1990s. Some of these ethnic minorities, for example, the Baltic Russians, are characterized by a developed collective ethnocultural identity, political consciousness and historical memory, which distinguishes them from the national majorities in these countries.

Interest in ethnic diversity has long been evident in sociological and historical-sociological research in Latvia after the restoration of its independence in 1991. The restoration of national independence of the countries of Central and Eastern Europe in the early 1990s stimulated mutual interest among scientists in these countries in the multiple aspects of ethnic diversity that have historically characterized this region of Europe. Such a multidimensional analysis included reflections and scientific communication of sociologists on issues such as the formation of models of ethnic politics, policies of national identity and national integration, policies for protecting the ethnocultural identity of ethnic minorities, etc. The complexity of the situation and the need to exchange experience with colleagues from countries with a similar historical fate and a high proportion of ethnic minorities in the population structure dictated the need for long-term scientific dialogue between sociologists in Central and Eastern Europe. In general, if we talk about the main trends in the analysis of the ethnic diversity of this region of Europe, we can highlight its main structural elements. First, these are the structures created by the ethnic majority of these countries, first of all, national statehood and its basic institutions. Secondly, these are ethnic groups whose identity does not coincide with the ethnic majority, but which, thanks to international legislation, have acquired the guaranteed status of ethnic minorities, implying a set of rights to preserve their collective ethnocultural identity within the framework of established national states.

Cooperation of Latvian, Estonian and Lithuanian sociologists in ethnicity research. In the 1990s, Latvia was characterized by the establishment of scientific cooperation between sociologists dealing with ethnic issues, primarily with colleagues from other Baltic countries – from Estonia and Lithuania. At this time, scientific conferences are held and collections of scientific papers specifically devoted to ethnopolitics are published under the auspices of the Institute of Philosophy and Sociology of the Academy of Sciences of Latvia (later the University of Latvia). The organizers of these conferences and the editors of these collections of scientific papers were Elmārs Vēbers, Ph.D., and Rasma Šilde-Kārkliņa, professor at the University of Illinois at Chicago. The collection “National Policy of the Baltic States” (1995), formed as a result of this dialogue that began, already had three sections, each of which included a series of articles on each country.

The articles in this collection state the peculiarity of the ethnic diversity of Latvia and Estonia, which is manifested in the existence of two ethno-linguistic communities: Latvians and Russian speakers in Latvia and Estonians and Russian speakers in Estonia. It is this understanding of the ethnic situation that leads sociologists in these countries to an active exchange of opinions regarding the search for theoretical paradigms that would explain the possibilities of nation-building in the presence of large ethnic communities in civil societies, which make up a significant share of the urban population of these countries, and in some cases the dominant one. share in the population of large cities (Daugavpils in Latvia and Narva in Estonia). In addition, the Russian-speaking population of Latvia and Estonia is characterized by developed forms of ethnocultural identification, historical memory, political consciousness, ethnodemographic behavior and similar stories of appearance in the Baltic states.

Articles by scientists about the ethnocultural situation in the Baltic states, which were published in joint collections in the 1990s, mainly introduced the scientific community to the situation in these countries. The main reflections were related to how to combine the need for nation-building with the values dominant in the liberal consciousness about protecting the right to preserve ethnic identity as one of the universal human rights. Particular attention began to be paid to the relationship between the ethnic majority in the Baltic countries and the Russians, taking into account the fact of their status as

ethnic minorities and the institutionalization of the geopolitical conflict between the Baltic countries and Russia, as well as the difference in the established sociolinguistic statuses of the state languages of the Baltic countries, on the one hand, and the Russian language on the other. At the same time, a significant part of the publications showed that the source of the presence of large communities of ethnic minorities and the peculiarities of their ethnocultural identity was the presence of the Baltic states in the USSR (see, for example: Kaplane, Breidijs 1995; Hallika 1995; Jakaitiene 1995; Druvieta 1995). Latvian liberal researchers were characterized by an active search for the most adequate reality of the concept of a national or ethnic minority, the formulation of the idea of their democratic integration into national states and at the same time showing the risks of marginalization and segregation of these population groups. Researchers have shown sensitivity to internal differences between ethnic minorities, which has led to the need to complement sociological analyzes of Latvian multiethnicity with in-depth historical research (Apine 1995). In the mid-1990s, the first articles appeared devoted to the influence of ethnopolitics and, above all, language policy on the formation of ethnosocial stratification, which limited the access of ethnic minorities to socially prestigious areas of employment. But, as the researchers pointed out, the lack and inconsistency of the available data did not allow making reliable generalizations about the typified social statuses of the Russian-speaking population in the system of ethnosocial stratification of the Baltic countries (Muižnieks 1995).

Since the late 1990s and in the following decades, the emphasis in studies of ethnic diversity has shifted to building models of integration of ethnic minorities, primarily Russians, in the Baltic countries. This process was not easy, as two main positions of such integration were emphasized. The first insists that integration presupposes the formation of a common national identity, the dominance of state languages, the culture of the ethnic majority and the interpretation of history in society as a whole and in the lives of ethnic minorities, and the preservation of ethnocultural identity is assumed only in the private life of minorities (Kuzmickaite 1998; Hirša 1998; Kirch 1998; Ruutsoo 2000; Vēbers 2000). The second, which is not a serious competitor to the first integration model, emphasizes the need to take into account the long historical ties of ethnic minorities with the Baltic states, their valuable contribution to its social, economic and cultural life, and the modern demand for the active political and public participation of ethnic minorities. This model of integration is built on the value of liberal multiculturalism for the multi-ethnic societies of the Baltics. This research position is especially typical for sociologists who themselves belong to ethnic minorities in the Baltics (Dribins 1998; Apine 1998; Kasatkina 2000; Liguta 2000; Volkovs 2000; Isakov 2008; Nikiforov 2011; Poleshchuk 2013). This was expressed in the need to understand integration as a two-way process of mutual consideration of interests by ethnic majorities and minorities, which implied recognition of the value of the collective identities of ethnic minorities. In fact, from this time on, a broad interpretation of the liberal approach in the study of ethnicity has been established, which is expressed in varying degrees of recognition of the value of multiculturalism in the public life of the many ethnic Baltic countries.

Latvian-Polish ethnic studies. The closest and most diverse contacts have developed between scientists from Latvia and Poland. And this is not at all accidental. Latvia has been home to a large Polish community for a long historical period. In 2022, its population was 40.4 thousand people, which accounted for 2.0% of the country's population (Latvijas iedzīvotāju ... 2023). But in Latgale, where approximately half of Latvian Poles live, their share in the region's population is 6.8% (Arhivēta kopija... 2023). In the second most populous city of the country, Daugavpils, Poles are the third largest population group – 10.2 thousand people, or 12.9% of all citizens (Iedzīvotāju skaits ... 2023). Such a significant share of Poles in the population of modern Latvia is the result of a long history, when in the 16th century the territory of Latvia came under the control of the Polish-Lithuanian Commonwealth. Poles in Latvia are distinguished by a high degree of organization and cultivation of their ethnocultural identity. This is expressed in the presence of publications in Polish and public organizations. There are several Polish schools in Latvia. The most famous of them: Daugavpils Polish Gymnasium named

after Józef Pilsudski (J. Pilsudska ... 2023), Rēzeknes valsts poļu ģimnāzija (Rēzeknes valsts ... 2023), Riga Polish Secondary School named after Ita Kozakiewicz (Rīgas Itas... 2023).

However, despite the growing value of ethnocultural identity among Latvian Poles, the most common spoken language in their families is Russian. (For Latvia, in relation to the majority of traditional ethnic minorities, except Russians and Gypsies, a similar picture of the discrepancy between the ethnic and linguistic components in ethnocultural identity is characteristic.) So, if Polish was recognized as a native language by 19% of Poles, Latvian by 20%, then Russian by 58% (Dati par valodu prasmi 2023; Meklēšanas rezultāti 2023). This indicates the complexity of the processes of strengthening Polish ethnocultural identity in modern Latvia. Therefore, the interest of sociologists of ethnicity from Poland in the life of the Polish diaspora in Latvia is natural. Cooperation with sociologists from Latvia in conducting joint research and scientific discussions is also very important for them. At the same time, it cannot be said that only scientists from Poland are interested in Latvian Poles. It is also extremely important for sociologists from Latvia to understand the nature of the reflections of Polish scientists on the ethnic mosaic of Latvia. This creates conditions for an interactive understanding of ethnic processes by sociologists from various countries of Central and Eastern Europe.

The mutual interest of Latvian and Polish sociologists in ethnic processes in these countries became apparent already in the 1990s. Professor, dr. hab. Adam Bobryk in College of Agriculture and Pedagogy (*Wyższa Szkoła Rolniczo-Pedagogiczna*) in Siedlce on November 16, 1998 organized the International Scientific Conference “Poles in the process of systemic and political transformation of the countries of the former Soviet Union” (*Polacy w procesie transformacji systemowej i ustrojowej krajów byłego Związku Radzieckiego*). Two reports were devoted to Latvia. These are questions of ethnic politics and the situation of the Poles. They were published in the post-conference collection (“Polskie odrodzenie na Wschodzie. Materiały z Międzynarodowej Konferencji Naukowej nt. Polacy w procesie transformacji systemowej i ustrojowej krajów byłego Związku radzieckiego” zorganizowanej w Siedlcach 16 listopada 1998 roku, red. Adam Bobryk). Articles in this book about ethnic processes in Latvia: Agnieszka Grędzik «The revival and current state of Polish education in Latvia (*Odrodzenie i stan aktualny szkolnictwa polskiego na Łotwie*)», s. 123-128 and Zbigniew Lisowski «Latvian fate of Poles (facts and impressions) (*Łotewskie losy Polaków (fakty i wrażenia)*)», p. 129-151. At the International Scientific Conference “Social life of Poles in the East and their contacts with Poland (*Życie społeczne Polaków na Wschodzie i ich kontakty z Polską*)” (Akademia Podlaska, 2005, December 2) reports were read: Józef Szostakowski "The issue of the revival of Polishness in Latvia and Estonia in the Polish-language press in Vilnius in 1985-1990 (*Kwestia odrodzenia polskości na Łotwie i w Estonii na łamach wileńskiej prasy polskojęzycznej w latach 1985-1990*)", Vladislav Volkov (Latvia) “Perception of security threats by the Polish minority in Daugavpils” (Bobryk 2007, pp. 93-101, 247-255). Professor A. Bobryk in the article “Poland's policy towards the Baltic states (*Polityka Polski wobec państw nadbałtyckich*)” discusses bilateral agreements between Latvia and Poland on the rights of ethnic minorities. And it touches on a difficult problem for a large part of the Polish population of Latvia - the difficulty of obtaining citizenship of this country (Bobryk 2009, p. 263).

Interaction with Polish sociologists led to joint scientific projects on the sociology of ethnicity in Latvia. This applies, first of all, to the Latgale region. It is worth mentioning such projects as “Antagonism and Reconciliation in the Multi-Cultural Areas” (2010) and Project of the Polish Ministry of Science and Education “Patterns of Dispute and Dispute Resolution as Elements of Popular Legal Culture” (2014 – 2016). Head of both projects - Professor Jacek Kurczewski, Warsaw University, head of sociological research in Latgale, Doctor of Sociology Vladislav Volkov. Both of these projects resulted in many scientific publications, including joint ones, including a scientific monograph, holding joint international scientific conferences in Warsaw, Krakow, Riga (Volkov 2012; Volkov, Kurczewski 2012; Volkov, Kurczewski 2013; Волков, Курчевський 2017). Joint sociological stud-

ies of the ethnic groups of Latvia, conducted by scientists from Latvia and Poland, have already meant the creation of a common methodology for the study of ethnicity. This methodology was based on the notion that modern ethnic groups should be seen as subjects of democratic and pluralistic nation-states. At the same time, the identity of ethnic minorities is understood as an integral social phenomenon that cannot be reduced only to ethnocultural characteristics, which have the sphere of their reproduction and manifestation exclusively in private life. The identities of ethnic minorities in a democratic pluralistic society have the form of collective identity and act as one of the forms of manifestation of national identity.

Cooperation of Latvian, Czech, Slovak and Hungarian sociologists in the study of ethnicity. One of the authors of this article, Doctor of Sociology, leading researcher at the Institute of Philosophy and Sociology of the University of Latvia, with the financial support of Friedrich-Ebert-Stiftung Baltic States, organized two international scientific conferences “The integration models of ethnic minorities in the Eastern and Central European countries after 1991” (2012) and “The collective identities of ethnic minorities in the national states of Eastern and Central Europe after 1991” (2014). The result of these conferences was the publication in the scientific journal “Ethnicity” of articles by scientists from Latvia, Estonia, Hungary, the Czech Republic, and Poland on ethnic issues (for example: Ehala, Zabrodskaia 2013; Kretalov 2013; Papp 2014; Volkov 2013).

Latvian scientists have implemented many joint projects with Czech colleagues to study the ethnic mosaic of Central and Eastern Europe. In 2016 – 2018, a bilateral project “National minorities and ethnic groups: past and present experience in Czech Republic and Latvia“ was implemented (project managers - Dr. Nadežda Pazuhina, Institute of Philosophy and Sociology of the University of Latvia and Dr. Petr Bednaržik, Institute of Modern History of the Czech Academy of Sciences). The purpose of this project was to analyze the cultural and historical experience of ethnic minorities in the interwar period of Latvia and the Czech Republic. The participants of this project continued the previous cooperation of the students of these scientific institutes. On the part of the Czech Republic are Petr Bednaržik, PhD, Helena Noskova, Ph D, Oldřih Toma, PhD, Zdenko Maršalek, PhD and David Kovaržik PhD. On the part of Latvia – Vladislav Volkov, Dr. Sc.soc., Inese Runce, Dr. hist., Igors Šuvajevs, Dr.phil., Kaspars Zellis, Dr.hist., Solveiga Koņkova-Krūmiņa, Dr.phil., Māra Kiope, Dr. phil. un Nadežda Pazuhina, Dr.art. Other research and academic institutions were also involved in the implementation of the project, the international scientific seminar "Migration in Czechoslovakia in the 20th century" was organized. and their consequences" (in cooperation with the Slovak Institute, Prague, 21.09.2016), practical seminar "Research, methodology, situation of national minorities in the Czech Republic and Latvia" (in cooperation with the House of National Minorities in Prague, Prague, 3.10.2017) international scientific conference "The power of the powerless: Masarik, Patočka, Havel" (in cooperation with Charles University in Prague, Faculty of Philosophy and History, Riga, 25 - 26 October 2017). The result of the research part of the project can be considered the collective monograph “Bezvarīgo vara: Masarik, Patočka, Havel (*Power of the powerless: Masarik, Patočka, Havel*)”. Compilers: N. Pazuhina, P. Shtoll, I. Šuvajevs. Riga: LU FSI, 2018, 382 pages. The first chapter of this book is related to T.G.Masarik's ideas about the role of national minorities in the preservation of historical and political memory.

In 2016, from November 28 to December 4, Petr Bednaržik and Oldřih Toma visited Riga with the aim of strengthening scientific contacts, conducting individual research work and participating in the practical seminar. The Institute of Philosophy and Sociology of the University of Latvia held a discussion on the research of national minorities and ethnic groups, during which Petr Bednaržik presented current events in the research of national minorities in the Czech Republic. P. Bednaržik also participated in the memorial events dedicated to the victims of the Riga ghetto and met with Marger Vestermanis at the conference organized by the "Jews in Latvia" museum. In 2017, from September 27 to October 4, 2 Latvian scientists (V. Volkov and K. Zellis) visited the Czech Republic with the aim

of participating in the practical seminar at the House of National Minorities in Prague - "Research, methodology, situation of national minorities in the Czech Republic and Latvia". The focus was on the research of the collective memory of national minority groups, as well as the reflection of controversial historical events in museum expositions. In 2018, from November 28 to December 2, Vladislav Volkov visited Prague with the aim of conducting individual research and presenting research results, as well as his monograph (Vladislavs Volkovs. "Identity values of Latvian ethnic minorities: between normativism and pluralism". Riga: LU FSI, 2018, 308 pages) and promote the latest publications of Latvian researchers.

Conclusion. Three Seas Initiative: the relationship between the study of regional ethnicities and geopolitics. Despite the fact that Latvian scientists are showing interest in joint research into the ethnic diversity of the Central and Eastern European region, in our opinion, a stable scientific narrative has not yet emerged that reflects standardized practices of important aspects of understanding ethnicity. Such elements of the necessary scientific search should include an understanding of the nation-building of states in this region of Europe, the interaction of the national majority and ethnic minorities, the dialectic of individual rights and collective identity of various ethnic groups and the nature of recognition of this identity. With a high degree of confidence, we can say that the development of this type of research will be stimulated not only by the academic interest of the scientific community, but also by the political processes of integration of the Three Seas region, in which ensuring humanitarian security and the rights of people with different ethnic origins plays an important role. Such political initiatives to consolidate this region of Europe are also manifested by Latvia.

Former President of the Republic of Latvia, Egils Levits, described The Three Seas Initiative (TSI) as a new region in Europe and 'the shield of democracy' on outer border of European Union. However, since establishment of the framework of TSI in 2015, there had been rather low political interest to be proactive from the side of Republic of Latvia. As member state of NATO and European Union, Latvia had been very cautious to be proactive in the Initiative. Taking into account involvement of the United States into the Initiative when the US President Donald Trump visited TSI Summit in Warsaw in 2017, Latvia has increased its activities within the framework of TSI. However, only in September of 2020, Ministry of Foreign Affairs established National Coordination Group for TSI. Since then, involvement of the Republic of Latvia into TSI framework rapidly increased and in June of 2022 TSI Summit was held in Riga, Latvia. Latvia has discovered that TSI platform would enhance its political and economic interests and provide possibility to use opportunities of the platform to counter current political and economic challenges. There are four main groups of political and economic objectives which Latvia pursues- geopolitics, economic growth/regional stability and investments, energy security, reliable, sustainable and inclusive connectivity. One would argue that the main reason for Latvia to be proactive in TSI project is to maintain trans- Atlantic link and further involvement of the United States into security issues of the Baltic Region. Latvia is also interested of proactive political and economic involvement of Germany; however, Latvian and German interests could be different at some point of development of TSI. Subsequently, Latvia has to use TSI platform in order to increase regional security and stability in the Baltics, including the humanitarian aspect of human rights with different ethnic origins, the rights of ethnic minorities to preserve their ethnocultural identity, as well as, to gain support for Latvian economic and energy supply projects. One has to conclude that Latvia has used all available political and economic resources in order to increase relevance of TSI (Sprūds, Vargulis 2022, p. 7, 96–108).

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LANGUAGE STUDIES

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A DIASPORA PUPIL IN A DIALOGUE WITH A LANGUAGE (LANGUAGES) AND CULTURE (CULTURES) IN RUSSIAN LANGUAGE AND LITERATURE LESSONS

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Abstract. The article is concerned with the issues of development and preservation of ethnic identity of Russian-speaking school children in Latvia studying the Russian language (mother tongue) under the conditions of diaspora. The authors, relying on the results of research activities, are convinced that one of the most important sources of preservation and development of Russian-speaking ethnic identity with the schoolchildren is the inclusion in the content of the school course “Russian language and literature” intracultural and intercultural dialogues.

Key words: Ethic and cultural identity, national minority schools, a diaspora pupil, intercultural and intracultural dialogue, linguocultureme, linguo-culturological competence, tasks of culture-related nature.

1. Introduction

Formation of the child’s personality and cultural identity in the context of school education is a complicated process, and, especially, if a pupil from a diaspora is concerned. What value orientations should a pupil have when graduated from a high school in diaspora? Should the person perceive himself or herself as belonging to one’s own ethnic group? Or as a member of two cultures? Or should one be fully integrated into the culture of the country of residence? The analysis of school education systems in different countries as well as opinions of ordinary people suggest that there are not and there could not be unambiguous answers to those questions.

The purpose of this article is to acquaint teachers, methodologists, authors of textbooks and other interested readers with experience of involving Russian-speaking schoolchildren of Latvia in a dialogue with the facts and values of Russian culture and cultures of other peoples, and the experience accumulated by the authors in the creation and practical implementation of Russian language and literature textbooks in primary school of national minorities of Latvia (grades 4-9).

2. Methodology

In this article the authors analysed Russian language and literature Standard of School Education and textbooks in primary school of national minorities of Latvia (grades 4-9) using descriptive analysis (Loeb, Dynarski, McFarland, Morris, Reardon & Reber, 2017). A particular attention was given to the analysis of the cross-cutting themes, of the texts as belonging to its specific historical, literary and cultural environment, of the effective strategies for working with the culturological senses represented in texts. Besides, the authors summarized the didactic experience of modern strategies for working

with culturological senses and used the method of pedagogical observation. In the process of diagnosing the development of pupils cultural openness, we conducted conversations with schoolchildren, analysed and evaluated the results of their creative works and projects. We also took into account the activity of pupils in extracurricular activities related to ethnographic holidays and traditions.

3. Results and discussion

3.1. A new Standard of School Education Subchapter

In 2018, Latvia adopted amendments to the Education Law and developed a new Standard of School Education involving the transition to education in schools of national minorities (incl. the schools, where the Russian-speaking pupils study) to schooling in the state (Latvian) language. According to these amendments in elementary school, only a part of the subjects the schoolchildren will study is in Russian. Starting from the 7th grade, 80% of the subjects will be taught in Latvian, and in grades 10-12 all the teaching will be in the state language. Exceptions apply to the study subjects related to the cultural identity of national minorities, such as Russian language and literature in the grades 1-9. This reform will come into force on September 1, 2019, and the transition period will be complete by the end of the 2021-2022 school years (Kompetenču pieeja mācību saturā, 2018).

The implementation of this educational model actualizes the issues of spiritual-semantic self-identification of adolescents and young people - representatives of the ethnocultural minorities of Latvia (Russians, Ukrainians, Jews, Poles, Lithuanians, etc.). In recent years, scientific research has been increasingly concerned with the issues of crisis, "drift" or "loss" by modern young people (including schoolchildren) of their own ethno-cultural identity. Especially often, according to researchers, this occurs when adolescents or young people live in a multicultural and multilingual environment. It is obvious that the sociocultural environment of the reformed Latvian school, in which the personality of a child is being formed, a child being a representative of a national minority, will make it more difficult to develop "mental constants" formed by family education. The more so, for the reason that many parents, who are currently representatives of the ethnocultural minority, are themselves experiencing a crisis of cultural identity, not having time to adapt to the rapid sociocultural changes. When it comes to the child of the diaspora, the motivation for the preservation and development of their identity depends not so much on the child as on his parents. Are the parents interested in having their child fully mastering the first (native) language, what role do they assign to this language in the child's future life?

3.2. The family and the school and ethnocultural identity

The authors A. Dzhalalova, N. Zorina, I. Kostyukevich of the study "Development of Parent Involvement Models for Bilingual Pre-Primary School and Bilingual Kindergartens" conducted in 2016-2017 among parents of Russian-speaking preschoolers and elementary school pupils in Latvia, Finland and Estonia, stated the following:

- all parents surveyed expressed their interest in having children properly learn Russian;
- responding to the question of why the child needs Russian in the future, the parents so distributed the proposed answers in order of importance: 1) to remain Russian (to preserve identity), 2) to use Russian for their hobbies in their free time; 3) to have Russian friends, 4) to belong to the Russians, 5) to be able to use the Russian language at work, and 6) to acquire education in the Russian language (Dzhalalova, Zorina, Kostyukevich, 2017: 35-37).

It is known that ethnocultural identity "arises from the psychological need of a person to set in order the ideas about oneself and one's place in the picture of the world, the subconscious desire to overcome the rupture of the original syncretism, to achieve unity with the outside world, which is achieved in substituted forms (language, religion, politics, etc.) through integration into the cultural and symbolic space of society" (Malygina, 2018). According to B.D. Tatum, the concept of identity is a complex one, shaped by individual characteristics, family dynamics, historical factors, and social and political contexts (Tatum, 1997: 18). Under the conditions of the diaspora, the fam-

ily and the school (more precisely, the lessons of the Russian language and literature) become for the “Russian-speaking” schoolchild the main (and, often, the only) source of knowledge and ideas about Russian culture, awareness of their involvement in it, in other words - the development of ethnic and cultural identity. We agree with M. Esteban-Guitart, J.L. Lalueza, C. Zhang-Yu, M. Llopart that the purpose is not only legitimate cultural practices of students and their families, but also to guarantee the existence of these legacies in educational practice, in particular, and society, in general (Esteban-Guitart, Lalueza, Zhang-Yu, Llopart, 2019: 3). However, there are quite a number of problems here. On the one hand, the new Latvian Standard of Basic Education emphasizes that one of the tasks of school language education is to ensure “the pupil understands the role of the native language in the development of national identity and in preserving the cultural and historical heritage” (Kompetenču pieeja mācību saturā, 2018). While on the other hand, for mastering the Russian language and literature, in grades 1–9, only three hours a week are stipulated (in high school, these academic subjects are among the selective study subjects). Even in the current situation, when bilingual education models are being implemented in the schools of national minorities in Latvia, providing for much more lessons in Russian language and literature, we observe serious problems in the development of the cultural outlook of schoolchildren. Their knowledge of culture and history is poor and stereotyped. This concerns not only Russian history and culture, but also Latvian history and culture, despite the fact that the share of information about Latvian culture in the educational content is very large. One of the reasons could be seen like that: a prerequisite for the sociocultural and intercultural integration of the individual is the development of its positive ethno-cultural identity. In our opinion, the necessary balance between the positive ethnocultural identity and the sociocultural tolerance of Russian-speaking schoolchildren can be maintained by two dialogues: the pupil’s dialogue with the Russian language and Russian culture (intracultural) and the dialogue with languages and cultures of other peoples (intercultural) that are purposefully and consistently included in the study process. Not by chance language and culture are so close that are being identified as synonyms (Hsin, 2013: 2). It should be noted that Russian researchers and methodologists point out the extremely low level of cultural competence among many schoolchildren in Russia, the shift of cultural orientations to “low”, kitschy forms, and the loss of interest in high humanist ideals and models of Russian national culture. It seems that S.N. Tokarev is right, when explaining the current situation primarily by the fact that in the twenty-first century the child is in a special socio-cultural situation, which is characterized by a change in such factors of cultural development as:

- a) “the transformation of the axiological sphere of personality: the shift of priority into the area of material values;
- b) reducing the impact of school education and family education on the process of socialization of the school child;
- c) the increasing role of screen culture, media and information technologies” (Tokarev, 2011: 27) .

3.3. The didactic space of the dialogue

The problem of literature selection occupies an important place in modern pedagogical discussions. We share the view that text selections should include different voices and ways of knowing, experiencing, and understanding life. In this way, pupils can find and value their own voices, histories, and cultures (Crisp, Knezek, Quinn, Bingham, Girardeau & Starks, 2016; Boyd, Causey & Galda, 2015). When developing the materials for the textbooks, we proceeded from the assumption that a dialogue with the facts and values of Russian culture and the cultures of other nations will be necessary, first, to include in the process of mastering by pupils of their native language and literature at all its stages, i.e., “weaving” into the actual linguistic and literary aspects, and, secondly, it should be worthwhile to integrate the cultural content acquired by schoolchildren in Russian language and literature classes (taking into account the small number of study hours and the fact that in schools of

national minorities of Latvia, Russian language and literature are studied within the framework of one single study subject “Language and literature of a national minority”).

Such integration is successful if this dialogue is made use of in the following didactic space: in the framework of cross-cutting culturological themes; in working with texts of cultural character (texts of culture) and language units (morphemes, words, phraseological and syntactic units) containing the national-cultural component of meaning; in solving cross-cultural problems.

Cross-cutting themes are understood as “single-issue educational content of a problematic nature, relating to some of the most important areas of human activity, which remains constantly present in the language studying process, performs an organizing function, has a hierarchical structure, and has a high linguistic, communicative and cultural value” (Digina, 2009: 100). The above topics, in our opinion, offer the best option to systematically and interactively “pack” the educational material into the study course of the Russian language and literature in terms of co-studying the people’s language and culture. Accordingly, the textbooks of the Russian language and literature (grades 4-9) include texts from which the schoolchildren learn about:

- decorative and applied Russian art;
- Russian traditions, ways of life, traditional festivities;
- Russian artists and their works;
- significant architectural sites of Russia and geographical locations;
- the personalities of Russian history, culture, science, etc.

Textbooks also pay considerable attention to texts that update the comparison of different cultural traditions. The proportion of such texts in textbooks is increasing, starting from the 6th grade, because it is from this age that the teenager moves from the emotional-figurative to the rational-logical, detailed perception of the world, and begins to reflect on the problem “Who am I?”.

First of all, these are texts that

- update universal concepts, allowing to compare both historical and cultural, and national cultural traditions;
- contain the interpretation of cultural archetypes;
- show samples of the dialogue of cultures, epochs and authors.

That is “the text selections include different voices and ways of knowing, experiencing, and understanding life. In this way, students can find and value their own voices, histories, and cultures” (Futterman, 2015). We shared Nussbaum’s belief that engagement with literature might “wrest from our frequently obtuse and blunted imagination an acknowledgement of those who are other than ourselves, both in concrete circumstances and even in thought and emotion” (Nussbaum, 1997: 111–112). Illustrations for the texts are to be provided by all means and often also the Internet addresses, where the schoolchildren can learn more about a particular cultural artifact. From grade to grade, the cultural information contained in the texts is getting more complicated.

3.4. Strategies for working with culturological senses

The search for effective strategies for working with the culturological senses represented in texts is based on the psychological peculiarities of information perception by modern adolescents. Taking into account that “the perception of the text ... depends not only on the quality of the text itself, but also on the personality of the subject perceiving it” (Stepanova, 2005: 26), it should be acknowledged that for a number of reasons diaspora schoolchildren are not ready for the correct and deep perception of the text of Russian culture with respect to the consciousness and personality. For our schoolchildren those works are some kind of “an archived file” storing “megabytes” of cultural senses hidden between the lines ...” (Mankevich, 2014: 74).

In addition, we take into account the information overload of modern adolescents, which adversely affects their ability to perceive and absorb knowledge, and reduces the level of motivation (Sosnovskaya, 2015: 221). It should also be taken into account that “it is important to use strategies

and skills as well as the learner's meta-cultural awareness are far more important here than declarative knowledge" (Marczak, 2010: 16). Besides, there is no getting away from the fact that modern schoolchildren as the representatives of the online generation, "digital residents" rely on a non-linear perception. According to R. Gross, "only now, in more recent times, a huge store of knowledge, wisdom and beauty, accumulated over the entire history of mankind, has become available to each of us and virtually immediately upon request" (Dryden, 2003: 145).

That is why the tasks provided for the texts are aimed at developing the following skills in the schoolchildren:

- explore the cultural information of the text (search, interpretation, evaluation, inclusion in own experience);
- find and use additional (scientific, objective) sources of cultural information to understand, clarify, supplement the information of the text;
- "reconstruct" the value representations of the nation, based on schoolchild's own ideas and the materials of sources;
- collate the facts of different cultures to build intercultural dialogue;
- use the information acquired in the pupil's own behaviour experience (verbal (speech) and non-verbal).

In the process of developing schoolchildren's ability to build a dialogue with the facts and values of Russian culture and cultures of other nations in the lessons of Russian language and literature, another basic didactic concept (along with the text) is the word (i.e., the didactic unit of the inclusion of the student in the context of the culture of the nation). The material of the textbooks contains tasks, designed to allow the children to analyse and compare linguocultures, find common and different in various nations' perceptions of such values as friend, friendship, happiness, joy, homeland, love, sky, soul, etc. In the course of the analysis, children learn, first, to work with different sources of cultural information: dictionaries (explanatory, etymological, phraseological dictionaries, a dictionary of symbols, etc.), reference books (encyclopaedias, illustrated albums), Internet sources, and others; secondly, to solve and formulate linguacultural problems, i.e. tasks that are aimed at "completing (or restoring) the missing fragments of the value picture of the world (as a fragment of the language picture of the world) in the thesaurus of the pupil's linguistic personality" (Mishatina, 2005: 39).

According to Moran (Moran, 2001), teaching content is supposed to embrace: (a) cultural information, (b) cultural practices (c) other people's perspectives, and (d) the learner's self. Based on this the depth of immersion in the cultural sense of linguocultures, the size of sources used and the analysis of the material of the sources, as well as the content of linguacultural tasks depend on the age characteristics of schoolchildren, the extend of their culturological experience. In the 4th and 5th grades, the pupils work with previously prepared mini-texts and linguistic and culturological tasks, adapted material from etymological and other dictionaries, in which the culturological information is already fully or partially processed (for example, the text with gaps, offering to complete the missing fragments). The schoolchildren are offered to formulate the problem and elicit what different nations have in common and/or what are the differences in the naming, understanding or perception of the same phenomenon or the object of the world around. For example, the tasks under the heading "Crossroads of cultures!" in the textbook for the 5th grade draw schoolchildren's attention to animal symbols in different cultures, similar and different names for the same household items, phenomena of the outside world, offering the children to explain the similarities and differences. In grades 6-9, linguoculturological activities of schoolchildren become more complicated, since significantly increases:

- the share of problem – solving tasks based on actual situations (often they serve as an illustrations to clash of cultures); the schoolchildren are offered to define a problem, to explain the reasons for the distinctions of the way certain phenomenon are perceived or evaluated; asked to find a solu-

tion, give reasons to support their point of view based on independent information search of and/or the culturological information given in the textbook;

- the number of creative tasks designed for the schoolchildren and offering to produce their own texts, cross-cultural tasks based on newly acquired culturological information (such as inclusion of the information into one's own speech, the ability to take the point of view of a member of a certain culture, to see the world through the eyes of that person).

Acquisition of the vocabulary of the language, enriching the vocabulary of the student, is undoubtedly more successful if the student masters the systemic connections of lexical units. Thematic group is one of the units of the lexical system (along with lexical-semantic groups and semantic fields). Thematic group are selected based on an extra-lingual criterion, which is essential for the school didactics of the language (as opposed, for example, to a lexico-semantic group), which is essential for the school didactics of the language. That is why culturological (vocabulary) material in textbooks of the Russian language and literature is compiled into thematic blocks (for example: Russian ethnographic (everyday) vocabulary, names and surnames and their origin, ancient Russian measures of length, means of transportation in Russia, Russian names of time periods (months, days of the week and under.), words – the names of emotions and feelings, etc.). In other words, the thesaurus approach was used in systematization of cultural lexis, the advantage of which is that the thematic vocabulary presented to schoolchildren “is a projection of a fragment of a picture of the world” (Mikhaleva & Maletina, 2014).

An important aspect of schoolchildren's lexico-cultural studies, starting from the 8th grade, is the study of literary translations. This activity is carried out in two directions. First, this is the analysis of texts that have received a "second birth" in Russian literature. Thus, the central problem that determines the study of the ballad works of V. A. Zhukovsky is the uncovering of personal content with which the poet has filled someone else's storyline. Secondly, a comparison of translations of the same literary source made by different poets is carried out. For example, eighth-graders compare the translations of R. Burns's poem “My heart's in the Highlands” by S. Ya. Marshak and the modern poet A. Kuznetsov and struggling to find out who of the translators managed to convey the flair and tone of the original source. The creative task of a comparative analysis of poems is to decide why R. Burns's deeply national and folk poetry, in the interpretation of S. Ya. Marshak, has become an integral part of Russian culture. Of course, there is no unequivocal answer to such a question. However, eighth-graders in the course of the studies come to the conclusion that the main reason can be the sameness of those spiritual problems that worried a Scotsman as much as they worry a Russian person.

The natural continuation of such activity is the creation of school children's own translations. Simultaneously the creative task facing the school children becomes more complicated: they need not only to correctly understand the content of the foreign language text, but also to convey the author's emotions and attitude to the prospective reader, that is, to look at the world from the value position of a representative of a different culture.

4. Conclusions

It should be emphasized that the results of diagnostics carried out in the course of practical implementation of textbooks on the Russian language and literature allow us to state not only the enrichment of knowledge and the improvement of pupils' skills, but also certain changes in their emotional value field, indicating enrichment of pupil's personal social and cultural experience. Creative work of schoolchildren, as well as the participation of children in project work and extracurricular activities related to ethnographic holidays and traditions, convince us that in the process of learning the pupils develop a personal cultural openness, which is, on the one hand, the basis for a deeper immersion of the student in a dialogue with the facts and values of the Russian culture, and on the other serves the basis for the development of socio-cultural tolerance ensuring the development of the ability of pupils to be involved into intercultural dialogue.

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SOCIAL POLICY

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SOCIO-ECONOMIC DEVELOPMENT OF THE BALTIC STATES: AN EVALUATION IN THE CONTEXT OF EUROPEAN INTEGRATION

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Abstract. This article presents a comparative analysis of the socio-economic development of the Baltic States – Lithuania, Latvia, and Estonia – during the post-Soviet era, with a focus on their integration into the European Union. It explores key economic reforms, shifts in socio-economic structures, and the social costs associated with the transition to a market economy. The analysis highlights both the successes and shortcomings of the reform processes, as well as the major challenges currently confronting the Baltic economies. Special attention is given to the risks associated with declining competitiveness and the urgent need for structural transformation toward high value-added industries. The findings offer practical insights for assessing policy effectiveness and shaping future development strategies in the region. The study introduces a set of indicators and proposes a methodology for evaluating the effectiveness of socio-economic policies, drawing on statistical data from 2020 to 2023. In order to compare the trajectories of socio-economic development in the Baltic States over the period 2020–2023, the Dynamic Time Warping (DTW) analysis was conducted.

Key words: Baltic States, socio-economic development, European integration, economic reforms, policy evaluation, DTW-analysis.

Introduction. In countries with a market economy, the evolution of social relations determines the predominant importance of social factors. The democratization of society and the pursuit of broad economic well-being further reinforce this trend. Social needs are closely tied to the patterns of economic development and, at the same time, play a crucial role in shaping national development strategies. They directly influence shifts in social priorities, core values, and the structure of economic activity.

A key objective of any modern state is to ensure a high standard of living and economic prosperity for its citizens. In this context, the interaction and mutual influence between social policy and economic stability becomes a particularly important area of study. This relationship is clearly reflected in the fact that key macroeconomic and microeconomic indicators are commonly used to assess the overall level of a society's socio-economic development.

At the start of the 1990s, the Baltic States faced a range of complex economic and social challenges, including high inflation, sluggish economic growth, inefficient public administration, deteriorating living conditions, and rising unemployment. Despite these difficulties, Latvia, Lithuania, and Estonia began their economic transformation from a similar starting point. Roughly one-third of their economic infrastructure was rooted in industry and agriculture, while the remaining two-thirds were

tioned to the service sector. During this period, all three countries transitioned to free-market economies, with their geographical location playing a key role in shaping development priorities. Positioned as vital “gateways” between Eastern and Western markets, the Baltic States leveraged their strategic location for economic growth. However, their paths diverged—while Latvia and Lithuania experienced contractions in key sectors and declines in household incomes, Estonia embraced rapid market-oriented reforms and prioritized investment in education, science, and technology, setting a distinct trajectory for its economic progress.

In 2004, the Baltic States became full members of one of the world's largest markets by joining the European Union (EU). This accession spurred increased investment, enhanced infrastructure, and provided access to new markets and advanced technologies. At the time of their entry, Latvia, Lithuania, and Estonia were classified as transition economies, marked by extensive economic restructuring, high unemployment, and low Gross Domestic Product (GDP). As EU members, they gained access to a vast market with standardized production regulations and unrestricted entry to a consumer base of approximately 500 million people. Additionally, membership brought expanded opportunities for foreign investment and financial support through EU structural funds, further aiding their economic development.

Given these evolving conditions, the need for a thorough examination of socio-economic policies in the Baltic States within the context of European integration has grown significantly. It is crucial to analyze their implementation, assess their outcomes, identify the challenges each country faces, and evaluate the effectiveness of the strategies used to address these issues. This topic is particularly relevant because Estonia, Latvia, and Lithuania occupy different positions in terms of economic development and social issues within the framework of European integration. While they share common challenges, their approaches to addressing them vary, resulting in significant differences in socio-economic progress and living standards. This disparity is especially critical today, as economic and political instability continues to impact all three countries.

This research aims to provide a thorough analysis of the socio-economic transformations that have occurred in the Baltic States, offering a comparative assessment of their development within the framework of EU membership.

In line with this aim, the authors set the following research objectives:

1. To study the theoretical and methodological foundations of the category “socio-economic development of the state”.
2. To assess the socio-economic development of the Baltic States in the context of European Union integration.
3. To identify the problems faced by Lithuania, Latvia and Estonia in their socio-economic development and the ways of overcoming them.
4. To identify trends in the further development of the Baltic States in the context of EU integration.

The study focuses on the socio-economic transformations in the Baltic States and their influence on integration processes.

Its primary aim is to conduct a comparative analysis and evaluation of the Baltic States' socio-economic development within the framework of European integration.

The authors employed general scientific methods in their research, including intuitive search, statistical analysis, and comparative evaluation of statistical data across different time periods and indicators. To strengthen the theoretical foundations of the study, a thorough examination of various sources and academic works was essential. The research draws on periodic reports and reviews from international economic organizations such as the United Nations (UN), International Monetary Fund (IMF), European Union (EU), World Bank, and European Bank for Reconstruction and Development (EBRD), among others. Additionally, it incorporates international and national statistical data from the three Baltic States, as well as information from official government websites, including the Ministries of Finance and other relevant departments in Lithuania, Latvia, and Estonia. Comparative

analysis relies on statistical data from Eurostat, the Central Statistical Bureau of Latvia, the Statistics Departments of Lithuania and Estonia, the central banks of all three countries, and various international agencies.

1. Theoretical Foundations of Socio-Economic Development. According to Article 25 of the Universal Declaration of Human Rights (Universal Declaration of Human Rights, 1948), everyone has the right to a standard of living adequate for the health and well-being of themselves and their family, including food, clothing, housing, medical care, and necessary social services, as well as the right to security in the event of unemployment, sickness, disability, widowhood, old age, or other lack of livelihood in circumstances beyond their control.

The economy of any country is a system comprising a variety of different activities, and each of its links or components can only exist because it receives something from others – that is, it is interconnected and interdependent with other components (Morohin, 2008, p.11).

The primary goal of any national economy is to sustain human life, create conditions for the continuation of humanity and improve the well-being of the members of society. To solve the main economic problem – the allocation of scarce resources – every economic system answers in its own way the following three questions: what to produce, how to produce and for whom to produce. The mechanisms and methods for achieving this goal include a set of instruments that make it possible to create a favourable environment for the economic activity of all participants, regardless of their form of ownership (Samujel'son, 1992, p.47).

Socio-economic development is a process that encompasses economic and social progress, improvement of living conditions and increased productivity of the economy (Auzan, 2014)

However, the definition of this term may vary depending on the author and the context in which it is used. Let's consider the evolution of the several approaches to defining the concept of socio-economic development (see Table 1).

Table 1

Evolution of the Definition of “Socio-Economic Development”

Autor(s) / Approach	Definition	Key Characteristics
Classical Economists (18th–19th centuries), e.g. Adam Smith / Classical Economic Liberalism (Smit, 1776, p. 8)	Socio-economic development is the result of economic freedom, limited government intervention, and active entrepreneurship.	Emphasis on market mechanisms, entrepreneurship, minimal state involvement.
Thomas Malthus (1798) / Malthusian Theory (Mal'tus, 1798, p. 22)	Development is constrained by population growth outpacing resource production.	Focus on population control as a factor in sustainable development.
Karl Marx (1867) / Marxist Theory (Marks, 1867, p.7 73)	Development involves class struggle; real progress is possible only through revolutionary change.	Social justice, equality, elimination of capitalist exploitation.
Joseph Schumpeter (1911) / Schumpeterian Innovation Theory (Shumpeter, 1911)	Development is driven by innovation and “creative destruction.”	Role of innovation, entrepreneurship, economic instability as a source of progress.
Max Weber (1905) / Protestant Ethic Thesis (Veber, 1905)	Cultural and religious values shape economic behaviour and development.	Influence of Protestant ethics on capitalism and social order.
John Maynard Keynes (1905) / Keynesian Economics (Kejns, 1936).	The state plays a key role in stabilizing the economy and promoting growth.	Government spending, employment, equal access to economic benefits.
Arthur Cecil Pigou (1920) and Vilfredo Pareto (1906) / Welfare Economics (Pigou, 1932), (Pareto, 2014)	Development includes providing social guarantees and reducing inequality.	Focus on social safety nets, universal access to services, equality.

Table1 (continuation)

Thorstein Veblen (1899), Douglass C. North (1989) / Institutional Economists (Veblen, 2000), (North, 1993, p. 1319–1332)	Institutions determine development outcomes by shaping economic and social behaviour.	Importance of stable, inclusive, and fair institutions.
Amartya Sen (1999) / Development as Freedom (Sen, 2004)	Development as expansion of human freedoms across all dimen- sions of life.	Freedom, opportunity, human capabilities, multidimensional well-being.
UNDP (late 20th century–present) / Human Development Approach (Doklad o rabote pervoj i vtoroj ocherednyh sessij i ezhegodnoj sessii 2020 goda)	Socio-economic development is measured by human development indicators, not just GDP.	Focus on life expectancy, edu- cation, income, equality, and sustainability.
World Bank / Comprehensive Development Approach (Sodejstvie stranam v adaptacii k menjajushhemusja miru, 2022)	Development encompasses eco- nomic growth, poverty reduction, and environmental protection.	Holistic view: income, education, health, equity, environmental sustainability.

Thus, we can distinguish three main directions that determine the concept of socio-economic development.

The economic approach views socio-economic development primarily through the lens of economic indicators – such as GDP growth, investment levels, employment, and income. In this view, social development is often treated because of successful economic performance.

The social approach focuses on human well-being, quality of life, access to education and health care, social equality and opportunities for personal development. From this perspective, economic growth alone is not enough if it does not lead to tangible improvements in people's lives.

The integrated approach combines both economic and social dimensions. It considers socio-economic development as a balanced and sustainable process of economic growth accompanied by improved living standards, social justice, and access to resources and opportunities for all citizens.

According to this broad understanding, socio-economic development is not only about increasing production or income, but also about achieving social cohesion, reducing inequality and ensuring the sustainable use of resources. It involves institutional, technological and cultural changes that contribute to the long-term improvement of people's lives.

This multidimensional nature of socio-economic development is particularly important for transition economies such as the Baltic States, where changes in political, economic and social structures occur simultaneously and interdependently. In such a context, effective government policies need to address both economic efficiency and social equity.

Studies show that the level of socio-economic development of the state depends in many ways on the strategic goals and objectives, the efficiency of management and the result of the state's activity. The main priorities for the country's socio-economic development are as follows:

- Raising the population's living standards.
- Raising employment levels and reducing unemployment.
- Reduction of social inequalities.
- Ensuring sustainable development and economic growth.
- Attracting additional investment in fixed assets and production.
- Technological modernisation of industry.
- Increase territorial integration in the development of territories.
- Creating favourable competitive conditions for business.

At the same time, the ultimate goals of socio-economic development are (European Commission, 2015):

1. To improve the standard of living of the population. This means ensuring a decent standard of living for the population, including access to education, health care, housing, food, transport and other basic services.
2. Job creation. This includes creating new jobs and reducing unemployment. Job creation is a key factor in improving the economic and social well-being of the population.
3. Economic growth. Economic growth is the basis for improving the living standards of the population, creating new jobs and increasing the country's attractiveness for investment.
4. Sustainable development. Sustainable development means that economic and social growth should be sustained and long-lasting. It means that growth should be based on the use of environmentally friendly technologies, the conservation of natural resources and the reduction of pollution.
5. Social Justice. Social justice means ensuring equal opportunities for all members of society and tackling inequalities in society. This includes access to education, health care, housing and other basic services without discrimination based on social and economic status.

2. Socio-Economic Development of the Baltic States in the Post-Soviet Period and Following EU Accession. After gaining independence, the Baltic States prioritized swift integration into Western European cooperation structures. Achieving this goal required more than a decade of complex systemic reforms aimed at aligning their legal and economic frameworks with European standards. Key aspects of these reforms included a rapid transition to national currencies, the denationalization of enterprises through commercial privatization and restructuring, and the comprehensive overhaul of tax, budgetary, and banking systems. Additionally, price liberalization and the establishment of a market-driven mechanism for regulating foreign trade were critical steps in their economic transformation. International Monetary Fund (IMF) specialists played a crucial role in designing and implementing economic stabilization measures, developing monetary and fiscal programs to support the transition. In terms of governance, reforms shifted the focus of sectoral ministries from direct operational management of the economy to addressing broader strategic objectives.

The transformation processes of the transition to a market economy led to a deep economic recession – in 1991–1994 there was a sharp decline in GDP, income of the population and hyperinflation. In the first 5-6 years of reform, GDP in Latvia, Lithuania and Estonia fell by 51%, 44% and 35% respectively. The economic growth rates in Latvia and Lithuania in 1990–2000 were negative (-3,4% and -2,3% respectively, on average annually) (Official Statistics Portal of Lithuania, 2025; Statistical database of Estonia, 2025; Official Statistics Portal of Latvia, 2025). In Estonia, economic growth rates were also generally negative in the 1990s (-0,5% on average annually), but since 1996 the average annual growth rate has been 6% over 10 years.

Despite initial challenges, market liberalization, foreign capital inflows, and macroeconomic stabilization had already begun to restore positive economic momentum between 1996 and 2000. By the turn of the century, growth rates in the Baltic economies had stabilized and remained relatively high. In the years leading up to their EU accession in 2004, Estonia, Latvia, and Lithuania experienced average economic growth rates of 6,5%, 7,5%, and 6,7%, respectively.

Since Russia, as the legal successor to the former USSR, assumed responsibility for all Soviet-era debts, including those of the Baltic republics, this provided the Baltic States with significant advantages during their transition period. With their public debt effectively reduced to zero, they faced no formal barriers to external borrowing, creating favourable conditions for rapid economic growth and facilitating their adaptation to the new market economy.

Estonia transitioned to a market economy more rapidly than its Baltic neighbours. Immediately after gaining independence, it adopted a liberal approach to foreign trade and opted not to repay deposits from failed banks. The country actively implemented a privatization program based solely

on monetary transactions, without the use of vouchers, granting equal rights to both domestic and foreign investors. This approach attracted substantial foreign investment. As in Latvia and Lithuania, foreign companies and banks played a significant role in the privatization process; however, unprofitable enterprises were swiftly liquidated.

In Lithuania, the use of vouchers has allowed the population to participate in the privatisation process in a meaningful way, resulting in 75% of workers owning shares in privatised companies.

In Latvia, privatization was also carried out through a voucher-based system. However, this approach led to the concentration of the most valuable assets in the hands of a small elite, particularly individuals with strong political connections. For the majority of the population, vouchers were primarily used for the privatization of personal residential property, offering little access to larger economic opportunities. As a result, many strategically significant enterprises were sold at substantially undervalued prices. Due to the limited managerial capacity of domestic entrepreneurs during the transition period, a large share of these enterprises eventually fell under the control of foreign investors.

The experience of the Baltic States illustrates the ambivalent outcomes of the neoliberal reforms implemented during the post-Soviet transition period. These countries adopted free-market economic models in accordance with the policy prescriptions of international institutions such as the IMF, the World Bank, and the World Trade Organization (WTO). However, the rigorous implementation of these externally recommended reforms did not produce the anticipated economic benefits. Despite assurances from Western stakeholders that such measures would lead to sustained prosperity, the reforms instead contributed to a significant rise in poverty levels, which subsequently fuelled large-scale emigration and demographic decline.

After undergoing a steep economic downturn in the early stages of market reforms – primarily caused by the collapse of established economic ties – the Baltic States successfully capitalized on the opportunities presented by global economic expansion. Their accession to the EU marked a turning point, as they quickly became some of the fastest growing economies in Europe, with annual GDP growth rates of between 7% and 12%.

However, this growth trajectory has slowed in recent years. In the earlier stages, robust economic performance and high consumption were largely driven by substantial inflows of Western capital, mainly in trade and financial services, coupled with a rapid expansion of mortgage lending. At the same time, investment in innovation-driven sectors remained relatively limited.

The structural composition of the Baltic economies underwent profound transformation, reflecting a transition toward a post-industrial model. Throughout the reform period, the sectoral balance shifted significantly: the industrial sector's share of GDP declined to 20–25%, and agriculture fell to approximately 5%, while the service sector – dominated by banking, transit, and retail – expanded to around 65% of GDP. Many large industrial enterprises were either liquidated or restructured, leading to a shift in economic priorities toward freight transit, tourism, and consumer-focused industries. However, the Baltic States struggled to develop a competitive high-tech industrial base comparable to their Soviet-era expertise in fields such as radio electronics, transport engineering, and fine chemical production (Tsaurkubule, 2014).

Entire industrial sectors in the Baltic states, previously geared towards integration with other former Soviet republics, were either dismantled or drastically reduced. In the early stages of reform, priority was given to using relatively cheap labour for primary processing of local raw materials. However, these industries produce low value-added products and are therefore largely inefficient – especially given that labour productivity is still only 40–45% of the European average.

The industrial sector in the Baltic States is increasingly evolving into a "subsidiary workshop" within the broader European economy. Today, industrial production is primarily concentrated in labour-intensive sectors such as food processing and textiles, alongside resource-heavy industries like wood processing and construction materials manufacturing. Following the dissolution of most large

enterprises, the industrial landscape is now dominated by small and medium-sized enterprises (SMEs). While these businesses play a crucial role in economic activity, their prevalence limits the widespread adoption of innovative technologies and hinders the growth of high-tech industries. Additionally, investment in research and development remains notably low, trailing far behind European standards.

While the economic growth models of the Baltic States reflect certain national specificities, they share a fundamentally similar approach. These economies are built on the principles of high openness, designed to attract foreign investment through low production costs, liberal tax policies, and relative macroeconomic stability. This framework is best characterized as a small open economy.

Agriculture in the Baltic States has also undergone profound changes, mainly due to the fragmentation of large farms – kolkhozes and sovkhozes – into small farms. The predominance of small-scale production is increasingly becoming an obstacle to improving agricultural efficiency. The share of agriculture in GDP has declined sharply and currently stands at around 2,2% in Estonia, 3,0% in Lithuania and 4,4% in Latvia, while employment in the sector represents 2,6% of the population in Estonia, 5,5% in Lithuania and 6,8% in Latvia (based on 2022 data).

The Baltic States have not prioritized enhancing the competitiveness of their national products. While they specialize in relatively high-quality agricultural and light industrial goods, these sectors have faced challenges in competing within the broader European market. As a result, their competitiveness is largely limited to specific niches, such as affordable, high-quality construction materials, specific chemicals, and wood-processing products.

Competitiveness is still maintained by relatively low production costs, mainly due to lower wages compared to other European countries. However, wages are now rising faster than labour productivity. About half of the Baltic countries' output is exported, due to the limited size of their domestic markets. Industries continue to produce low value-added goods, which limits wage growth and thus exacerbates the problems of population and labour outflows. The potential for industrial development based on low production costs has now been exhausted, leading to the closure of companies and the relocation of production to Asia, where such costs are lower. Industry in the Baltic States needs to diversify, with a focus on high-tech sectors.

Tax reform has played an important role in the system of economic transformation. The Baltic States have a lower tax burden as a percentage of GDP than other EU members, which is a significant competitive advantage that facilitates investment inflows and higher growth rates than in the rest of Europe.

During the reform period, the Baltic States did not implement scientifically grounded programs for the modernization of industry and agriculture, as these sectors were not prioritized in their economic policies. Lithuania was the only country to adopt a law on the economic regulation of agriculture in 1994, alongside a national program that provided targeted state support for agricultural workers. As a result, Lithuania developed the most efficient agricultural sector in the region.

Latvia faces the most significant challenges in agriculture. As part of European Union policies, farmers received financial compensation for ceasing production, leading many either to abandon their land or to emigrate. Consequently, agriculture has become a secondary sector within the national economy. Reforms in this field resulted in the privatization of the Land Fund and a decline in the amount of cultivated land. Restitution further complicated the situation, as numerous plots were returned to former owners who either lacked interest in farming or the resources to maintain agricultural production. Today, Latvia's arable land area stands at approximately 2 million hectares.

As a result of the opening up of the economy, the agricultural market is flooded with imports, making it difficult for local producers to compete. Priorities have shifted: with agriculture seen as unprofitable, Baltic governments are directing funds towards the development of rural tourism (partly to employ the population previously employed in agriculture).

During the post-Soviet period, the financial sector in the Baltic States developed at an accelerated pace: banks and insurance companies experienced growth in almost all areas of activity.

Lending, especially mortgage lending, grew rapidly. Competition in the banking sector increased and new products were introduced, such as investment management, savings plans and life insurance. The financial sector became the most profitable sector of the economy, accounting for up to 40% of annual profits.

One of the conceptual reasons for the shortcomings of the reforms was their one-sided approach. In particular, the relentless pursuit of EU membership often came at the expense of key economic priorities, such as strengthening domestic competitiveness, fostering national investment, and supporting local producers and exporters.

The weaknesses of the reform process were:

1. Social policy, which led to an escalation of social problems and an exodus of labour.
2. The policy of attracting foreign capital, which essentially transferred most (70–80%) of the domestic economy into foreign hands, while developed countries impose restrictions on the presence of foreign capital in their economies.
3. A policy of external borrowing, not for development but for consumption, resulting in significant external debt.

There was insufficient state support for small and medium-sized enterprises and for enterprises in priority sectors; investment in innovation and the quality of education was minimal. The reforms did not include a thorough analysis of the problems in the industrial and agricultural sectors. The political factor was particularly strong – the desire to distance oneself from Russia at the expense of national economic interests.

There were also several internal socio-political factors: corruption, political bias of governments in favour of Western European countries and the US and growing social inequality.

The Baltic States' accession to the European Union holds significant importance (Tsaarkubule&Vishnevskaya, 2020; Tsaarkubule, 2014). Being in the EU allows these countries to count on substantial support for certain sectors of their economies, as EU policy aims to equalise regional levels of development and compensate for historically uneven patterns. This is particularly relevant for the Baltic States, which are laggards within the EU, but now, with full membership status, can rightly expect various forms of support from the EU.

However, absorbing EU funds is a major challenge, and integration into the European Union brings not only millions of euros in subsidies but also quotas. Latvia, for example, has completely dismantled its once well-developed sugar industry. After joining the EU, the food, textile and pharmaceutical sectors suffered significant losses. The European Union's decision to reduce carbon dioxide emission quotas for companies in Latvia and Lithuania for the period 2008-2012 has significantly constrained expansion plans for certain industries in these countries or will lead to relocation of production to non-EU countries (Tsaarkubule&Vishnevskaya, 2017; Tsaarkubule, 2020).

After joining the EU and the euro area, the central banks of the Baltic States became purely technical bodies responsible for regulating the circulation of money, supervising the activities of commercial banks and collecting and processing statistical data. They effectively gave up their own monetary policy, losing the ability to control the pace of economic growth through changes in interest rates, and forfeited all rights to conduct an independent monetary policy, delegating these powers to the European Central Bank. However, the associated benefits outweigh the costs and risks: almost three-quarters of the Baltic States' trade is with EU countries and two-thirds of their foreign investment originates from the EU, with these indicators continuing to grow as economic interdependence increases.

At the same time, the leaders of the Baltic states incurred significant costs (mainly in the social sphere) in implementing reforms, partly due to the severing and weakening of established economic ties with the Russian market. This led to a deep economic crisis at the beginning of the reforms, followed by widespread poverty and a population exodus from these countries.

Poverty, low birth rates and severe labour shortages are the main internal problems the Baltic states are facing. All this is the result of a state doctrine that promotes an investment climate that favours the wealthy. The current tax base in the Baltic States is insufficient to address pressing social issues. Typically, the tax burden falls mainly on the working population, widening the gap between the rich and the poor. The different approaches of the Baltic States to socio-economic transformation have shaped the subject of this study.

3. Methodology of the Study. The methodology for the comparative analysis of socio-economic development indicators of the analysed subjects includes the following stages (Babkova&Panahov, 2018):

1. The first stage involves analysing relevant literature and processing statistical data to identify key indicators that reflect various aspects of socio-economic development in the regions under study.
2. The second step of the study is to choose a research method that allows to compare the socio-economic policies of different Baltic countries in different time periods.
3. The third stage consists of a comparative analysis of the selected countries.

In order to solve the specific tasks of comparative analysis of the level of socio-economic development of Lithuania, Latvia and Estonia, based on the analysis of literary sources (Tsaurkubule&Vishnevskaya, 2020; Tsaurkubule.2014; Tsaurkubule&Vishnevskaya, 2017; Tsaurkubule, 2020; Davydenko&Pasichnyk, 2017; Krasnopjorovs, 2021). and statistical data, a system of non-integrated indicators was selected for the study. These indicators were selected based on the criteria of availability, reliability and justification and cover various areas of socio-economic policy, including social protection, employment, income, poverty, health, education, demography and economic policy (Tsaurkubule, 2011; 2015). In the initial phase of the study, 65 indicators were selected based on the selected policy areas (Tsaurkubule, 2017). Subsequently, many of them were either controversial (ambiguous characterisation of the effectiveness of social policies) or inaccessible for collection and comparison. At the end of the data collection phase, 21 indicators were finally selected (see Table 2).

Table 2

System of socio-economic policy indicators

Economic Policy Indicators	Social Policy Indicators
e1. GDP per capita at PPS, % of the EU average (EU = 100%)	s1. Social protection expenditures, % of GDP
e2. Real GDP growth rate, %	s2. Life expectancy at birth, years (average value)
e3. Total government expenditures, % of GDP	s3. Average monthly wage, EUR
e4. Government debt, % of GDP	s4. Minimum monthly wage, EUR
e5. Shadow economy level, % of GDP	s5. Minimum monthly wage as a percentage of the average monthly wage, %
e6. Inflation (average annual growth rate), %	s6. Income inequality (Gini coefficient), %
e7. Employment rate, %	s7. Proportion of population at risk of poverty, %
e8. Unemployment rate, %	s8. Proportion of residents living below the poverty line, %
e9. Population, thousand people	s9. Proportion of residents experiencing severe material and social deprivation, %
e10. Emigration, thousand people	s10. Proportion of pensioners at risk of poverty, %
	s11. Proportion of pensioners (65+) at risk of poverty, %

The selection of socio-economic indicators for analysis was based on a number of scientific articles in which similar studies were conducted (Davydenko&Pasichnyk, 2017; Yoji Koyama, 2020; Lonska&Komarova, 2019; Masso&Espenberg, Masso, Mierina, Philips, 2012; Krasnopjorovs, 2021). Appendix 1 presents the statistical data on the socio-economic policies of the Baltic States in the post-COVID period, from 2020 to 2023.

Socio-economic indicators are associated with specific social and economic phenomena for which certain measures can be taken. Such actions are based on a theoretical framework that is largely implemented by professionals in the field of social sciences, statistics or public policy. Many socio-economic indicators have an international character and allow the same social fact to be compared between different societies.

For conducting the comparative analysis, the statistical data on the socio-economic policies of the Baltic States were consolidated into a single data table (3 countries, 4 years, 10 + 11 indicators). Economic indicators were numbered from e1 to e10, and social indicators from s1 to s11 (see Table 3).

Table 3

Input data for analysis

Indicators	Countries											
	Latvia				Lithuania				Estonia			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
e1	69	71	69	70	87	88	88	87	85	85	84	80
e2	-3,5	6,9	1,8	2,9	0,0	6,4	2,5	0,3	-2,9	7,2	0,1	-3,0
e3	44,3	46,5	44,2	44	42,3	37,3	36,2	37,4	44,7	42,1	40	43,3
e4	42,7	44,4	41,8	43,6	46,2	43,4	38,1	38,3	18,6	17,8	18,5	19,6
e5	25,5	26,6	26,5	22,9	20,4	23,1	25,8	26,4	16,5	19	18	17,9
e6	0,1	3,2	17,2	9,1	1,1	4,6	18,9	8,7	-0,6	4,5	19,4	9,1
e7	76,9	75,3	77	77,5	76,7	77,4	79	78,5	79,1	79,3	81,9	82,1
e8	8,1	7,6	6,9	6,5	8,5	7,1	6	6,9	6,9	6,2	5,6	6,4
e9	1900,5	1884,5	1879,4	1877,5	2810,4	2808,4	2831,6	2871,6	1329,5	1330,9	1348,8	1370,3
e10	12	13	16,7	16,3	25,2	25,2	15,3	22,0	12,4	12,5	9,7	14,5
s1	17,2	19,3	17,5	17,3	19,1	18,5	16,2	16,3	18,9	17,4	15,4	15,3
s2	75,5	73,1	74,5	75,9	75,2	74,2	75,8	77,3	78,9	77,2	78,1	78,8
s3	1143	1277	1373	1537	1428	1579	1666	2022	1448	1548	1685	1832
s4	430	500	500	620	607	642	730	840	584	584	654	725
s5	39,5	41,6	38,5	42,4	46,4	44,8	44,3	45,4	42,6	37,9	38,8	38,1
s6	34,5	35,7	34,3	34	35,1	35,4	36,2	35,7	30,5	30,6	31,9	31,8
s7	25,1	26,1	26	25,6	24,5	23,5	24,6	24,3	22,8	22,2	25,2	24,2
s8	23,4	22,5	22,5	21,6	20	20,9	21,2	20,6	20,6	22,8	22,5	20,2
s9	7	5,3	7,8	6,2	8,1	6,4	6	6,1	2,3	1,9	3,3	2,5
s10	46,5	50,9	47,3	46,5	39,5	38,8	43,1	39,2	48,8	47,6	59,8	55
s11	71,7	73,6	68,4	67,8	63,3	61,3	64,1	57,6	76,8	78,1	81,7	79,1

In order to compare the trajectories of socio-economic development in the Baltic States over the period 2020–2023, the Dynamic Time Warping (DTW) analysis was conducted, which consisted of the following steps:

1. Data normalization (to remove the influence of scale).
2. DTW – clasterisation.
3. Visualization of country trajectories by year.

A Dynamic Time Warping (DTW) analysis is a method for measuring similarity between time series that allows for shifts and variations in the pace of changes. Unlike traditional methods, DTW does not require the compared time series to be aligned in time or scale. Instead, it "warps" the time axis by stretching or compressing it to find the optimal alignment between series. This makes it possible to identify similar dynamics even when countries react to external shocks at different times.

In this analysis, DTW enabled the grouping of countries not by static indicator values, but by the similarity of their trends over time, revealing common development paths despite differences in specific years.

Using this method, all variables were divided into two groups: social and economic indicators, each of which was analysed separately. This made it possible to identify features in two separate areas of socio-economic development. A general analysis was then carried out for all 21 factors, which in turn allowed their mutual influence to be taken into account.

All calculations were performed in R program with dtw Package from T. Giorgino (Giorgino, 2009).

4. Statistical data analysis.

4.1. Analysis of DTW Clustering Results of Social Indicators in the Baltic States (2020–2023).

To explore the evolution of social dynamics in the Baltic States over the period 2020–2023, a DTW-based clustering was conducted using a set of social indicators s1-s11. Since the comparison was restricted to three countries, the analysis was structured into two distinct clusters. The results of the clustering process are presented in the Table 4 and Figure 1.

Table 4

DTW Clustering Results of Social Indicators in the Baltic States (2020–2023)

Country	Year			
	2020	2021	2022	2023
Latvia	2	2	2	2
Lithuania	2	2	2	1
Estonia	2	2	2	2

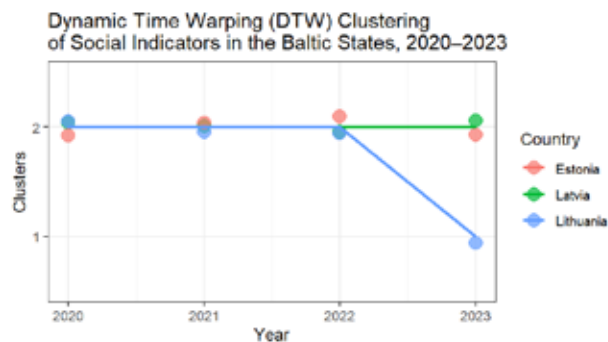


Fig. 1. DTW Clustering Results of Social Indicators

A DTW-based clustering of social indicators in the Baltic States from 2020 to 2023 reveals notable trends. All three countries -Latvia, Lithuania, and Estonia- were grouped in the same cluster (Cluster 2) from 2020 to 2022, indicating a shared trajectory in social development during the post-pandemic recovery. This suggests broadly similar responses to challenges in areas such as health, employment, and social protection.

In 2023, Lithuania shifted to Cluster 1, diverging from Latvia and Estonia. This change may reflect differences in social policy or unique national developments affecting indicators like education, welfare, or public health, which requires additional research methods. Meanwhile, Latvia and Estonia remained in Cluster 2 throughout the period, suggesting a stable and aligned pattern of social progress.

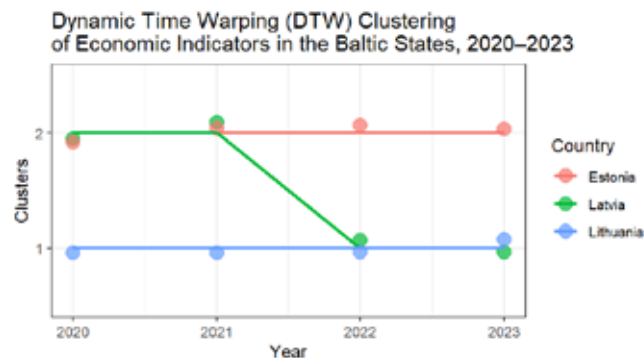
Overall, the findings indicate an initial phase of social convergence across the Baltic States, followed by growing signs of divergence in recent years. DTW clustering effectively highlights these evolving trajectories, offering insights into the pace and nature of social change in the region.

4.2. Analysis of DTW Clustering Results of Economic Indicators in the Baltic States (2020–2023). As was the case in the preceding instance, the division was into two clusters. The results are presented in Table 5 and Figure 2.

Table 5

DTW Clustering Results of Economic Indicators in the Baltic States (2020–2023)

Country	Year			
	2020	2021	2022	2023
Latvia	2	2	1	1
Lithuania	1	1	1	1
Estonia	2	2	2	2

**Fig. 2. DTW Clustering Results of Economic Indicators**

Analysis of DTW-clustering by economic factors shows that Lithuania demonstrated the most consistent trajectory, remaining in the same (first) cluster throughout all four years. This suggests a stable pattern of economic development, possibly characterized by steady growth or limited fluctuation in key macroeconomic indicators.

Initially, Latvia was placed in the second cluster (2020–2021), but subsequently transitioned to the first cluster in 2022 and 2023. This transition may be indicative of a convergence with Lithuania's economic trajectory, potentially driven by changes in economic structure or policy orientation.

In contrast, Estonia demonstrated the highest level of consistency, occupying the second cluster position consistently throughout the entire period. This suggests an alternative path of economic development, distinct from that of Lithuania and Latvia in the latter years. Potential explanations for this phenomenon may include Estonia's emphasis on the digital economy, specific investment strategies, or external trade orientations.

Overall, the clustering results reveal both shared trends and significant divergences in the economic dynamics of the Baltic States. DTW proves to be a valuable analytical tool, as it captures not only the levels of economic indicators but also the structure of their changes over time, offering a more nuanced view of regional economic processes.

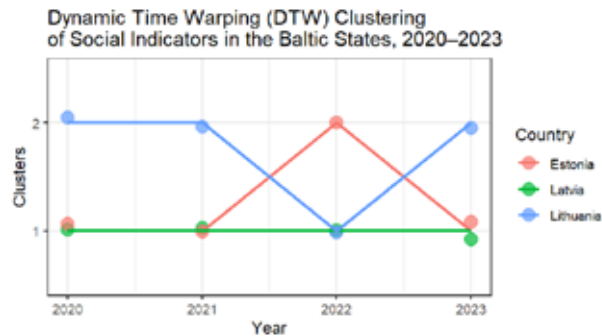
4.3. Analysis of DTW Clustering Results of Socio-Economic Indicators in the Baltic States (2020–2023). Let us consider the clustering results for the set of all 21 indicators of socio-economic policy (see Table 6 and Fig. 3).

DTW's clustering analysis of the socio-economic development of the Baltic States from 2020 to 2023 reveals key trends. Latvia remains consistently in Cluster 2 throughout the period, indicating stable and predictable socio-economic growth or resilience. This may reflect conservative economic policies or balanced responses to social and economic factors. Lithuania showed variability, being in Cluster 1 for three of the four years (2020, 2021, 2023) and moving to Cluster 2 in 2022. This

Table 6

DTW Clustering Results of Socio-Economic Indicators in the Baltic States (2020–2023)

Country	Year			
	2020	2021	2022	2023
Latvia	1	1	1	1
Lithuania	2	2	1	2
Estonia	1	1	2	1

**Fig. 3. DTW Clustering Results of Social Indicators**

transition suggests a temporary alignment with Latvia and Estonia, possibly due to external shocks such as energy crises, changes in export markets or the war in Ukraine. Estonia shows the highest variability, moving to cluster 1 in 2022 and returning to cluster 2 in 2023. This change is likely to reflect a different response to events such as the war in Ukraine or disruptions in sectors such as IT and logistics. In 2022, the countries diverged, with Latvia and Lithuania in Cluster 2 and Estonia in Cluster 1. By 2023, however, a partial realignment was observed, indicating a recovery of regional development patterns.

Overall, DTW clustering highlights both stable and dynamic aspects of socio-economic development in the region, providing insights into synchronisation and divergence that can inform more flexible regional economic policies.

5. Results and discussion. A comparison of the economic and social indicators of the three Baltic republics reveals significant differences in their development dynamics, despite similar starting conditions after the collapse of the Soviet Union. Following the attainment of independence, each country elected to pursue its own unique trajectory, thereby resulting in divergent socio-economic policies and outcomes. This makes the analysis of common features and differences even more valuable, allowing for a deeper understanding of each country's unique regional characteristics.

Lithuania adopted a state-market approach to its reforms, implementing gradual and incremental changes rather than a complete dismantling of the existing system. In contrast, Latvia and Estonia pursued a more radical approach, opting to dismantle the socialist economic framework rather than reform it. Their transition resembled a bourgeois revolution, characterized by a rapid redistribution of economic power and resources. At a critical juncture, Latvia and Estonia began selling off their resources and industries, while Lithuania took measures to preserve its existing production systems. As a result, Lithuania continues to trade in industrial products, while Latvia has the largest negative trade balance: it finds it easier to import than to produce domestically. At the same time, Estonia, with the support of Finland, managed to achieve significant development compared to Latvia and Lithuania.

This analysis highlights that, despite similar historical starting points, the differing approaches to economic reforms have led to varying levels of success in each country. Estonia's reliance on external support and a more market-oriented approach allowed it to build a stronger and more diversified economy, while Latvia and Lithuania have struggled with trade imbalances and economic transitions.

In recent years, the Baltic States have experienced remarkable economic growth, which is often cited as evidence of successful post-transition reforms. However, a closer analysis shows that this growth has been largely consumption-driven, supported by EU structural funds and the expansion of the mortgage market. Previously, GDP growth was mainly driven by transit trade and, more recently, by the retail, services and financial sectors – rather than by industrial production.

The region's leading growth rates in Europe also need to be put into context: following the almost complete dismantling of their industrial base, the Baltic economies started from a position of negative capacity. As a result, the initial improvements were disproportionately large compared to the more industrialised European countries.

This has given rise to concerns regarding the sustainability of such growth. Foreign investment has been found to be focused on consumption-oriented sectors, while the substantial current account deficit has been financed by bank loans, often sourced from foreign parent banks. This overreliance on mobile financial capital poses systemic risks. Moreover, the process of globalization has led to an acceleration in the relocation of manufacturing from the Baltic region to countries in Southeast Asia and China, which offer lower costs, particularly following the accession of the Baltic States to the EU and China's entry into the WTO.

The European Union's reform of the sugar industry, which resulted in the closure of production facilities in Latvia, serves as an illustrative case study of the manner in which global trade liberalisation and shifts in internal EU policy can potentially compromise the viability of domestic production. It is hypothesised that increased competition from cheaper imports from Asia, Latin America and Africa may result in the displacement of traditional Baltic industries.

In sum, while the Baltic States' economic growth may appear robust, it remains structurally fragile, driven more by external and short-term factors than by sustainable industrial or technological development. Without a strategic shift toward innovation and productive capacity, these economies remain vulnerable to global market fluctuations and financial instability.

The Baltic States are currently confronted with structural challenges that may compromise their long-term economic sustainability. The most significant issue is the increasing labour force deficit, which has resulted in higher labour costs and poses a significant threat to the competitiveness of domestic enterprises in both domestic and international markets.

Another critical concern is the persistent rise in import volumes, which exacerbates already substantial current account deficits. The failure of domestic production to satisfy internal demand serves to perpetuate reliance on external markets, thereby contributing to the exacerbation of trade imbalances and the further erosion of economic resilience.

The increasing cost of production, particularly labour, poses a significant risk to the competitiveness of Baltic enterprises. Indications of this decline are already evident, as firms in the region are experiencing a relative decline in competitiveness compared to their counterparts in other EU member states. If these trends are not addressed, there is a risk of increased reliance on imports and a deterioration in the underlying principles of sustainable growth.

The authors of the analysis suggest that if local businesses and governments fail to effectively manage rising production costs, a negative macroeconomic scenario could unfold. This would lead to sluggish GDP growth, ranging between 3–5% annually, restricting the region's economic potential and impeding efforts to improve living standards.

In order to circumvent this issue, it is imperative that the Baltic States enhance their productivity levels by effecting a transformation in their economic structures. A pivotal step in this process is the transition towards the production of higher value-added goods. This could entail a concentration on technological innovation, an improvement in industrial processes, and an enhancement in the skill level of the workforce to boost productivity and enable businesses to compete on the global stage more effectively.

The necessity for structural changes is imperative, as reliance on low-cost labour and traditional industries will no longer be sufficient in the face of rising global competition and technological advancement. In order to ensure sustainable, long-term growth, the Baltic States must diversify their economies and adapt to the demands of the modern global economy.

The future economic path of the Baltic States will depend on a blend of domestic policy decisions and external economic factors. As highly open economies, they remain vulnerable to global economic downturns. In this context, domestic policy decisions assume added importance, as they will shape the region's ability to withstand future crises.

Despite the notable advancements made by the Baltic States in their economic reform efforts, their experiences underscore the constraints faced by international institutions such as the IMF, World Bank, and WTO in formulating universally applicable transition models. These organisations frequently neglect to consider national particularities, resulting in reform outcomes that might have been enhanced through the implementation of more customised, context-sensitive strategies.

In order to address the current structural challenges, it is necessary to implement long-term national reform programmes that integrate the social dimensions and reflect the unique characteristics of each country. Recent policy shifts indicate that governments in the region are acknowledging previous missteps and transitioning towards more balanced economic planning, incorporating social welfare considerations.

A pivotal aspect of this transition pertains to the strategic promotion of high-tech, value-added industries through targeted incentives, such as tax reductions. Absent a concomitant emphasis on innovation and productivity, the aspiration of attaining rising wages will remain unfulfilled, thereby serving only to exacerbate labour migration and circumscribe sustainable growth. The failure to provide adequate support for high-productivity sectors has the potential to exacerbate the ongoing brain drain.

Conclusion. In conclusion, although the Baltic States have made substantial gains since independence, sustaining growth in the face of global uncertainty will require more diversified, inclusive, and adaptive economic strategies that go beyond market liberalization and foreign capital attraction.

The Dynamic Time Warping (DTW) method allows for the comparison of development trajectories even when the speed and shape of changes differ. In this case, it reveals how synchronously or divergently the Baltic States evolved in terms of socio-economic indicators from 2020 to 2023.

As a result of using this method, the following main trends were identified for the three Baltic countries:

- Latvia demonstrates a stable development trajectory.
- Lithuania shows temporary deviations, likely in response to external challenges (shocks).
- Estonia exhibits the highest variability, reflecting unique economic dynamics.

The analysis recommends a transition towards a socially oriented economic model, like that of Western Europe. The implementation of social inclusion policies has been demonstrated to play a pivotal role in addressing issues of inequality, poverty, and labour shortages, while concurrently fostering long-term development.

DTW helps identify both convergence and divergence in regional development patterns over time. Further research is expected to include a more detailed study of the influence of individual indicators on the identified trends.

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**Indicators of the socio-economic policies of the Baltic States in the post-COVID period,
from 2020 to 2023**

No.	Indicators	2020	2021	2022	2023
LATVIA					
<i>Economic policy</i>					
1	GDP per capita at PPS, % of the EU average (EU = 100%)	69	71	69	70
2	Real GDP growth rate, %	-3.5	6.9	1.8	2.9
3	Total government expenditures, % of GDP	44.3	46.5	44.2	44.0
4	Government debt, % of GDP	42.7	44.4	41.8	43.6
5	Shadow economy level, % of GDP	25.5	26.6	26.5	22.9
6	Inflation (average annual growth rate), %	0.1	3.2	17.2	9.1
7	Employment rate, %	76.9	75.3	77.0	77.5
8	Unemployment rate, %	8.1	7.6	6.9	6.5
9	Population, thousand people	1900.5	1884.5	1879.4	1877.5
10	Emigration, thousand people	12.0	13.0	16.7	16.3
<i>Social policy</i>					
11	Social protection expenditures, % of GDP	17.2	19.3	17.5	17.3
12	Life expectancy at birth, years (average value)	75.5	73.1	74.5	75.9
13	Average monthly wage, EUR	1143	1277	1373	1537
14	Minimum monthly wage, EUR	430	500	500	620
15	Minimum monthly wage as a percentage of the average monthly wage, %	39.5	41.6	38.5	42.4
16	Income inequality (Gini coefficient), %	34.5	35.7	34.3	34.0
17	Proportion of population at risk of poverty, %	25.1	26.1	26.0	25.6
18	Proportion of residents living below the poverty line, %	23.4	22.5	22.5	21.6
19	Proportion of residents experiencing severe material and social deprivation, %	7.0	5.3	7.8	6.2
20	Proportion of pensioners at risk of poverty, %	46,5	50,9	47,3	46,5
21	Proportion of pensioners (65+) at risk of poverty, %	71.7	73.6	68.4	67.8
LITHUANIA					
<i>Economic policy</i>					
1	GDP per capita at PPS, % of the EU average (EU = 100%)	87	88	88	87
2	Real GDP growth rate, %	0.0	6.4	2.5	0.3
3	Total government expenditures, % of GDP	42.3	37.3	36.2	37.4
4	Government debt, % of GDP	46.2	43.4	38.1	38.3
5	Shadow economy level, % of GDP	20.4	23.1	25.8	26.4
6	Inflation (average annual growth rate), %	1.1	4.6	18.9	8.7
7	Employment rate, %	76.7	77.4	79.0	78.5
8	Unemployment rate, %	8.5	7.1	6.0	6.9
9	Population, thousand people	2810.4	2808.4	2831.6	2871.6
10	Emigration, thousand people	25.2	25.2	15.3	22.0
<i>Social policy</i>					
11	Social protection expenditures, % of GDP	19.1	18.5	16.2	16.3
12	Life expectancy at birth, years (average value)	75.2	74.2	75.8	77.3
13	Average monthly wage, EUR	1428	1579	1666	2022
14	Minimum monthly wage, EUR	607	642	730	840
15	Minimum monthly wage as a percentage of the average monthly wage, %	46.4	44.8	44.3	45.4

Appendix 1 (continuation)

16	Income inequality (Gini coefficient), %	35.1	35.4	36.2	35.7
17	Proportion of population at risk of poverty, %	24.5	23.5	24.6	24.3
18	Proportion of residents living below the poverty line, %	20.0	20.9	21.2	20.6
19	Proportion of residents experiencing severe material and social deprivation, %	8.1	6.4	6.0	6.1
20	Proportion of pensioners at risk of poverty, %	39,5	38.8	43.1	39.2
21	Proportion of pensioners (65+) at risk of poverty, %	63.3	61.3	64.1	57.6
ESTONIA					
<i>Economic policy</i>					
1	GDP per capita at PPS, % of the EU average (EU = 100%)	85	85	84	80
2	Real GDP growth rate, %	-2.9	7.2	0.1	-3.0
3	Total government expenditures, % of GDP	44.7	42.1	40.0	43.3
4	Government debt, % of GDP	18.6	17.8	18.5	19.6
5	Shadow economy level, % of GDP	16.5	19.0	18.0	17.9
6	Inflation (average annual growth rate), %	-0.6	4.5	19.4	9.1
7	Employment rate, %	79.1	79.3	81.9	82.1
8	Unemployment rate, %	6.9	6.2	5.6	6.4
9	Population, thousand people	1329.5	1330.9	1348.8	1370.3
10	Emigration, thousand people	12.4	12.5	9.7	14.5
<i>Social policy</i>					
11	Social protection expenditures, % of GDP	18.9	17.4	15.4	15.3
12	Life expectancy at birth, years (average value)	78.9	77.2	78.1	78.8
13	Average monthly wage, EUR	1448	1548	1685	1832
14	Minimum monthly wage, EUR	584	584	654	725
15	Minimum monthly wage as a percentage of the average monthly wage, %	42.6	37.9	38.8	38.1
16	Income inequality (Gini coefficient), %	30.5	30.6	31.9	31.8
17	Proportion of population at risk of poverty, %	22.8	22.2	25.2	24.2
18	Proportion of residents living below the poverty line, %	20.6	22.8	22.5	20.2
19	Proportion of residents experiencing severe material and social deprivation, %	2.3	1.9	3.3	2.5
20	Proportion of pensioners at risk of poverty, %	48,8	47.6	59.8	55.0
21	Proportion of pensioners (65+) at risk of poverty, %	76.8	78.1	81.7	79.1

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The requirements to the structure and the layout of articles are the following:

- The size of the submitted article, including the bibliography, should be within 20,000–70,000 characters with spaces. The article is presented in Microsoft Word, paper size – A4, margins along the edges of the page – 20 mm on each side.

- The text of the article: font Times New Roman; font size 12 pt; line spacing 1,5, the first line of each paragraph with indentation 1.5 mm.

- Components of the articles should be laid out as follows:

1. the title of the article is written in capital letters (font Times New Roman, font size 12 pt, Bold, Center);

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3. the abstract should be in the range of 6–7 sentences, and describe the main ideas of the article (font Times New Roman, font size 12 pt);

4. after the abstract the key words (5–6) follow, which are the most important concepts discussed in the article and related to the theme (font Times New Roman, font size 12 pt).

- The article should have the following basic structural parts consecutively emphasized in the text: the statement of the problem, its relevance / importance, the analysis of recent publications on the subject of the article, the purpose of the research conducted by the author, main findings, conclusions, and the list of references. The titles of the structural elements, as well as parts of the article, in the case of their designation by the author, should be marked in bold.

- The bibliographic list of regulations, normative acts and references to literary sources is placed at the end of the article with the use of the numbering arrangement starting with the first reference to the source of information in the main body of the text (font Times New Roman, font size 12 pt).

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