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ARTIFICIAL INTELLIGENCE-BASED DECISION-MAKING IN PUBLIC ADMINISTRATION

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Abstract. *This article considers the possibilities and challenges of using artificial intelligence (AI) for decision-making in the public administration system. The aim of the study is to analyze the possibilities of using AI for decision-making in public administration. The research employs the following methods: correlation analysis, the least squares method, the White heteroscedasticity test, and the Chow test. The results of the study demonstrate the significant benefits of using AI technologies to increase the efficiency and transparency of public*

authorities and improve the quality of public services. Empirical research proves a positive correlation between the level of use of AI in public administration and the quality thereof. The model built demonstrates a significant correlation at the level of almost 60%. The least squares method establishes the main parameters of the model. The White heteroskedasticity test confirms the null hypothesis. The Chow test confirms the absence of structural shifts. The growing trend of using AI in the spheres of public services, social protection, economy and health care in Central and Eastern Europe is revealed. It is recommended to develop a comprehensive strategy in order to successfully realize the potential of AI as follows: create a favorable environment, ensure the transparency of AI systems, and develop the appropriate regulatory and legal framework. It is planned to study the results of using AI for decision-making in public administration in countries with different levels of economic development, which will contribute to the provision of more universal recommendations.

Introduction

In recent years, AI has undergone significant development and found wide application in various fields, including public administration. AI technologies, such as machine learning, robotics, natural language processing, and others, can help public authorities to focus on new goals (Ulnicane et al. 2021), make more informed and effective decisions, improve public service provision, and increase the transparency and accountability of state institutions.

As AI is increasingly being used in various fields, researchers are paying more attention to the possibilities of innovative solutions in the public sector (Wang, Teo and Janssen 2021). The gradual penetration of ICT into the public administration system has improved the capabilities of public authorities, providing modern tools for operating data, such as e-government (Malodia et al. 2021).

Authorities see significant potential for major opportunities in the use of AI for decision-making in public administration and various areas of the public sector, such as e-governance, social innovation, predictive modelling, and resource optimization. These approaches create opportunities for increasing efficiency and effectiveness based on automated solutions (Wang et al. 2021).

The complexity of these issues involves determining the features of using AI in public administration for decision-making and providing recommendations to overcome potential risks and barriers to the introduction of modern technologies.

The aim of this study is to analyze the possibilities of using AI for decision-making in public administration, which can increase the efficiency of administrative processes.

This aim involves the fulfilment of the following research objectives:

1. Identify the key advantages of using AI for decision-making in the public sector.
2. Analyze the main challenges associated with the implementation of AI systems in the field of public administration.
3. Develop recommendations and ways for the successful integration of AI technologies into decision-making processes in the public administration system.

These approaches will contribute to the adoption of more justified and transparent management decisions, increase the efficiency of public services, and strengthen the accountability of authorities.

Literature Review

The current state of AI use requires the development of regulatory and legal acts to oversee this activity. Analysis of the legislation of individual countries shows a significant increase in the number of AI-related draft laws (by 6.5 times since 2016), because both the use of technology and state investments in the sector are growing rapidly. For example, the cost of using AI by the US government has increased by approximately 2.5 times (Maslej et al. 2023). In most cases, national AI strategies emphasize the need to use AI to implement tasks in public administration, with an emphasis on minimizing existing risks (OECD/ CAF 2022; Berryhill et al. 2019). State authorities are expanding the scope of using AI to enact positive changes in the decision-making system, service provision, and control functions in public administration (OECD 2023).

The issue of using AI in public administration is the subject of active research and discussion. Since 2010, the number of studies on various aspects of AI application has more than doubled (Maslej et al. 2023). Many scholars and experts are studying the potential of AI to transform decision-making and public service delivery, as well as the possible challenges associated with the implementation of innovative technologies (Tyler et al. 2023, 28).

Among the key directions of using AI in the public sector are electronic governance (e-governance) and public service provision. Big data analysis is another area where AI can play an important role in decision-making in public administration.

Furthermore, AI can be used for predictive modelling and the assessment of the potential consequences of various policy decisions and strategies (Danish and Senjyu 2023; Madan and Ashok 2023). Researchers emphasize the importance of considering the principles of transparency, fairness, accountability, and privacy protection during the development and implementation of AI systems in the public sector (Ulnicane and Erkkilä 2023, 163). Furthermore, the need to create an appropriate legal framework and enact regulations that would moderate the use of AI in public administration is emphasized.

In general, the academic literature testifies to the significant potential of AI for the transformation of decision-making processes and the provision of services in public administration. However, the implementation of available opportunities requires careful planning, the consideration of legal aspects, as well as privacy protection (Neumann, Guirguis and Steiner 2024, 128).

AI-enabled data analysis can be a valuable tool for decision-making in different areas of public administration. Machine learning technologies can be used to identify hidden relationships and patterns in large data sets, which will allow more informed decisions to be made and facilitate the prediction of future trends (including the analysis of financial and economic data to predict risks, as well as the development of appropriate policies and strategies) (Kruhlov et al. 2024, 917).

Large language models (such as GPT-3 and LaMDA) are beginning to be used for various public administration tasks (text generation, summarization, and analysis of citizen queries and feedback). These models can improve the development of regulatory acts, report creation, and responses to citizen inquiries (Chang et al. 2024, 14). Natural Language Processing (NLP) methods are appropriate for extracting information from large volumes of unstructured text data (such as public comments or social media discussions) and ensuring digital language equality (De-Dios-Flores et al. 2023, 80). Computer vision technologies (object detection, facial recognition, image analysis) are used in various public administration sectors (infrastructure monitoring, identifying potential security threats, transportation management) (Talha et al. 2022, 546; Dilek and Dener 2023).

Researchers emphasize the importance of considering transparency, fairness, accountability, and privacy protection principles during the development and implementation of AI systems in the public sector (Ferrara 2024). Adhering to ethical principles is crucial for ensuring the responsible and reliable implementation of AI in the public administration decision-making process. Privacy and data protection are also top ethical concerns. The application of AI in areas such as facial recognition and citizen evaluation poses significant privacy threats (Gilani et al. 2023, 5). Reliable data governance systems, privacy preservation methods, and public oversight mechanisms are needed.

Currently, most countries do not have specific national legislation governing the use of AI in public administration, which can create legal uncertainty and facilitate abuse. This problem can be solved by developing an appropriate legal framework that would regulate the use of AI in the public sector. Such a regulatory legal act should include rules and requirements related to ethical and legal aspects, as well as control and accountability mechanisms. In March 2024, the European Union took a step in this direction when the first legislative act in the world to regulate AI was adopted (European Parliament 2024). The Artificial Intelligence Act defined approaches to the operation of AI, restrictions and prohibitions on its use, and a number of other directions.

Methods

This study employs a combination of different methods and approaches to comprehensively analyze the opportunities and challenges of using AI for decision-making in public administration.

The research design includes the following stages in accordance with the research objectives (Figure 1).
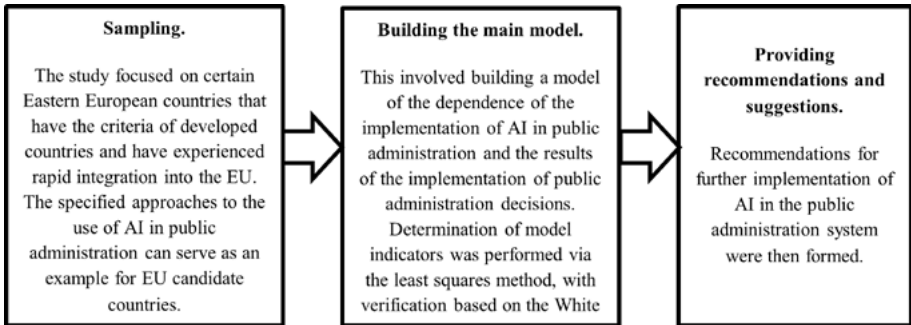
Figure 1. *Research design*

The following stages can be distinguished in the research process:

1. The level of possibilities regarding the use of AI by public authorities in selected Central and Eastern European countries was determined.
2. The degree of AI use in certain areas of public administration in selected Central and Eastern European countries was identified.
3. A correlation analysis of the dependence between AI implementation in public administration and the results of public administration was conducted.
4. The potential benefits and opportunities of AI for improving decision-making processes and providing services to citizens in the public administration system were determined.
5. Recommendations for the successful integration of AI into the public administration system were formulated.

The use of Eastern European countries in the study is related to the active implementation of AI technologies, in particular in the public administration system. Central and Eastern European countries are an interesting example of countries with transition economies undergoing the active reform of public administration systems, which makes them an important object for studying the impact of new technologies on the modernization of the public sector.

The research involved data from academic literature, the reports of public authorities, organizations, and institutions, and industry materials (Misuraca and van Noordt 2020;

Maslej et al. 2023; Rogerson et al. 2022; Hankins et al. 2023). The model of dependence between the implementation of AI in public administration and the results of public administration was built on the basis of the Government AI Readiness Index and governance indicators (Hankins et al. 2023; Legatum Institute 2023).

A combination of the methods of correlation analysis, least squares, the White test, and the Chow test was applied to explore the opportunities and challenges of using AI in public administration. Consideration of both theoretical developments and practical results provided an empirical background for the conclusions and recommendations presented in the study.

Results

The analysis of the Government AI Readiness Index in Central and Eastern European countries shows fairly acceptable results and mostly insignificant positive changes in the majority of the countries studied (Figure 1). At the same time, it should be noted that some countries show a certain decrease in the Government AI Readiness Index in 2023 (Czech Republic, Bulgaria, Romania, Hungary, Macedonia).
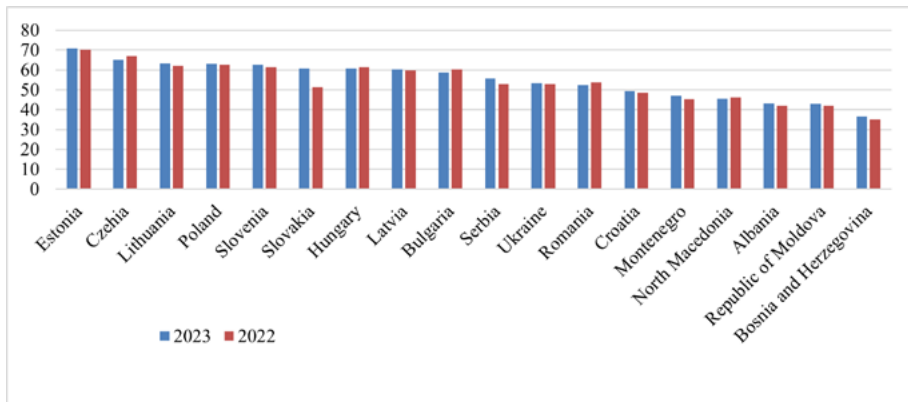
Figure 1. *Government AI Readiness Index in Central and Eastern European countries in 2022–2023 (Rogerson et al. 2022; Hankins et al. 2023)*

Directions for the use of AI in public administration based on function in selected European countries are presented in Figure 2. In most countries, the largest share of AI use is observed in such areas as general public services, social protection, economic issues, health care, and education. The level of AI adoption is lower in the fields of defense, public order and security, housing and utilities, and recreation.
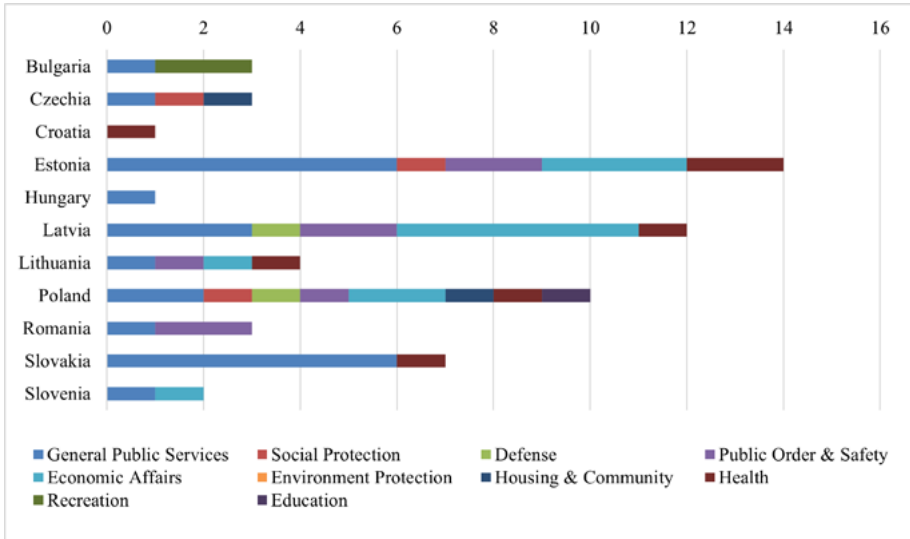
Figure 2. *Directions of AI use in public administration based on function (Misuraca and van Noordt 2020)*

There are noticeable differences between countries in the use of AI in certain fields. For example, Latvia (economic sphere), Slovakia and Estonia (general public services), and Bulgaria (recreation) have high indicators in specific areas, while the development of spheres is more balanced in other countries.

In general, the data highlight the spread of AI in the public sectors of different European countries, especially in traditional areas of public administration (provision of public services, social security, and economic development).

The analysis of dependence between public administration AI implementation and the results of the implementation of public administration decisions demonstrates a significant correlation at the level of almost 60% (Figure 3).
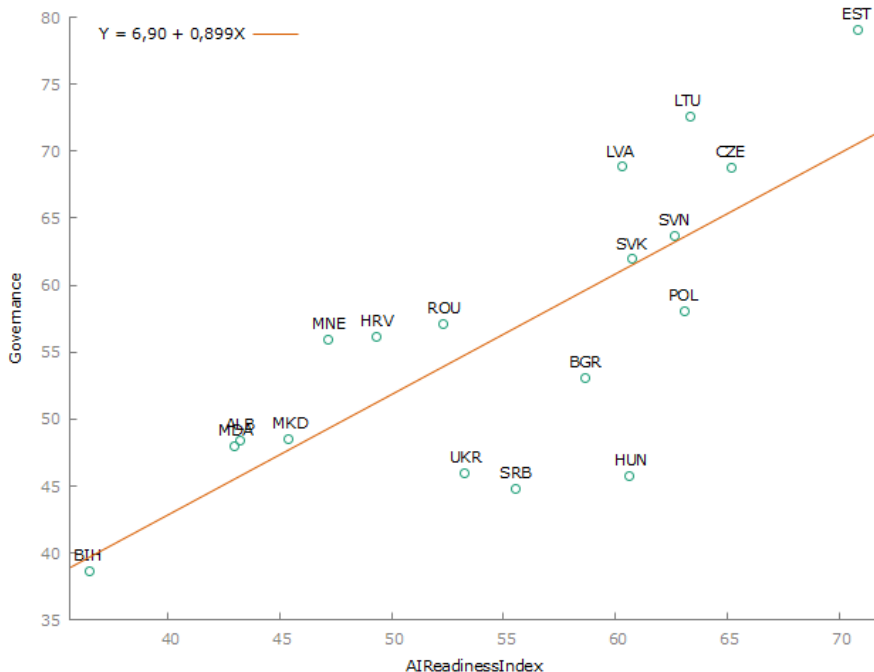
Figure 3. *The relationship between AI use in public administration and the Governance Indicator (Hankins et al. 2023; Legatum Institute, 2023)*

The scatterplot in Figure 3 demonstrates a positive correlation between public administration AI readiness and public administration outcomes. Significant results achieved by the Baltic States and the Czech Republic should be noted, indicating significant progress in AI use and subsequent results in the public administration system.

Gretl software was used to determine the indicators of the specified model using the least squares method (LSM) (Table 1).

Based on the regression model, $Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$, where:

Y_i – the observed value of the dependent variable for the ith observation,

X_i – the value of the independent variable for the ith observation,

β_0 and β_1 – the model parameters (free term and regression coefficient, respectively), and

ε_i – the model error for the ith observation.

Thus we find the values of parameters β_0 and β_1 that minimize the sum of squared errors.

This results in the equation 6.9 + 0.899X, which characterizes the dependence of the two indicators.

Table 1. *Model 1: LSM, based on observations 1–18 (dependent variable: Governance)*

	Coefficient	St. error	*t*-test	*p*-value
Const	6.89750	10.6099	0.6501	0.5249
AIReadinessIndex	0.898836	0.190119	4.728	0.0002

According to Table 1, the *p*-value for the coefficient before AIReadinessIndex is 0.0002, which is less than the usual significance level of 0.05. This means that the coefficient is statistically significant: there is statistical confidence that the indicator of the use of AI in public administration significantly affects the results of management activities.

The quality of the obtained model is tested below (Table 2).

Table 2. *Obtained model quality indicators*

Average residual variable	56.39389
Residual sum of squares	853.4459
R squared	0.582809
$F(1, 16)$	22.35174
Logarithmic likelihood	−60.27109
Schwarz criterion	126.3229
Residual standard deviation	10.96973
Standard error of the regression	7.303449
Adjusted *R* squared	0.556735
p-value (*F*)	0.000228
Akaike information criterion	124.5422
Hannan–Quinn information criterion	124.7877

Table 2 shows that approximately 58% of the variation in management can be explained by the model: the model has a moderate ability to explain the dependence of the variable. A fairly high *F*-test value (22.35174) and a low *p*-value (0.000228) indicate the statistical significance of the regression as a whole; that is, the model as a whole is statistically significant.

Based on the use of Gretl software, the White test demonstrated no heteroskedasticity. The test statistics were as follows: $LM = 2.56149$, with a *p*-value of p(Chi-square $(2) > 2.56149) = 0.27783$. When checking the normality of the distribution of the residuals, the null hypothesis was confirmed: errors are normally distributed. The test statistics were as follows: Chi-square $(2) = 3.37704$, with a *p*-value of 0.184793. The Chow test of structural displacements at point 9 confirmed the absence of structural displacements. The test statistics were as follows: $F(2, 14) = 2.26284$, with a *p*-value of $p(F(2, 14) > 2.26284) = 0.140759$.

The results of the analysis demonstrate a satisfactory level of readiness for the use of AI in public administration in most countries. The Baltic countries and the Czech Republic have high levels of readiness and effectiveness in AI-based public administration, while Bulgaria, Romania, and Hungary lag behind in these indicators.

The analysis revealed a number of key advantages of using AI in public administration. Table 3 lists the main benefits and provides brief explanations.

Table 3. *Advantages of using AI in public administration decision-making*

Advantage	Description
Increasing efficiency	AI automates routine tasks, speeds up processes, and optimizes the use of resources, which increases the overall efficiency of public authorities.
Improving decision-making	AI technologies such as machine learning and analytics help to make more informed and accurate decisions based on data analysis.
Personalization of services	AI provides personalized services to citizens taking into account their individual needs and preferences.
Optimization of resources	AI systems optimize the allocation and use of resources such as energy, transportation, and personnel, resulting in significant cost savings.
Prediction and forecasting	Machine learning models are used to predict future trends and events, enabling authorities to be more proactive in solving problems.

Source: Based on Danish and Senjyu (2023), Madan and Ashok (2023), and Ulnicane and Erkkilä (2023, 615)

These benefits demonstrate the significant potential of AI to improve efficiency, decision-making, and service delivery in the public sector. At the same time, the successful implementation of these technologies requires careful planning, the consideration of ethical and legal aspects, as well as raising stakeholders' awareness and involvement.

Discussion

This article covers a wide range of aspects related to the application of AI in public administration, including advantages, challenges, empirical research results, and recommendations. At the same time, since the large-scale implementation of AI in public administration is a relatively new phenomenon, there is only a limited amount of data available for analysis. The geographical scope of the study, limited to Central and Eastern European countries, may not fully reflect the situation in other regions of the world.

The results of the study highlight the current state and prospects for the use of AI tools in public administration, demonstrating a wide range of AI applications, such as

e-government, data analysis, predictive modelling, and resource optimization. The automation of routine decision-making tasks, the personalization of services, the optimization of resources, and forecasting capabilities are powerful incentives for the use of AI technologies in public administration.

The fact that the use of AI in public administration decision-making is mostly a trend in developed countries limits the wider opportunities for this research to an extent. Moreover, AI technology is fairly new, and the results of its active use are limited to the period of the previous 5–7 years, which also prohibits monitoring its effects over a significant period of time.

The results obtained in this study correlate with the conclusions drawn in other studies in the field of the application of AI in public administration.

A study by Alhosani and Alhashmi (2024) confirms the key benefits of using AI, such as increasing efficiency, improving decision-making, and personalizing services, as well as reducing liabilities by analyzing the advantages and disadvantages of using AI in the public sector.

De Sousa et al. (2019) demonstrated that reforms aim to reduce public spending and the number of civil servants, and have promoted AI use to automate tasks and reorient agents towards serving users. These reforms, initially focused on managerial discourse, are shifting towards expanding AI functions, relying on the technical discourse.

A study conducted by Lampropoulos et al. (2024) highlights the potential of AI for resource optimization and forecasting. AIoT as an industry is currently in its infancy, but has shown great potential to impact and transform multiple sectors (Kankanhalli, Charalabidis and Mellouli 2019, 306–307) and has become a leading component of achieving a sustainable future, given the importance of creating ideal conditions that enable sustainable development and the achievement of the SDGs.

An analysis of the perception and readiness of civil servants to use AI (Millan-Vargas and Sandoval-Almazán 2024, 1862) confirms other survey results. This evidence suggests a lack of skills and limited understanding of AI among government officials, potentially hindering its future adoption.

The results of this study indicate that the implementation of AI in public administration is associated with significant benefits (increased efficiency, improved decision-making processes, personalization of services, and enhanced forecasting capabilities). These findings align with previous studies that have identified similar advantages of public sector AI implementation (Yfantis and Ntalianis 2020, 211).

The quantitative analysis in this study further confirms that countries with higher levels of AI integration in their public administration systems generally achieve better management outcomes, potentially leading to more efficient and effective service delivery to citizens. While these results are consistent with other studies highlighting the benefits of AI in public administration, there are some differences. For example, a study by Si (2022, 320) emphasizes the potential of AI for resource optimization and forecasting in the context of

achieving the SDGs. This aspect was not addressed in the current research, suggesting an area for future studies to explore.

For the successful implementation of AI in public administration, it is necessary to develop a comprehensive strategy that takes into account potential advantages, challenges, and risks with due regard to some key recommendations (Table 4).

Table 4. *Recommendations for Further AI Implementation in Public Administration*

Direction of implementation	Necessary actions
Creation of a favorable environment	Public authorities should create a favorable environment for the development and implementation of AI technologies (investment in research, infrastructure creation, PPP tools).
Ensuring transparency and accountability	Development of mechanisms to ensure transparency and accountability of AI-based systems used for decision-making in public administration.
Privacy and data protection	Development of rules and regulations governing the collection, storage, and use of personal data by AI-based systems; ensuring security measures to protect data.
Development of the regulatory framework	Creation of an appropriate regulatory framework that would moderate the use of AI in the public sector, which should include rules and requirements related to ethical and legal aspects, as well as control and accountability mechanisms.

The protection of citizens' privacy and data security presents significant ethical challenges in the implementation of AI in public administration. Decision-making algorithms must be thoroughly tested for bias, discrimination, and privacy violations. An appropriate regulatory framework should be developed to govern the ethical aspects of AI use, ensure accountability, and establish mechanisms for auditing and verification.

With the increase in the automation of routine tasks through AI, public servants can focus on more creative, analytical, and strategic duties. In the long term, AI can contribute to more personalized, efficient, and client-oriented public services. The widespread use of AI in public administration may lead to a shift in the governance paradigm itself, moving the emphasis from hierarchical structures to more horizontal, flexible, and adaptive models.

A comprehensive strategy for the successful introduction of AI in public administration should ensure the possibility of reliable AI use for management decision-making, guarantee the safety of work and reliability of information storage, and allow the application of complex algorithms in order to process large amounts of data. At the same time, the control of users (public officials) regarding the adequate interpretation of management information and relevant management decisions remains important.

Conclusions

This article assessed the possibilities and challenges of using AI for decision-making in the public administration system. Comprehensive analysis made it possible to draw reasonable conclusions regarding the prospects for the introduction of AI in the public sector. The results of the study demonstrate the significant potential of AI tools for increasing the transparency, accountability, and efficiency of public authorities, as well as increasing the quality of public services provided to citizens.

1. AI can facilitate the automation of routine tasks, assist in the processing of large amounts of data to make more informed decisions, ensure the personalization of services according to individual needs, optimize the use of resources, and predict future trends.
2. Despite numerous advantages, the implementation of AI in public administration is also associated with a number of serious challenges. This study found that the key issues are ethical considerations, the need to ensure the protection of the privacy of citizens' personal data, the lack of a clear legal framework to regulate the use of AI in the public sector, and the limited understanding of AI technologies among civil servants.
3. In order to successfully overcome the challenges and realize the potential of AI in public administration, it is necessary to develop a comprehensive strategy that will cover a number of key directions for creating a favorable environment for the development and implementation of AI technologies, ensuring the transparency of AI-based systems (audit and verification mechanisms) and preventing bias and discrimination in their operation.
4. An important aspect is the creation of a regulatory and legal framework that would moderate the use of AI in the public sector, taking into account ethical and legal requirements, as well as establishing control and responsibility mechanisms.

In further research, it is planned to consider the results of using AI in public administration decision-making in countries with different levels of economic development.

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DIRBTINIU INTELEKTU GRĮSTAS VIEŠOJO ADMINISTRAVIMO SPRENDIMŲ PRIĖMIMAS

Anotacija. Straipsnyje nagrinėjamos dirbtinio intelekto (DI) panaudojimo galimybės ir iššūkiai, susiję su sprendimų priėmimu viešojo administravimo sistemoje. Tyrimo tikslas – išanalizuoti AI panaudojimo galimybes priimant sprendimus viešajame administravime. Tyrime buvo taikomi šie metodai: koreliacinė analizė, mažiausių kvadratų metodas, baltojo heteroskedastiškumo testas ir Chow testas. Tyrimo rezultatai rodo reikšmingą DI technologijų naudojimo naudą didinant valdžios institucijų veiklos efektyvumą, skaidrumą ir gerinant viešųjų paslaugų kokybę. Atliktas empirinis tyrimas įrodė teigiamą koreliaciją tarp DI naudojimo lygio viešajame administravime ir viešojo administravimo kokybės. Sukurtas modelis atskleidžia beveik 60 proc. reikšmingą koreliaciją. Mažiausių kvadratų metodas leido nustatyti pagrindinius modelio parametrus. Baltojo heteroskedastiškumo testas patvirtino nulinę hipotezę. Chow testas patvirtino, kad nėra struktūrinių poslinkių. Atskleista auganti DI naudojimo viešųjų paslaugų, socialinės apsaugos, ekonomikos ir sveikatos apsaugos srityse Vidurio ir Rytų Europoje tendencija. Norint sėkmingai realizuoti DI potencialą, rekomenduojama parengti kompleksinę strategiją: sukurti palankią aplinką, užtikrinti dirbtinio intelekto sistemų skaidrumą, parengti atitinkamą reguliavimo ir teisinę bazę. Planuojama ištirti DI panaudojimo sprendimų priėmimo viešajame administravime rezultatus skirtingo ekonominio išsivystymo lygio šalyse. Radiniai prisidės prie universalesnių rekomendacijų teikimo.

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PUBLIC ACCOUNTABILITY IN THE MANAGEMENT OF NON-PERFORMING LOANS IN INDONESIA

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Abstract

The purpose of this study is to examine administrative and legal obstacles in the management of non-performing loans (NPLs) in Indonesian public financial institutions, especially People's Credit Bank (BPR). Applying a case study method to 30 court decisions related to NPLs, this study identifies key obstacles such as slow collateral verification, complex litigation procedures, and a lack of coordination between institutions. The results show that these obstacles significantly slow down the recovery of NPLs and reduce the efficiency of financial institutions. Regulations such as PERMA No. 2/2015 and PERMA No. 4/2019 have not been fully effective in overcoming this problem. Therefore, it is necessary to simplify litigation procedures, increase collateral verification, and integrate information systems between institutions. The

novelty of this research lies in its in-depth analysis of administrative and legal obstacles in the management of NPLs, as well as its provision of concrete policy reform proposals to improve the stability of the public financial sector.

Keywords: *public accountability, non-performing loans, administrative barriers, policy reform.*
Reikšminiai žodžiai: *viešoji atskaitomybė; neveiksnios paskolos; administracinės kliūtys; politikos reforma.*

Introduction

Public accountability is a key idea in public administration, and is essential in order to ensure that public organizations, including financial institutions, manage the resources entrusted to them responsibly. In this context, the management of non-performing loans (NPLs) in public financial institutions, especially the People's Credit Bank (BPR) and the Limited Liability Company Rural Bank Sub-district Credit Agency (PT BPR BKK), face various challenges caused by administrative obstacles, including: slow collateral verification; lack of coordination between financial and legal institutions; and legal complexity (Nithin Kumar H N 2019), as evidenced in the unclear implementation of relevant regulations and articles (Aldi Akbar, Karyadi and Budi Rustandi Kartawinata 2021). Law No. 21/2011 authorizes the Financial Services Authority to supervise the financial sector. However, the implementation of supervision is often constrained by the slow verification of collateral and a lack of coordination between institutions (Adisaputra 2023).

In addition, Article 44 of Bank Indonesia Regulation No. 14/15/PBI/2012 on asset quality assessment in commercial banks, including BPR, often causes delays in the completion of NPLs due to the lack of clear technical guidelines regarding collateral. The execution of collateral is also hampered by Law No. 4 of 1996 on Dependent Rights, where Article 20 is often interpreted differently by various agencies, slowing down this process. Despite the existence of regulations such as PERMA No. 2/2015 and PERMA No. 4/2019, their effectiveness in dealing with NPLs in public financial institutions is still doubtful.

Therefore, this study aims to analyze administrative and legal barriers that slow down the process of resolving NPLs in Indonesia, as well as provide policy recommendations that can strengthen public accountability and improve the efficiency of financial institutions in handling these issues. Increased transparency and effectiveness in this process will not only accelerate the settlement of NPLs, but will also strengthen public financial stability in Indonesia.

Through this research, it is hoped that policy recommendations can be produced that can help public financial institutions in Indonesia to be more effective in handling NPLs, utilizing both administrative and legal approaches. Reforms in litigation procedures,

increased cooperation between institutions, and the adoption of better information technology in the collateral verification process are just some of the steps that are expected to accelerate the settlement of NPLs and improve the financial stability of public institutions. Thus, this research not only provides new insights in the academic literature, but also offers practical solutions that can be applied by policymakers to improve the efficiency of public financial institutions in Indonesia when facing the challenges of NPLs.

Literature Review

NPL management is a crucial issue in the public finance sector because of its impact on financial stability and economic growth (Victor Osunnaiye and Alymkulova 2022). In Indonesian public financial institutions such as BPRs, the high number of NPLs affects liquidity, new credit capabilities, and public confidence in the financial system (Sutisnawati and Anggraeni 2023). Given the direct link between NPL recovery rates and financial stability, addressing this bottleneck remains critical, especially given Indonesia's growing public finance sector. Given the direct link between NPL recovery rates and financial stability, addressing this bottleneck remains critical, especially given Indonesia's growing public finance sector. In the context of public administration, accountability is a very important element of ensuring that financial institutions are responsible for the management of the resources entrusted to them (Natision et al. 2022). Global studies show that developed countries, such as the US, made major reforms after the 2008 crisis, including bail-outs and regulatory tightening (d'Udekem and Van Audenrode 2019). In contrast, developing countries such as India, Brazil, and Indonesia still face challenges regarding limited regulation and weak credit risk management (Hoque and Zaidi 2020). Factors such as poor credit risk management, low asset quality, a liquidity crisis, and inadequate regulatory oversight contribute to the high number of NPLs (Gaur, Mohapatra, and Jena 2022). Empirical studies show that weaknesses in credit risk management, especially in debtor evaluation and supervision, are the main cause of the increase in the amount of NPLs in developing countries (Wahyudi and Arbay 2021).

Administrative and legal reforms are essential in order to overcome barriers to NPL resolution in Indonesia. Despite regulations such as PERMA No. 2/2015 and PERMA No. 4/2019, challenges in NPL management in public financial institutions still persist, especially post-COVID-19. The experience of countries such as South Korea and Greece shows that procedural reforms and the utilization of information technology can accelerate the resolution of NPLs (Gillispie 2021).

Coordination between institutions, including financial institutions, legal authorities, and the government, is a major challenge in managing NPLs in Indonesia, which is exacerbated by the lack of information system integration and slow data exchange (Apriani et al. 2023). Countries such as Italy and Spain have shown that increased transparency in the management of NPLs, through external audits and public engagement, can increase public

accountability and trust in financial institutions (Manes Rossi, Brusca, and Aversano 2018; Garcia-Lacalle and Torres 2021). Therefore, transparency and accountability are key elements of strengthening public trust and ensuring that NPL management is carried out efficiently and responsibly.

A literature review highlights the research gaps related to NPL management in public financial institutions in Indonesia, especially procedural barriers and cross-agency coordination. Most previous studies have focused on the macroeconomic impact of NPLs, without addressing operational challenges such as collateral verification, complex litigation, and inter-agency coordination, which affect credit recovery (Hussaini 2019; Wen et al. 2021; Jiang and Zhao 2022).

Therefore, this study seeks to fill this gap through an in-depth analysis of 30 court decisions in Indonesia in order to evaluate how administrative and legal barriers affect the management of NPLs in public financial institutions.

Research Method

This study investigates administrative and legal challenges in handling NPLs in Indonesian public financial institutions, with a focus on BPRs. It uses a case study method along with a thorough review of existing literature to delve into these issues. This method shows potential in studying the factors that impact how well NPL management works and helps us better understand the specific institutional situation in Indonesia. A study was performed to improve the analysis framework by combining theory and practice, creating a solid academic foundation for this research (Nakano and Muniz Jr., 2018) .

This research was performed in a step-by-step manner to achieve thorough results. The initial step was to recognize the main issues concerning administrative and legal challenges in handling NPLs in Indonesian public financial institutions, specifically BPRs. A literature review was conducted to outline the essential theories when creating the theoretical framework for this research. The next step involved gathering information from 30 court rulings regarding NPLs in Indonesia. These rulings were selected based on their importance and geographical diversity in order to highlight the challenges that public financial institutions encounter in different areas. Other related regulations, including PERMA No. 2/2015 regarding Mediation Procedures in Court and PERMA No. 4/2019 regarding Small Claims Settlement, were also assessed in order to understand how they are used in relation to NPLs and their impact on credit recovery. This information was then used in the next stage of analysis.

Once the data had been gathered, the next step was to create a guide for analyzing the data. This guide helped with coding and identifying essential themes, such as challenges with verifying collateral, legal issues, and communication between organizations. This guide helps analyze every obstacle consistently to keep the analysis accurate and consistent

During the fourth stage, we analyzed administrative and legal barriers by studying data from court rulings and relevant rules and regulations. This analysis focuses on finding obstacles that cause delays in the NPL recovery process. Examples include slow collateral verification, complex litigation procedures, and a need for coordination between agencies. This analysis looks at administrative and legal factors, as well as the context of Indonesian public administration, and how they affect public accountability.

After identifying administrative and legal barriers, step 5 involved synthesizing findings. This step was focused on compiling the main findings from analyzing court cases and regulations. This synthesis brought together the data analysis findings and a review of related literature to give a better understanding of the structural barriers in managing NPLs in Indonesia. Combining information in this way helped to highlight the challenges that public financial institutions encounter when dealing with NPLs. It also helped when creating practical policy recommendations during the next step. These policy suggestions aimed to address the challenges of dealing with NPLs in public financial institutions, specifically rural banks. During the conclusion-drawing stage, a summary providing suggestions on how policy changes can enhance the way Indonesian public financial institutions handle NPLs was formulated. These suggestions involve: making court processes simpler, enhancing the checking of collateral, and enhancing cooperation among different organizations. This research offers policy recommendations to help policymakers enhance public financial stability in Indonesia.

For more details of the stages in this study, see Figure 1.
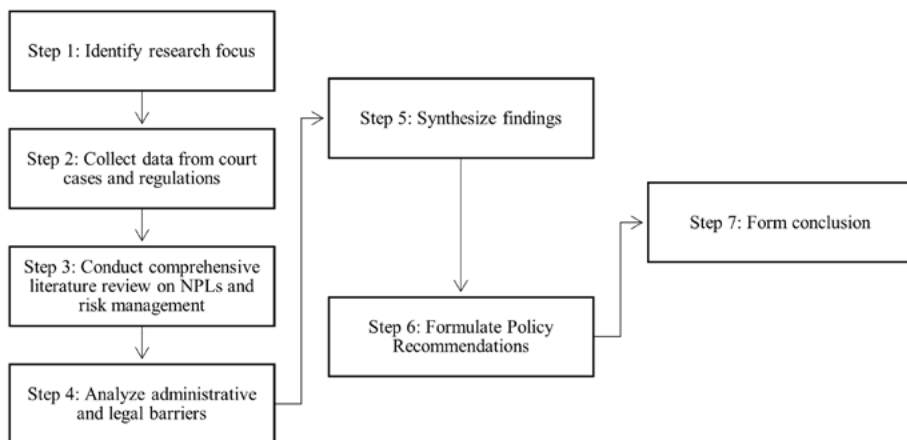
Figure 1. Research stages

Results and Discussion

In order to offer a more comprehensive comprehension of the administrative and legal obstacles that public financial institutions encounter while handling NPLs, Table 1 provides an examination of the empirical data pertaining to 30 NPL cases in Indonesian courts.

Table 1. The 30 court decisions related to NPLs

No.	Financial institution	Loan type	Dispute type	Court ruling	Legal/admin barriers	Process duration (months)	Year
1	PT BPR BKK Semarang	Micro business loan	Debtor default	Creditor won	Complicated lawsuit process	6	2002
2	PT BPR BKK Solo	Small business loan	Unclear collateral	Creditor lost	Unverified collateral	8	2003
3	PT BPR BKK Kudus	Micro business loan	Payment delay	Creditor won	Interagency coordination	7	2004
4	PT BPR Central Java	Consumer loan	Debtor default	Creditor won	Slow administration	10	2005
5	PT BPR East Java	Small business loan	Collateral default	Creditor lost	Complex litigation process	9	2006
6	PT BPR BKK Yogyakarta	Consumer loan	Asset seizure	Creditor won	Lack of legal documents	5	2007
7	PT BPR BKK Tegal	Micro business loan	Debtor default	Creditor won	Execution day	7	2008
8	PT BPR BKK Malang	Consumer loan	Collateral seizure	Creditor won	Collateral issue	6	2009
9	PT BPR BKK Surabaya	Small business loan	Inadequate collateral	Creditor lost	Lack of collateral verification	12	2010
10	PT BPR Bali	Micro business loan	Payment delay	Creditor won	Lack of legal coordination	8	2011

11	PT BPR BKK Bandung	Small business loan	Debtor default	Creditor won	Documentation barriers	9	2021
12	PT BPR BKK Solo	Consumer loan	Debtor default	Creditor won	Complicated application process	10	2013
13	PT BPR BKK Surabaya	Small business loan	Inadequate collateral	Creditor lost	Collateral not verified	8	2014
14	PT BPR East Java	Micro business loan	Payment delay	Creditor won	Lengthy legal process	7	2015
15	PT BPR BKK Semarang	Small business loan	Debtor default	Creditor won	Administrative barriers	9	2016
16	PT BPR BKK Tegal	Consumer loan	Asset seizure	Creditor won	Asset execution delay	6	2017
17	PT BPR Bali	Micro business loan	Payment delay	Creditor won	Inadequate collateral	9	2018
18	PT BPR BKK Yogyakarta	Consumer loan	Collateral seizure	Creditor won	Lack of legal evidence	7	2019
19	PT BPR Central Java	Micro business loan	Debtor default	Creditor won	Third-party involvement	10	2020
20	PT BPR BKK Bandung	Consumer loan	Collateral default	Creditor won	Unclear document verification	8	2020
21	PT BPR East Java	Small business loan	Payment delay	Creditor won	Slow settlement	8	2009
22	PT BPR BKK Malang	Consumer loan	Unclear collateral	Creditor won	Slow evidence verification	9	2010
23	PT BPR BKK Kudus	Micro business loan	Debtor default	Creditor won	Lengthy litigation process	7	2011

24	PT BPR BKK Semarang	Small business loan	Collateral default	Creditor lost	Lack of court coordination	10	2012
25	PT BPR BKK Solo	Small business loan	Inadequate collateral	Creditor won	Slow asset verification	11	2013
26	PT BPR BKK Surabaya	Consumer loan	Payment delay	Creditor won	Procedural barriers	6	2014
27	PT BPR Central Java	Small business loan	Unclear collateral	Creditor won	Incomplete documentation	9	2015
28	PT BPR BKK Bali	Micro business loan	Debtor default	Creditor won	Slow execution process	8	2016
29	PT BPR BKK Tegal	Small business loan	Asset seizure	Creditor won	Asset payment delay	7	2017
30	PT BPR BKK Bandung	Micro business loan	Payment delay	Creditor won	Weak administrative verification	10	2018

Source: Directory of Decisions of the Supreme Court of the Republic of Indonesia. Jakarta: Mahkamah Agung Republik, Indonesia

Based on an analysis of 30 court decisions related to NPLs in public financial institutions, it can be seen that administrative and legal barriers are among the main factors affecting the effectiveness of credit recovery (Pavlikov et al. 2023). Issues such as inadequate collateral verification, lack of coordination between agencies, and protracted litigation procedures reflect fundamental challenges in public financial governance in Indonesia. These barriers slow down the credit recovery process and reduce public accountability, where communities and stakeholders face difficulties in accessing efficient and transparent processes (Rouhanizadeh and Kermanshachi 2021).

One prominent issue is the inefficiency of collateral verification, which has repeatedly emerged as an inhibiting factor in cases of NPLs. In the context of public administration, failure to properly verify collateral not only causes financial losses for public financial institutions, but also undermines the government's credibility in managing public assets (Jiang and Zhao 2022). This shows that there is a gap in the capacity of the bureaucracy to carry out its duties optimally, especially in relation to credit risk management. Other administrative obstacles, such as delays in the implementation of court decisions and a lack of coordination between institutions, reflect weak integration in the public administration system. If

not handled properly, these weaknesses can worsen public confidence in the government's ability to manage the public financial sector efficiently and responsibly.

In addition, litigation processes in the legal system are often in the spotlight, especially those related to a settlement that ranges from 5 to 12 months in duration. This inconsistency in law enforcement not only creates uncertainty for the parties involved, but also has the potential to reduce public trust in the integrity of the legal system itself (Hidayat, Yunus, and Helmi 2023). In many cases, especially those involving unclear collateral or delays in asset execution, dispute resolution times can be stretched much longer. This phenomenon reflects significant challenges in case management and the implementation of law enforcement, which need to be addressed immediately to improve the efficiency of the litigation process.

The phenomenon of inconsistency in the litigation process emphasizes the need for reform in law enforcement, especially in the settlement of NPL-related cases (Arato, Brown, and Ortino 2020). When the legal process lasts longer than expected, this has a direct impact on the increase in the number of NPLs because delays in collateral execution or dispute resolution make it increasingly difficult for NPLs to be recovered (Hasibuan, Sinaga, and Adawiyah 2023). This problem becomes even more apparent when viewed in the context of the trend in the total amount of NPLs, which continues to fluctuate from year to year – especially during times of economic crisis and regulatory uncertainty.

To give a more concrete picture of how the total amount of NPLs grew from 2002 to 2020 in Indonesia, Figure 2 shows fluctuations in this figure in USD. This trend provides empirical evidence of the impact of inefficiencies in litigation processes and other structural challenges faced by public financial institutions.
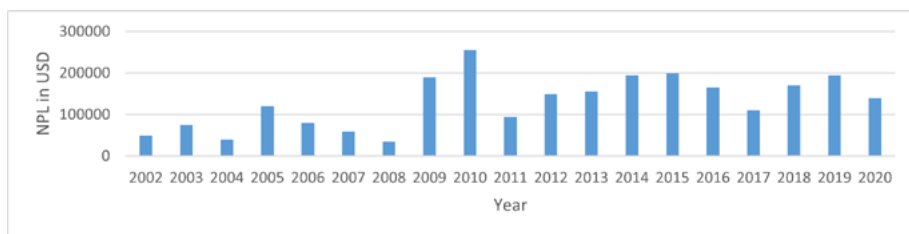
Figure 2. The total amount of NPLs in Indonesia, USD
Source Data processed from 30 Supreme Court rulings on NPL cases (2002–2020)

Based on the analysis of Figure 2, it can be concluded that the total amount of NPLs in public financial institutions has experienced significant fluctuations. At the beginning of the period under study, the amount of NPLs was relatively low, but this began to show a gradual increase until a drastic spike in 2009 and 2010, which can be attributed to the impact of the global financial crisis. The increase in NPLs during this period reflects the weakening of global economic stability, where many business sectors and financial institutions

faced difficulties in meeting financial obligations. The NPL peak occurred in 2010, with the total amount of NPLs reaching more than $250,000, signaling serious challenges in credit risk management.

Despite a decline in the following years, the NPL trend remained unstable, indicating the continued challenges in managing NPLs in public financial institutions. Repeated increases in 2013, 2015, and 2019 indicate that although various improvement policies have been implemented, structural problems in credit management have not been fully resolved. The main causes of these fluctuations can be traced to several factors, such as poor economic conditions, where a recession or economic slowdown has a direct impact on the debtor's ability to meet credit payment obligations (Kehoe et al. 2020). In addition, weak risk management and low asset quality in various financial institutions also worsened the NPL situation, due to weak supervision of the provision of credit to debtors with high risk profiles (Miglionico 2019).

The liquidity crises that occurred in several periods are also important factors that exacerbate the NPL condition, where financial institutions have difficulty maintaining stable cash flow to support their operations (Chen, Chen, and Huang 2021). On the other hand, inadequate oversight from regulators and sudden regulatory changes have contributed to the increase in the total amount of NPLs, as many financial institutions are not yet ready to adapt their strategies to the new regulations. In 2020, there was a resurgence in the total amount of NPLs, which was most likely affected by stimulus policies and credit moratoriums in response to the COVID-19 pandemic. However, this decline more likely reflects delays in reporting NPLs than actual settlements, given that structural causes such as economic conditions, supervision, and poor asset quality remain challenges in the long term. Table 3 shows the main causes of NPLs.

Table 3. Causes of NPLs

No.	NPL Cause	Total number of cases
1	Poor economic conditions	5
2	Poor risk management	5
3	Low asset quality	5
4	Liquidity crisis	5
5	Inadequate supervision	5
6	Regulation changes	5

To address the problems caused by the factors shown in Table 3, public administration reforms focused on improving efficiency, transparency, and accountability in the management of NPLs are needed. Factors such as poor economic conditions, weak risk management, and liquidity crises, as shown in Table 3, indicate the existence of systemic weaknesses that hinder the effectiveness of NPL management. Therefore, improvements must

be made comprehensively – from the policy level to implementation in the field. Reforms must respond to fluctuating economic conditions and address long-standing weaknesses such as weak risk management and inadequate supervision. Strengthening administrative capacity, particularly in collateral verification and simplifying litigation, is needed to accelerate the settlement of NPLs and reduce financial risks (Kokkinis and Miglionico 2020).

Improved coordination between institutions, including the integration of information systems to share data quickly, is also important in order to improve the efficiency of handling NPLs (Zaini and Hakim 2019). These reforms are expected to increase public confidence in transparent and accountable fund management, as well as contribute to long-term financial stability through effective structural improvements in credit risk mitigation.

Conclusion

1. This study examined the management of NPLs in public financial institutions in Indonesia, focusing on legal and administrative barriers that hinder the settlement of NPLs. Key findings show that a lack of coordination between institutions, a slow collateral verification process, and prolonged litigation are significant challenges that hinder NPL management efficiency.

2. Success in addressing NPL challenges in public financial institutions is highly dependent on comprehensive structural reforms. These reforms must not only strengthen the stability of the financial sector, but also increase accountability and public trust in the financial system in Indonesia.

3. This study recommends strategies for simplifying litigation procedures, strengthening collateral verification, and improving coordination between institutions to accelerate the settlement of NPLs. The integration of information systems between public financial institutions and legal authorities is also expected to increase transparency and accelerate the non-performing credit management process.

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VIEŠOJI ATSKAITOMYBĖ VALDANT NEVEIKSNIAS PASKOLAS INDONEZIJOJE

Anotacija

Šio tyrimo tikslas – išnagrinėti administracines ir teisines neveiksnių paskolų (NPL) valdymo kliūtis Indonezijos valstybinėse finansų įstaigose, ypač Liaudies kredito bankuose (BPR). Taikant atvejo analizės metodą, susijusį su 30 teismo sprendimų dėl neveiksnių paskolų, tyrimo metu nustatytos pagrindinės kliūtys: lėtas užstato tikrinimas, sudėtingos bylinėjimosi procedūros ir nepakankamas institucijų veiklos koordinavimas. Rezultatai rodo, kad šios kliūtys itin sulėtina neveiksnių paskolų išieškojimą ir mažina finansų įstaigų veiksmingumą. Tokie reglamentai kaip PERMA Nr. 2/2015 ir PERMA Nr. 4/2019 nebuvo itin veiksmingi sprendžiant šią problemą. Todėl būtina supaprastinti bylinėjimosi procedūras, padidinti užstato patikros mastą ir integruoti įstaigų informacines sistemas. Šio tyrimo naujumas – išsami administracinių ir teisinių kliūčių, kylančių valdant neveiksnias paskolas, analizė, taip pat konkretūs politinių reformų pasiūlymai, kuriais siekiama padidinti viešojo finansų sektoriaus stabilumą.

Reikšminiai žodžiai: *viešoji atskaitomybė; neveiksnios paskolos; administracinės kliūtys; politikos reforma.*

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UNLOCKING THE LINKS BETWEEN POLITICAL AND INSTITUTIONAL TRUST AND SUBJECTIVE WELL-BEING: INSIGHTS FROM THE 11TH EUROPEAN SOCIAL SURVEY

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Abstract:

The factors contributing to political and institutional trust in Europe are under-researched. This study aims to explore the links between political and institutional trust, subjective well-being, and satisfaction with the economy, national government, and democracy by applying data from the 11th round of the European Social Survey, conducted in 2023–2024. The age of the participants (n = 22,039) ranged from 15 to 90 (M = 51.88, SD = 18.728). The results reveal that in European countries, trust in politicians and political parties is consistently lower than trust in institutions such as the police, the legal system, and international organizations like the United Nations. The findings show that subjective well-being is significantly correlated with all forms of political and institutional trust, including trust in the country's parliament, legal system, politicians, political parties, the European Parliament, and the United Nations, suggesting that institutional trust is a foundational component of societal well-being. However, the strongest correlation is observed between trust in the police and subjective well-being. Satisfaction with the economy, national government, and democracy show the strongest correlations with trust in the country's parliament and politicians, positing that economic conditions and governmental performance are the primary determinants of political trust. Structural equation modeling reveals that subjective well-being does not directly translate into political and institutional trust, but political and economic satisfaction acts as a critical mediating variable. High

levels of life satisfaction and happiness can enhance positive perceptions of economic and governmental performance, which in turn foster political and institutional trust.

Keywords: European Social Survey; political trust; institutional trust; subjective well-being; life satisfaction; economic satisfaction.

Reikšminiai žodžiai: Europos socialinis tyrimas; politinis pasitikėjimas; institucinis pasitikėjimas; subjektyvi savijauta; pasitenkinimas gyvenimu; ekonominis pasitenkinimas.

1. Introduction

Political and institutional trust are important concepts in political science and public administration, indicating citizens' confidence in their political systems and institutions (e.g., the country's parliament, the legal system, the police, politicians, political parties, the European Parliament, or the United Nations) (Zmerli and Van Der Meer 2017). Political trust refers to citizens' confidence in their political system, including the belief that government officials and institutions will act in the public's best interest, and it encompasses trust in elected representatives, government bodies, and political processes. Political trust is critical for the stability and legitimacy of democratic systems, as high levels of political trust facilitate effective governance, compliance with laws, and citizens' engagement in political processes (Levi and Stoker 2000). Conversely, low political trust can lead to political instability, apathy, and even civil unrest. Previous research has indicated that political trust increases when: citizens perceive that the government is performing well in areas such as the economy, public services, and national security (Hetherington, 1998); governments are open about their actions and hold officials accountable (Grimmelikhuijsen et al. 2013); corruption is low (Anderson and Tverdova 2003); and citizens have positive early experiences with political institutions and processes (Easton 1975).

Institutional trust refers to the confidence citizens have in public administration and formal institutions, such as the police. This concept is broader than political trust, as it also encompasses non-political institutions. Other researchers have established links between institutional trust and the effective functioning of societal systems, compliance with regulations, cooperation between citizens and institutions, and social cohesion (Newton and Norris 2000). Further studies have revealed that trust in institutions increases if they: are perceived as effective, fair, and responsive (Van de Walle and Bouckaert 2003); treat all citizens equally and fairly (Rothstein and Stolle 2008); and possess high levels of interpersonal trust, which translate to trust in institutions (Putnam 2000). Additionally, historical legacies and cultural norms positively affect institutional trust (Inglehart 1997). It is important to explore the analysis of political and institutional trust in order to enhance the effectiveness of governance.

Previous research has suggested that political and institutional trust is linked to societal

well-being – namely, citizen's subjective well-being, which refers to various aspects of mental health including emotional stability, life satisfaction, and overall happiness – and that these links might be bi-directional.

Subjective well-being is broadly defined as individuals' self-reported assessments of their life satisfaction, happiness, and emotional experiences (Helliwell and Barrington-Leigh 2010). Regarding the impact of subjective well-being on political and institutional trust, it has been demonstrated that individuals with high psychological well-being are more likely to perceive institutions as fair and competent. Positive mental states enhance the cognitive bias toward perceiving external entities, including institutions, in a favorable light (Diener, Lucas and Oishi 2009). It has also been revealed that individuals with higher levels of subjective well-being tend to be more optimistic and hopeful, which extends to their views on political and institutional structures (Seligman 2011). Furthermore, it has been found that positive emotions lead to greater social trust, which might spill into trust in political and institutional structures (Fredrickson 2001). Emotional stability has also been positively associated with political trust, as stable individuals are less likely to perceive governmental actions as threatening or unfair (Tyler 2006). Studies have shown that low stress and anxiety levels are linked to a lower likelihood of skepticism toward institutions (Pressman and Cohen 2005). Additionally, trust in parliament and politicians positively affect individuals' private savings (Newton and Norris 2000; Facchini, Massin, and Brookes 2024).

Researchers have also demonstrated that higher psychological well-being is linked to increased civic engagement and participation in community activities, as engaged citizens feel a part of the governance process and perceive institutions as responsive to their needs (Helliwell and Putnam 2004). Moreover, happy individuals tend to believe in the integrity and competence of governmental structures (Helliwell and Putnam 2004). Studies have also shown that individuals with better mental health report higher levels of trust in governmental and other institutions, suggesting a significant link between mental health indicators and institutional trust across different countries (Bjørnskov 2007).

Regarding the impact of political and institutional trust on subjective well-being, it has been demonstrated that high levels of political and institutional trust contribute to a sense of security and predictability in society, which is essential for psychological well-being (Hudson 2006). Political and institutional trust enhance social cohesion, which is linked to improved mental health outcomes (Helliwell and Putnam 2004). People that believe in a just world are also more likely to perceive the political system as just (Hadarics 2024). When individuals believe that institutions are fair and just, they demonstrate higher levels of life satisfaction and lower levels of psychological distress (Tyler 2006). Trust might reduce uncertainty about the reliability of institutions, which, consequently, can lower stress levels and enhance overall well-being (Yamagishi and Yamagishi 1994). Trust in institutions is linked to civic engagement, a greater sense of purpose, and well-being (Putnam 2000). Additionally, higher institutional trust might lead to better compliance with public

policies and utilization of public services, which impact individual well-being (Sønderskov and Dinesen 2014).

Prior studies have indicated that the link between political and institutional trust and subjective well-being might be bidirectional, and could be based on several theoretical perspectives. Based on the theory of cognitive dissonance, individuals strive for cognitive consistency, and if they are generally satisfied with their lives, they seek consistency by maintaining positive views towards various entities, including political and institutional ones (Festinger 1957). Based on the theory of attribution, individuals in a positive psychological state are more likely to attribute benevolent intentions to others, including institutions, and this positive attribution might enhance trust (Weiner 1985). Based on the theory of solidarity, when individuals feel connected to a society (feelings of social cohesion and belonging might be a sign of well-being), they are more likely to trust its institutions (Durkheim 1897). Sohlberg, Agerberg, and Esaiassonet (2024) described the reduction of institutional and interpersonal trust within asylum seekers as processing times increased.

Despite the abundance of studies demonstrating the possibility of links between political and institutional trust and subjective well-being, some researchers suggest that these links are not direct, and might be mediated by various factors. This means that there may be non-subjective well-being variables strongly related to political and institutional trust. For example, some studies indicate that positive economic indicators such as low unemployment, high GDP growth, and stable inflation rates bolster trust in political institutions (Rothstein and Stolle 2008), and that economic mismanagement can erode trust (Anderson and Guillory 1997). Furthermore, political trust significantly declines with increased economic inequality (Bienstamen, Hense and Gangl 2024).

Some research suggests that satisfaction with the national government is closely linked to perceived governmental performance (Norris 1999). This leads to higher acceptance of policy outcomes, even if they are not entirely favorable to all citizens, as trust engenders a belief in the government's overall levels of competence and fairness (Levi and Stoker 2000). High levels of political trust contribute to democratic stability, reduce the likelihood of political unrest, and increase satisfaction with democracy (Newton 2001). Trust in institutions promotes civic engagement (Dalton 2004), and trust is strengthened when institutions are seen as acting with integrity, transparency, and accountability (Mishler and Rose 2001). Open and transparent communication from political institutions as well as constructive media coverage of governmental actions and economic performance helps build trust and enhances satisfaction (Cook, Hardin, and Levi 2005; Norris 2011). Trust in institutions fosters social cohesion, which positively impacts satisfaction with economic conditions, government, and democracy (Putnam 2000).

These findings on the variables linked to political and institutional trust are in line with several theoretical perspectives. Based on performance theory, citizens' trust in institutions is significantly impacted by the perceived performance of those institutions: when they perform well, trust in institutions tends to be higher, and vice versa (Hetherington 1998).

Based on legitimacy theory, when citizens trust their government, they are more likely to view its actions as legitimate and are satisfied with its performance (Easton 1975).

Based on the analysis of previous studies, it was hypothesized that satisfaction with the economy, national government, and democracy in the state is a mediating factor in the link between political and institutional trust and subjective well-being. This study aimed to explore the links between political and institutional trust, subjective well-being, and satisfaction with the economy, national government, and democracy in the state. By leveraging subjective well-being data, the researchers sought to uncover how governance and economic policies affect individuals' lives, offering perspectives on the efficacy and outcomes of such policies (Helliwell and Barrington-Leigh 2010). Regardless of the abundance of prior research on the links between political and institutional trust and subjective well-being and other variables, the factors that most strongly contribute to political and institutional trust in Europe today are under-researched.

2. Methodology

This study applied data from the 11th round of the European Social Survey (hereinafter ESS 11), which was a multi-national, cross-sectional survey conducted in 2023–2024. The ESS intends to examine and depict the development and maintenance of social structures, conditions, and attitudes across Europe and to provide an understanding of the landscape in Europe's social, political, and ethical dimensions. The survey includes questions on a variety of core topics repeated from previous rounds of the survey, along with two modules developed for ESS 11 specifically. These are "Gender in Contemporary Europe: Rethinking Equality and the Backlash" and "Social Inequalities in Health and their Determinants" (Sikt – Norwegian Agency for Shared Services in Education and Research., 2024). The data were retrieved from the ESS 11 database in August 2024 at https://doi.org/10.21338/ess11-2023, and details of the sample are depicted in Table 1.

Table 1. Number of participants in total, by country, and by gender

	Total		Males		Females	
	n	**%**	**n**	**%**	**n**	**%**
Austria	2,354	10.6	993	9.7	1361	11.4
Switzerland	1,384	6.2	697	6.8	687	5.8
Germany	2,420	10.9	1214	11.8	1206	10.1
Finland	1,563	7.0	770	7.5	793	6.7
United Kingdom	1,684	7.6	824	8.0	860	7.2
Croatia	1,563	7.0	711	6.9	852	7.1

Hungary	2,118	9.5	835	8.1	1283	10.8
Ireland	2,017	9.1	906	8.8	1111	9.3
Lithuania	1,365	6.2	526	5.1	839	7.0
Netherlands	1,695	7.6	843	8.2	852	7.1
Norway	1,337	6.0	673	6.6	664	5.6
Slovenia	1,248	5.6	608	5.9	640	5.4
Slovakia	1,442	6.5	671	6.5	771	6.5
Total	22,190	100.0	10,271	100.0	11,919	100.0

The age of the participants (n = 22,190) ranged from 15 to 90, and the mean age in the total sample was 51.88 (SD = 18.728). The interviews lasted roughly one hour, were administered in local languages, and were held face-to-face, with computer assistance, or on paper. Some variant of probability sampling (simple, stratified, or multistage) was used to collect the data.

Several parts of the modules of ESS 11 were used to analyze the links between political and institutional trust, subjective well-being, and satisfaction with the economy, national government, and democracy in the state.

Political and institutional trust was assessed using items from section B, via the following instruction: "Using this card, please tell me how much you trust each of the institutions: the country's parliament, the legal system, the police, politicians, political parties, the European Parliament, the United Nations." The respondents had to choose an answer on a 10-point Likert scale ranging from 0 (no trust at all) to 10 (complete trust). Cronbach's alpha for these 7 items in the total study sample was 0.912.

Subjective well-being was assessed using one item from section B, via the following instruction: "All things considered, how satisfied are you with your life as a whole nowadays?" The respondents were asked to choose one of the answers on a 10-point Likert scale from 0 (extremely dissatisfied) to 10 (extremely satisfied). Additionally, one item from section C was applied, with the following instruction: "Taking all things together, how happy would you say you are?" The respondents were asked to choose one of the answers on a 10-point Likert scale from 0 (extremely unhappy) to 10 (extremely happy). Cronbach's alpha for these 2 items in the total study sample was 0.813.

Political and economic satisfaction (satisfaction with the economy, national government, and democracy in the state) was assessed using three items from section B, via the following instruction: "On the whole how satisfied are you with the present state of the economy in the country/the way the government is doing its job/the way democracy works in the country." The respondents were asked to choose one of the answers on a 10-point Likert scale from 0 (extremely dissatisfied) to 10 (extremely satisfied). Cronbach's alpha for these 3 items in the total study sample was 0.845.

SPSS v.26.0 and AMOS v.26.0 software were used to calculate descriptives and Pearson correlations, and to perform structural equation modeling (SEM). In SEM, model fit was evaluated based on the Comparative Fit Index (CFI), Tucker-Lewis's coefficient (TLI), the normed fit index (NFI), and Root Mean Square Error of Approximation (RMSEA).

3. Results

To gain some insights into the data, several key descriptive statistics were computed in the preliminary analysis: means, standard deviations, skewness, and kurtosis (Table 2). Based on the skewness and kurtosis results ranging within ± 2, it was considered that the data were distributed normally.

Table 2. Means, standard deviations, and data distribution

Variables	n	Mean	Std. Deviation	Skewness	Kurtosis
Trust in the country's parliament	21,817	4.86	2.680	−.231	−.806
Trust in the legal system	21,833	5.90	2.627	−.558	−.484
Trust in the police	22,037	6.76	2.373	−.880	.322
Trust in politicians	21,883	4.04	2.500	−.035	−.848
Trust in political parties	21,773	4.04	2.441	−.037	−.800
Trust in the European Parliament	20,880	4.76	2.551	−.273	−.685
Trust in the United Nations	20,655	5.33	2.571	−.442	−.511
Satisfaction with life as a whole	22,049	7.41	1.953	−1.080	1.265
Happiness	22,120	7.63	1.776	−1.133	1.701
Satisfaction with the present state of the economy in the country	21,868	4.90	2.408	−.253	−.635
Satisfaction with the national government	21,666	4.32	2.553	−.065	−.843
Satisfaction with the way democracy works in the country	21,562	5.53	2.582	−.426	−.612

The preliminary analysis revealed that in European countries, trust in politicians and political parties is lower compared to trust in the police, the legal system, or the United Nations. To explore the links between political and institutional trust, subjective well-being, and satisfaction with the economy, national government, and democracy, correlation analysis was performed on the study variables (Table 3).

Table 3. Pearson correlations of the study variables

	1	2	3	4	5	6	7	8	9	10	11
1. Trust in the country's parliament	1 21,817										
2. Trust in the legal system	.685** 21,604	1 21,833									
3. Trust in the police	.519** 21,728	.672** 21,756	1 22,037								
4. Trust in politicians	.772** 21,669	.615** 21,638	.498** 21,796	1 21,883							
5. Trust in political parties	.743** 21,579	.598** 21,542	.473** 21,688	.877** 21,719	1 21,773						
6. Trust in the European Parliament	.575** 20,728	.510** 20,716	.423** 20,811	.609** 20,768	.625** 20,722	1 20,880					
7. Trust in the United Nations	.514** 20,499	.497** 20,492	.440** 20,584	.526** 20,536	.542** 20,473	.758** 20,180	1 20,655				
8. Satisfaction with life as a whole	.246** 20,728	.288** 20,716	.312** 20,811	.229** 20,768	.217** 20,722	.190** 20,763	.188** 20,546	1 22,049			
9. Happiness	.206** 21,751	.241** 21,767	.275** 21,971	.195** 21,816	.188** 21,708	.171** 20,819	.171** 20,599	.687** 22,004	1 22,120		
10. Satisfaction with the present state of the economy in country	.532** 21,563	.446** 21,568	.376** 21,737	.515** 21,616	.494** 21,517	.367** 20,686	.320** 20,464	.359** 21,756	.284** 21,806	1 21,868	
11. Satisfaction with the national government	.624** 21,443	.448** 21,415	.379** 21,558	.629** 21,497	.589** 21,404	.436** 20,563	.370** 20,349	.248** 21,551	.202** 21,606	.648** 21,471	1 21,666
12. Satisfaction with the way democracy works in the country	.645** 21,317	.567** 21,324	.464** 21,453	.604** 21,370	.580** 21,281	.474** 20,520	.442** 20,341	.312** 21,451	.249** 21,499	.613** 21,355	.676** 21,265

** Correlation is significant at the 0.01 level.

Correlation analysis showed that political and institutional trust was positively linked to subjective well-being (life satisfaction and happiness) ($p < 0.01$). The strongest correlation was observed between subjective well-being (life satisfaction/happiness) and trust in the police ($p < 0.01$). Generally, subjective well-being was significantly linked to all of the forms of political and economic trust surveyed, including trust in the country's parliament, the legal system, politicians, political parties, the European Parliament, and the United Nations ($p < 0.01$). Satisfaction with the economy/national government/democracy in the country was most strongly correlated with trust in the country's parliament and politicians ($p < 0.01$), although the findings showed significant positive links with other forms of political and institutional trust ($p < 0.01$). Similarly, satisfaction with the economy/national government/democracy in the country was significantly linked to subjective well-being, encompassing life satisfaction and happiness ($p < 0.01$). Overall, the preliminary analysis showed that political and institutional trust, subjective well-being, and satisfaction with the economy, national government, and democracy were interlinked variables.

To explore the specifics and various aspects of the relationships between political and institutional trust, subjective well-being, and satisfaction with the economy, national government, and democracy in the state, SEM analysis – which offers several advantages, including the assessment of the significance of the theoretical structural connections between the constructs – was conducted. The estimates of the model of associations are displayed in Table 4.

Table 4. Scalar estimates of the model of associations between political and institutional trust, subjective well-being, and satisfaction with the economy, national government, and democracy

Regression			B	S.E.	C.R.	β	p
Subjective well-being	→	Political and economic satisfaction	.480	.011	43.157	.403	<0.001
Political and economic satisfaction	→	Political and institutional trust	.616	.008	81.061	.814	<0.001
Subjective well-being	→	Political and institutional trust	–.019	.005	–3.603	–.022	<0.001
Subjective well-being	→	Satisfied with life	1.000			.921	
Subjective well-being	→	Happy	.738	.013	56.315	.747	<0.001
Political and economic satisfaction	→	Satisfied with democracy	1.000			.829	
Political and economic satisfaction	→	Satisfied with government	.985	.007	132.608	.826	<0.001
Political and economic satisfaction	→	Satisfied with economy	.847	.007	119.070	.754	<0.001

Regression			B	S.E.	C.R.	β	p
Political and institutional trust	→	Satisfied with United Nations	1.000			.630	
Political and institutional trust	→	Satisfied with European Parliament	1.100	.013	87.086	.700	<0.001
Political and institutional trust	→	Satisfied with political parties	1.356	.013	105.162	.901	<0.001
Political and institutional trust	→	Satisfied with politicians	1.412	.013	106.292	.916	<0.001
Political and institutional trust	→	Satisfied with police	.867	.011	77.106	.592	<0.001
Political and institutional trust	→	Satisfied with legal system	1.172	.013	90.089	.723	<0.001

The standardized results of the model are presented in Figure 1. These findings revealed that the fit of the model was acceptable: $\chi^2 = 21929.304$; Df = 51; CFI = 0.875; TLI = 0.809; NFI = 0.875; RMSEA = 0.139 [0.137–0.141].
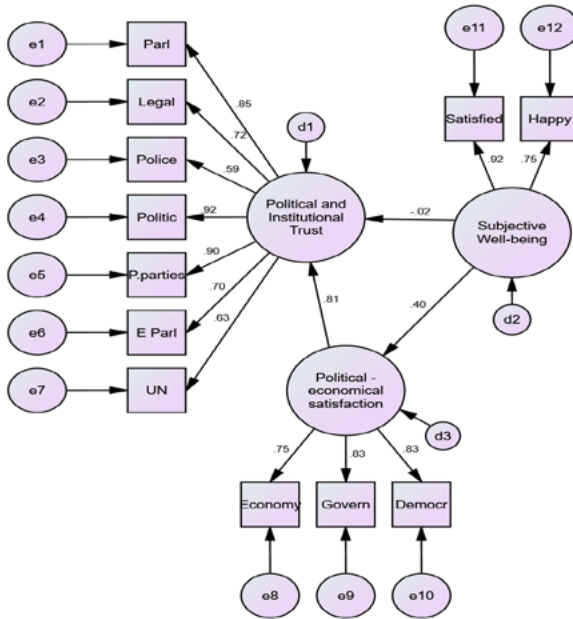
Figure 1. Standardized results of the model of associations between political and institutional trust, subjective well-being, and satisfaction with the economy, national government, and democracy in the country

SEM analysis revealed the specifics of the links between latent variables of subjective well-being, political and economic satisfaction, and political and institutional trust. The findings indicated that subjective well-being played no significant role in political and institutional trust compared to the impact of political and economic satisfaction. However, satisfaction with the economy, national government, and democracy in the country could be considered to have a mediating effect on political and institutional trust. The findings showed that subjective well-being was linked to political and economic satisfaction, which, in turn, was strongly linked to political and institutional trust.

4. Discussion

This study intended to examine the predictors of political and institutional trust, exploring the links between political and institutional trust, subjective well-being, and satisfaction with the economy, the national government, and democracy in the state. This aim was pursued based on several theoretical perspectives and previous studies. The insights, grounded in data from more than 22,000 respondents to ESS 11, are as follows.

Firstly, the results revealed that trust in politicians and political parties was lower than trust in institutions like the police, the legal system, or international bodies such as the United Nations. This observation aligns with existing literature suggesting a general skepticism toward political actors compared to more consistent trust in law enforcement and judicial institutions (Newton 2001; Norris 2011). Next, the correlation analysis showed significant positive relationships between political and institutional trust and subjective well-being, defined as life satisfaction and happiness. A most robust correlation was found between subjective well-being and trust in the police. This finding suggests that trust in institutions perceived as protective and just is directly linked to subjective well-being. Previous research supports this, indicating that trust in the police might be associated with a sense of security, which is crucial for life satisfaction (Helliwell and Putnam 2004). Moreover, subjective well-being significantly correlated with all surveyed forms of political and institutional trust, including trust in the country's parliament, the legal system, politicians, political parties, the European Parliament, and the United Nations. This link suggests that overall confidence in political and institutional frameworks contributes to subjective well-being and supports the idea that institutional trust forms a foundational element of societal well-being (Newton and Zmerli 2011). Furthermore, satisfaction with the economy, national government, and democracy was most strongly correlated with trust in the country's parliament and politicians. This relationship underscores the critical role of economic performance and governmental effectiveness in fostering political trust. Citizens' perceptions of economic stability and democratic integrity appear to significantly shape their trust in political institutions. This finding aligns with the political economy perspective, which posits that economic conditions and governmental performance are primary

determinants of political trust (Mishler and Rose 2001).

The SEM analysis showed that while subjective well-being is linked to political and economic satisfaction, it does not directly translate into political and institutional trust. Instead, political and economic satisfaction emerged as a critical mediating variable. This mediating role implies that individuals' overall satisfaction with economic conditions, governmental performance, and democratic processes significantly influences trust in political and institutional frameworks, and this mediation effect is consistent with theories suggesting that economic performance and governmental effectiveness serve as benchmarks through which individuals assess the trustworthiness of political institutions (Inglehart 1997). When people are satisfied with the economic and political status quo, they are more likely to develop and sustain trust in the institutions governing them.

Although subjective well-being alone does not have a significant direct impact on political and institutional trust, it influences trust indirectly through its effect on political and economic satisfaction. This finding highlights the complex interplay between subjective well-being and broader socio-political evaluations. High levels of life satisfaction and happiness can enhance positive perceptions of economic and governmental performance, which in turn foster trust in political institutions, as suggested by previous research.

Overall, these findings underscore the importance of improving economic conditions and governmental performance to increase political and institutional trust. Policies aimed at economic stability, transparency in governance, and strengthening democratic processes can significantly contribute to higher levels of institutional trust. Governments and institutions need to be transparent, fair, and responsive to build and maintain trust, and this can involve implementing policies that promote accountability, reduce corruption, and ensure the equitable treatment of all citizens (Rothstein and Stolle 2008). Moreover, fostering environments that enhance subjective well-being can indirectly reinforce political trust through improved perceptions of economic and political satisfaction. Programs that facilitate citizens' involvement in decision-making processes can enhance both trust and well-being (Helliwell and Putnam 2004).

Future research could explore the causal pathways between subjective well-being, economic and political satisfaction, and political and institutional trust. Longitudinal studies could provide insights into how changes in one domain affect the others over time. Additionally, investigating cultural and regional differences within Europe could offer a more comprehensive understanding of these relationships.

5. Conclusions

1. This study confirms that in European countries, trust in politicians and political parties is consistently lower than trust in institutions. There are significant positive relationships between political and institutional trust and subjective well-being,

and the strongest correlation is observed between trust in the police and subjective well-being. Subjective well-being is significantly correlated with all forms of political and institutional trust, including trust in the country's parliament, legal system, politicians, political parties, the European Parliament, and the United Nations, suggesting that institutional trust is a foundational component of societal well-being. Satisfaction with the economy, national government, and democracy show the strongest correlations with trust in the country's parliament and politicians, positing that economic conditions and governmental performance are primary determinants of political trust.

2. SEM analysis revealed that subjective well-being does not directly translate into political and institutional trust. Instead, political and economic satisfaction acts as a critical mediating variable. High levels of life satisfaction and happiness can enhance positive perceptions of economic and governmental performance, which in turn foster trust in political institutions.

3. In conclusion, this study revealed that political and economic satisfaction play a pivotal mediating role, emphasizing the need for effective new public governance and economic management to foster citizens' trust. The role of subjective well-being and its indirect pathway through political and economic satisfaction underscores the complexity of building and sustaining political and institutional trust. Future research should investigate the causal pathways between subjective well-being, economic and political satisfaction, and political and institutional trust. Examining political figures' perceptions of trust and its impact on public decision-making could provide valuable insights (Weinberg 2023). Therefore, presumably, political and institutional trust is a foundational element of a healthy society, and fostering trust in political and institutional frameworks can lead to more stable, cohesive, and prosperous communities.

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POLITINIO IR INSTITUCINIO PASITIKĖJIMO IR SUBJEKTYVIOS GEROVĖS RYŠIŲ ANALIZĖ: 11-OJO EUROPOS SOCIALINIO TYRIMO ETAPO ĮŽVALGOS

Anotacija. Veiksniai, skatinantys politinį ir institucinį pasitikėjimą Europa, ištirti nepakankamai. Šiuo tyrimu siekiama ištirti sąsajas tarp politinio ir institucinio pasitikėjimo, subjektyvios gerovės ir pasitenkinimo ekonomika, nacionaline valdžia ir demokratija. Šiame tyrime taikyti 11-ojo Europos socialinio tyrimo etapo (2023–2024 m.) duomenys. Dalyvių amžius (n = 22039) svyravo nuo 15 iki 90 metų (M = 51,88, SD = 18,728). Rezultatai atskleidė, kad Europos šalyse pasitikėjimas politikais ir politinėmis partijomis yra nuolat žemesnis nei pasitikėjimas tokiomis institucijomis kaip policija, teisinė sistema ir tarptautinės organizacijos, pavyzdžiui, Jungtinės Tautos. Išvados parodė, kad subjektyvi gerovė reikšmingai koreliuoja su visų formų politiniu ir instituciniu pasitikėjimu, taip pat pasitikėjimu šalies parlamentu, teisine sistema, politikais, politinėmis partijomis, Europos Parlamentu ir Jungtinėmis Tautomis. Tai rodo, kad institucinis pasitikėjimas yra pagrindinis visuomenės gerovės komponentas. Tačiau stipriausia koreliacija nustatyta tarp pasitikėjimo policija ir subjektyvios gerovės. Pasitenkinimas ekonomika, nacionaline valdžia ir demokratija atskleidžia stipriausias koreliacijas su pasitikėjimu šalies parlamentu ir politikais. Tai reiškia, kad ekonominės sąlygos ir vyriausybės veikla yra pagrindiniai politinio pasitikėjimo veiksniai. Struktūrinių lygčių modeliavimo (SEM) analizė atskleidė, kad subjektyvi gerovė tiesiogiai neperauga į politinį ir institucinį pasitikėjimą, tačiau politinis ir ekonominis pasitenkinimas veikia kaip kritinis tarpininkavimo kintamasis. Aukštas pasitenkinimo gyvenimu ir laimės lygis gali sustiprinti teigiamą ekonomikos ir vyriausybės veiklos suvokimą, tai savo ruožtu skatina politinį ir institucinį pasitikėjimą.

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THE LEGAL FRAMEWORK OF THE INSTITUTE OF PUBLIC-PRIVATE PARTNERSHIP IN CENTRAL ASIA

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Abstract. *Central Asia (CA) is a region facing a substantial infrastructure deficit. In recent years, CA countries have turned to public-private partnerships (PPPs) as a potential avenue for infrastructure improvement. This article aims to comprehensively understand the regulatory framework in the PPP field and assess the impact of legislation on developing partnerships between the state and the private sector. The study is based on PPP legislation in CA countries, comparative analysis, statistical data from government agencies, international literature, and research materials. The analysis reveals that while CA governments have established legal and institutional frameworks for PPPs, the level of partnership development could be more balanced and satisfactory. Therefore, this article examines the regulatory framework and identifies challenges and opportunities, highlighting the potential of PPPs to drive sustainable growth and development.*

Introduction

The countries of Central Asia (CA) significantly prioritize public-private partnerships (PPPs) as critical drivers of sustainable infrastructure development. This approach is widely adopted in many developed countries as it offers the balanced distribution of risks, utilizes the expertise of the private sector, and produces innovative strategies that incentivize the enhancement of public infrastructure. The CA countries, recognizing the necessity of infrastructure projects (Amedanou 2023, 295–309), are keenly aware that robust infrastructure is the cornerstone of economic progress. A well-connected infrastructure network not only elevates quality of life for citizens, but also fosters trade, improves the business climate, and attracts investment (Edobor Arimoro 2022, 109–111).

PPP is a globally recognized practice for implementing infrastructure projects in various fields, including transportation, construction, energy-related projects, utility projects, and the renovation of sports facilities, schools, hospitals, and housing (Cui et al. 2018, 773–774). Hard and soft infrastructure is pivotal to economic growth and sustainable development. Therefore, establishing an institutional and regulatory legal environment that fosters favorable conditions for the CA countries is paramount. The role of infrastructure in economic growth and sustainable development is crucial, underscoring the necessity of advocating for PPP in the CA countries.

Presently, the CA countries are grappling with severe infrastructure issues across various sectors of the economy. The primary culprits are insufficient investment and many infrastructure facilities needing construction, repair, and maintenance. For instance, the primary energy source in CA countries is coal, which releases significant amounts of harmful gases into the atmosphere, hindering the achievement of the Sustainable Development Goals (OECD 2019, 101–108). The wellbeing of citizens worldwide hinges on investments in infrastructure projects (Li, Li, and Zhang 2023, 103–104). This underscores the criticality of the situation and the potential impact of PPP legislation on infrastructure development.

This article aims to assess the impact of PPP legislation on infrastructure development in the CA countries. The authors firmly believe that creating properly organized PPP laws will not only positively impact the development of infrastructure processes in the CA region, but also pave the way for a brighter, more sustainable future. It has been proven that many countries where PPP is successfully implemented utilize a solid regulatory and institutional framework for implementing projects, especially developing countries. Institutional and regulatory frameworks must be adequate in order to manage PPP arrangements, given their long-term nature and the need to adapt to changes throughout the life of a PPP project. The World Bank also recommends the creation of sustainable, reliable, and inclusive legal norms in the PPP field. Therefore, it is necessary to create good laws to develop infrastructure goals, implement the government's programs, and achieve social progress (JSC Kazakhstan Center for Public-Private Partnership 2022, 4–16). To understand the state of development of the PPP mechanism in CA, the following questions were raised:

- RQ1: How effectively does PPP law work in CA countries?
- RQ2: What aspects need to be improved or changed for the effective operation of PPP?
- To answer the above questions, the following hypotheses were postulated:
- H1: Adopting an effective and favorable legal framework will strengthen the development of infrastructure projects in CA countries.
- H2: Laws regarding PPP need to be improved in all CA countries to attract investment and ensure openness and equal rights.

Literature review

PPP, a concept with diverse interpretations globally, holds significant relevance around the world. In the UK, it is referred to as a private finance initiative (PFI); in Canada, Australia, and the USA, it is known as P3; in France, it is a public-private partnership contract, or *Societe d'economie mixte (SEM)*; in the countries of the former Soviet Union, it is termed a PPP (Pashina et al. 2018, 2734–2738).

Veblen (Valiati and Fonseca 2014) considers institutions as habits of thinking, observing that culture influences economic relations; therefore, an evolutionary approach is required to study the theory of public choice, and the principles of new public administration (NPM) have set a trend in the search for solutions to emerging problems in the field of public finance. Studying various PPP experiences from around the world, Veblen determined that the success of a PPP depends on legal, cultural, and social factors (Kociemska 2020, 581–587). In order to improve PPP, the European Center for PPP Expertise has determined the cost-performance ratio (VfM) method for using PPP and noted the time and cost indicators, i.e., the signifiers of the implementation of projects on time and within budget (Verweij and Satheesh 2023, 680–682; Kosycarz, Nowakowska, and Mikołajczyk 2019, 2–7). It is noted that infrastructure projects require significant financial investments and that the primary purpose of using PPP is finance (Shvydenko et al. 2020, 1–2). This indicates that a transparent and understandable legal and organizational PPP framework with competitive reporting can increase the volume of PPP projects and the interest of business entities in using this mechanism to improve infrastructure.

Steelberg (2021, 727–728) points out the increasing use of PPP in low- and middle-income countries to address infrastructure demands. This trend has led to laws facilitating the participation of business in infrastructure projects, often in collaboration with banks and international organizations. The author further argues that the underdevelopment of infrastructure networks, leading to issues such as unemployment, transportation, and energy problems, is a key factor hindering the success of PPP.

Other studies have argued that sustainable organizational management, leadership, strict compliance, and contract management are key aspects of a successful partnership

(Abdul Latif et al., 2023, 1–3). In addition, reducing opportunism on the part of both public and private partners is essential in order to minimize the collapse of projects and improve partnerships. Abdul Latif et al. also paid particular attention to the factors contributing to successful PPP implementation. According to their study, such factors as proper coordination, trust, quality of communication, and cooperation are crucial to the successful implementation of PPP projects. The above factors depend on a robustly organized legal and institutional framework through which public and private partners can interact.

These conclusions are consistent with those of other researchers, as Ismail (2013, 6–9) noted that one of the essential criteria for developing PPP in Malaysia is effective governance and a favorable legal framework. This observation is corroborated by the findings of Chan et al. (2010, 484–486), who argue that to ensure the successful development of PPP in China, there is a "favorable legal framework" paired with a "strong and excellent private consortium." The latter study also classified 18 critical success factors, three of which are "joint responsibility," "political and social stability," and "reasonable state control."

In general, the state's role is to create a legal framework that would stimulate the use of the PPP mechanism, provide reliable protection to investors, and create equal conditions by establishing priority standards for PPPs.

Materials and Methods

In this study, we analyzed the legal framework presented in Table 1. Regulatory laws were obtained from the legal information database. A comparative analysis of the legal norms in the field of PPP was conducted in CA countries by analyzing their legislative frameworks. The purpose was to identify similarities and differences among nations and to evaluate the effectiveness of the regulatory framework in each country. The authors reviewed the literature related to PPP from over the past decade. This involved conducting a comprehensive search of electronic databases, including Scopus, Web of Science, and Google Scholar, as well as the official websites of governments and government agencies in CA countries. The last search was performed on April 28, 2024, using the online library of the University of Aix-Marseille and the International Kazakh-Turkish University's databases. The study was conducted based on a systematic review and meta-analysis, using data from national PPP centers and information from newspapers, conference presentations, and ministry websites.

Statistical analysis is one of the methods used to evaluate the development of PPP in CA countries. CA countries' statistical committees and PPP centers collect and publish information in the public domain. To assess the effectiveness of PPP law in each country, we analyzed the total number of PPP projects by country in Figure 1. The official websites of the PPP centers were used as sources of information. In Figure 2, we identified projects by economic sectors, and the number of projects was distributed among the five main sectors of the economy by country, as shown in Table 2.

Results

General characteristics of the PPP legislative framework in CA countries

PPP legislation in CA countries was established after 2010. Table 1 provides an overview of the legislative framework, highlighting its commonalities and divergences.

Table 1. *Comparative table of PPP legislation in CA countries*

Norms	Kazakhstan 2015	Kyrgyzstan 2021	Uzbekistan 2019	Turkmenistan 2021	Tajikistan 2012
Parties	Public and private partners				
State Partner	Governments and state companies				Only government
Private partner	Legal entities and individual entrepreneurs				
Deadlines	5–30 years	0–49 years	3–49 years	3–45 years	Via contracts
Object of the agreement	All sectors of the economy	Public infrastructure and social services			
Contest	via tender				
Direct negotiations	Defined by law				
PFI	Defined by law				Absent
PPP center	Defined by law			Absent	Defined by law
Dispute resolution	Via negotiations, courts, or arbitrations		Via national law		Via council

Source: composed by the authors

Share of PPP projects in CA countries

Figure 1 depicts the number of PPP projects in CA countries. Despite the implementation of PPP law, there has been an uneven distribution of projects amongst the countries in the region. Kazakhstan has seen the most growth in PPP projects, accounting for over 70% of all regional initiatives. However, Turkmenistan and Tajikistan have yet to see much progress despite having a legislative framework. On the other hand, Uzbekistan and Kyrgyzstan have recently started developing PPP partnerships, and they currently account for

around 20% of the total number of projects in the region.
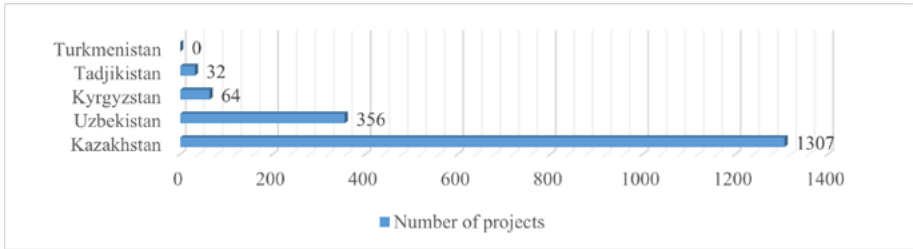
Figure 1. *Number of PPP projects in CA countries*
Source: composed by the authors

PPP projects by sector in CA countries

Figure 2 shows the five main sectors in the economy of the CA countries where most PPP agreements have been formed. Education accounts for almost half of projects, while the healthcare and energy sectors account for approximately 16%. The infrastructure, transport, industry, agriculture, and communication sectors constitute less than 15% of projects, while those related to culture and sports occupy less than 10%.
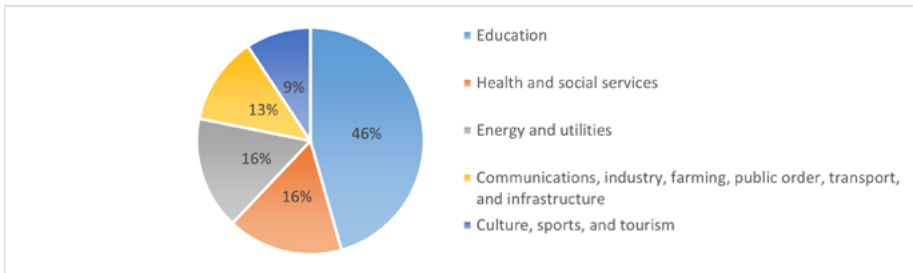
Figure 2. *PPP projects by sector in CA countries*
Source: composed by the authors

Table 2 highlights five sectors of the economy in which PPP projects vary in each country. As shown in Figure 2, most PPP agreements in Kazakhstan are in education, and the fewest are in industry, agriculture, and communications. On the other hand, Uzbekistan, Kyrgyzstan, and Tajikistan are focusing more on developing transport, infrastructure, and agriculture projects. However, there are fewer projects in the field of education. In these countries, there are more projects in the field of infrastructure and transport than in culture and sports.

Table 2. *PPP projects by sector in CA countries*

Countries	Education	Health and social services	Energy and utilities	Culture, sports, and tourism	Communications, industry, farming, public order, transport, and infrastructure
Kazakhstan	748	234	165	92	68
Uzbekistan	43	45	115	40	107
Kyrgyzstan	6	9	2	18	29
Tajikistan	2	1	0	13	16
Turkmenistan	0	0	0	0	0

Source: composed by the authors

Discussion

This study underscores the transformative power of legislation for developing infrastructure projects in the CA region. The research, employing comparative legal analysis, validates the hypotheses, revealing that countries in CA with advanced PPP laws, such as Kazakhstan, have experienced a remarkable upswing in infrastructure projects across various sectors of the economy. Kazakhstan's success story is a beacon of hope, demonstrating the potential benefits of explicit regulatory legal acts in establishing PPP agreements and fostering more infrastructure projects.

Firstly, PPP legislation initiates the development of infrastructure projects in CA countries. All CA countries have a legal and institutional framework for PPP, but there are some similarities and differences between them in the legislation. Public and private partners are recognized as parties in all CA countries, but in Kazakhstan, financial institutions and operators are also recognized as parties. Public partners include the government, local authorities, and companies authorized by the state. Private partners in Kazakhstan can be individuals, legal entities, consortia, and non-profit organizations. The implementation period of PPP projects ranges from 1 to 49 years, depending on the country. The object of PPP is infrastructure, but in Kazakhstan, PPP can be applied to all sectors of the economy. The selection of a private partner is generally determined through tender and direct negotiations. Private financial initiatives were identified in all countries except Tajikistan. In all countries except Turkmenistan, PPP centers are responsible for implementing projects. The legislation of each country resolves disputes, and in Tajikistan, they are resolved through councils (Law of the Republic of Kazakhstan on Public-Private Partnership 2015; Law of the Kyrgyz Republic on Public-Private Partnership 2021; Law of the Republic of Tajikistan on Public-Private Partnership 2012; (The Law of Turkmenistan on Public-Private

Partnership 2021); (Law of the Republic of Uzbekistan on Public-Private Partnership 2019).

We analyzed the effectiveness of the PPP legislative framework in the CA countries. Kazakhstan has the highest number of PPP projects implemented among all CA countries, ranking first in political impact. As of 2019, it ranked 11th in Asia for favorable PPP conditions, 8th for quality of institutions, and 13th in regulation (Asian Development Bank 2022b). Kazakhstan has a solid legal framework for PPP that aligns with the UNECE principles, addressing social, economic, and environmental issues. Private partners receive incentives and state support, as the government is committed to attracting investments, technology, and services. Thus, Kazakhstan has over 1,300 operational PPP projects.

Uzbekistan's PPP law, adopted in 2019 and amended in 2021, has boosted project growth, with over 20% of Central Asia's PPP projects now taking place in the country. While PPP in Kyrgyzstan is in its early stages, legal norms have been developed to create favorable conditions for PPP implementation despite the challenges of bureaucracy and low public service provision (Chayubekova et al. 2022, 442–444). Tajikistan has made only 60 PPP projects available – less than 5% of all projects in the region. Despite adopting a PPP law earlier than the other CA countries, the total percentage of regional projects taking place in Tajikistan is less than 2%. This is due to the need for more favorable investment support and PPP development conditions. Turkmenistan has established a legal and institutional framework for PPPs, but has yet to announce official projects (Kurbonova 2017, 46–48).

Figure 2 shows that the education sector is the most common industry in which PPP projects are implemented in CA countries due to rapid population growth. As the region's population is anticipated to increase, more PPP agreements are expected in the education sector (Migranyan 2016, 99–103). Healthcare and social services represent almost 20% of PPP projects due to the impact of COVID-19 in the CA region, leading to the need for healthcare development and population protection (Asian Development Bank 2022a, 28–31).

Energy, housing, and communal services are as crucial as healthcare in Central Asia, and 16% of PPP agreements are for infrastructure and transportation projects. Developing transport infrastructure is essential for economic growth and job creation. Infrastructure and transport projects comprise a significant portion of PPP agreements, particularly in Kyrgyzstan. While culture and sports account for less than 10% of PPP agreements, they are still critical sectors in the CA countries (Sheraliev 2023, 28–30). Table 2 shows that PPP agreements are primarily concluded in CA countries' education, healthcare, and infrastructure sectors. Despite the fact that Kazakhstan needs to replace or reconstruct around 75% of its infrastructure, the Kazakhstan 2050 strategy aims to see it enter the ranks of the top 30 most developed countries. Moreover, the government has adopted the Quality Education – Educated Nation and Healthy Nation projects to address education and health-related issues. Programs such as Nurly Zhol and Nurly Zher are also being implemented in housing, communal services, culture, and sports (Asian Development Bank

2022b, 127–129).

In Uzbekistan, more than half of projects are in transport and utilities, electric power, agriculture, and tourism (Dzhuraevna and Alisher Qizi 2021, 38–39). Energy is the most popular area where a PPP agreement is concluded. The government intends to produce 25% of its energy from renewable energy sources such as hydro, solar, and wind by 2026 (Evrim et al. 2023, 255–262). The use of PPP in education is essential because of limited access to higher education, to which only 9% of those eligible can apply today. Therefore, the higher education system needs to be improved by training highly qualified personnel in science and innovation and providing the material and technical basis, among other measures (Ravshanovich 2021, 134). It is therefore no surprise that more than 15% of current Uzbekistani PPP projects are in the education sector.

PPP is defined as a priority for developing the Kyrgyz economy according to the National Strategy for 2018–2040, and it is considered a way to reduce poverty. In addition, a national PPP development program for 2022–2026 has been developed, the main goal of which is infrastructure development. Most projects are linked to infrastructure, transport, culture, and sports. Thus far, 19 projects have been implemented, and more than 50 are being prepared (Kozhomberdieva et al. 2023, 54–56). In Tajikistan, PPP has been developing for over 10 years, and the PPP Implementation Center is responsible for overseeing these projects. Today, most PPP projects are implemented in hydropower, agriculture, the social sector, tourism, mining, and infrastructure (Babagalieva 2018, 8–9). The potential of PPP in Tajikistan has yet to be fully realized, despite the fact that its legal and institutional framework was formed before that of any other CA country. The legal and institutional framework in Turkmenistan in the field of PPP thus requires further development. In addition, the law on PPP of Turkmenistan is partially similar to the law on PPP of Uzbekistan, especially regarding the issue of holding a tender and determining a private partner (Law of Turkmenistan on Public-Private Partnership 2021; (Law of the Republic of Uzbekistan on Public-Private Partnership 2019).

Conclusions

1. Firstly, the findings of this study suggest that although all CA countries have a legal and institutional PPP framework, the development of PPP is uneven due to various factors, such as the level of institutional and legal development, the availability of specialists in the field, and political will. Kazakhstan has a robust legal and institutional framework that supports the growth of infrastructure projects across all sectors of the economy. However, in Turkmenistan and Tajikistan, the underdeveloped legal and institutional infrastructure poses challenges in implementing infrastructure projects in the field of PPP.

2. Secondly, the consequences of the PPP mechanism can vary depending on the country. In the countries of the CA region, where tenders require more transparency and direct negotiation is too frequently used to avoid competition, PPP can lead to negative results. To address this issue, a unique approach to PPP is needed, which includes developing a custom strategy, improving the legal and institutional framework, complying with principles and laws, the monitoring of project implementation by the state and international organizations, and providing training in the field of PPP.

3. Lastly, this study has some limitations. Firstly, we should have analyzed how PPP affects the socio-economic situation of the CA countries in terms of attracting additional investment. Secondly, searching for information on PPP development in the CA countries (except Kazakhstan) was difficult. Thirdly, secondary data on PPP from authors in the CA countries must meet further inclusion requirements, and thus was omitted from this study. Nonetheless, we obtained general information about ongoing projects through the official PPP websites of the CA countries. The PPP project data in this study covers the period up to April 28, 2024. Finally, we emphasize the need to study the development of PPP in the CA countries annually in order to track the dynamics of the growth of the PPP mechanism and its impact on people's quality of life and the development of sustainable infrastructure.

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VIEŠOJO IR PRIVATAUS SEKTORIŲ PARTNERYSTĖS INSTITUTO TEISINĖ SISTEMA CENTRINĖS AZIJOS ŠALYSE

Anotacija. *Centrinė Azija (CA) yra regionas, kuriame labai trūksta įvairių sričių infrastruktūros. Todėl pastaraisiais metais CA šalys norėjo pagerinti infrastruktūrą per viešojo ir privataus sektorių partnerystę (VPSP). Šiuo straipsniu siekiama suprasti VPSP srities reguliavimo sistemą ir įvertinti teisės aktų poveikį plėtojant valstybės ir privataus sektoriaus partnerystę. Tyrimas grindžiamas PPP teisės aktais CA šalyse, lyginamąja analize, CA šalių vyriausybinių agentūrų statistiniais duomenimis, tarptautinės literatūros apžvalga ir CA šalių tyrimų medžiaga. Tyrimo analizė parodė, kad CA šalių vyriausybės sukūrė teisines ir institucines VPSP kūrimo sistemas. Tačiau partnerystės išsivystymo lygis yra nevienodas ir nepatenkinamas. Todėl šiame straipsnyje nagrinėjama reguliavimo sistema, nustatomi iššūkiai ir galimybės bei pabrėžiama viešojo ir privataus sektoriaus partnerystės svarba siekiant skatinti tvarų augimą ir plėtrą.*

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ASSESSING EMOTIONAL INTELLIGENCE IN HIGHER EDUCATION: POLICY RECOMMENDATIONS FOR KAZAKHSTAN'S EDUCATION SYSTEM

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Abstract. Emotional intelligence (EI) shapes students' academic success and life satisfaction, influencing broader educational outcomes. This study assesses EI and life attitudes among students in Kazakhstan and explores the relationship between these variables, providing policy recommendations for integrating emotional skills development into higher education. Using the Big-Five, the Bar-On Emotional Quotient Inventory, and the Lüscher color test, data were collected from 2019 to 2023. In the first stage (2019–2021), a pilot study was conducted with 504 participants, followed by the main study (2021–2023)which involved 4,027 participants. The results indicate that EI significantly correlates with life satisfaction, stress management, and leadership behavior, while age and gender show varying

impacts. No direct correlation was found between year of study and EI. These findings suggest that policymakers should consider incorporating EI development into educational programs across all levels of higher education in Kazakhstan to enhance students' academic and personal outcomes. Future research could explore the role of targeted educational interventions in improving long-term student success and professional development, with potential applications in other contexts.

Keywords: emotional intelligence; educational infrastructure; stress management; higher education; educational policy; leadership evelopment; education reform.

Reikšminiai žodžiai: emocinis intelektas; švietimo infrastruktūra; streso valdymas; aukštasis mokslas; švietimo politika; lyderystės ugdymas; švietimo reforma.

Introduction

The study of emotional intelligence (EI) is crucial not only for parents and representatives of higher educational institutions, but also for policymakers responsible for shaping education reforms. Emotional states directly influence students' motivation to study, their adaptation to the educational environment, and academic outcomes. Students with high EI who can intelligently understand and manage their own and others' emotional stress tend to excel in mastering professional competencies and are often effective communicators. In the context of globalization and rapid changes in the labor market, the development of EI in students is an educational objective and a critical factor in the socio-economic strategies of many countries, including Kazakhstan.

The study of EI is essential for parents, higher educational institutions, and secondary schools.Emotional state influences students' desire for education, adaptation to the educational environment, and academic results. Students who have a high EI profile and the capacity to conceive and manage personal intelligence and others' emotional stress, more successfully master professional competencies and, as a rule, become good communicators. Over the last few years, research on students' emotional state and attitudes toward education has attracted more and more attention (Goleman 1995; Salovey and Mayer 1990). Special attention has also been paid to developing a person's EI skills and overall EI level (Kirk et al. 2008; Elfenbein and MacCann 2017; Kotsou et al. 2019; Moeller et al. 2020).

Since the early 2000s, scientific research on EI has grown significantly, focusing on its influence on psychological well-being and life satisfaction (Bar-On and Parker 2000; Sembiring et al. 2020). Many studies have demonstrated a positive correlation between EI and academic achievement, with students who exhibit higher levels of EI achieving better academic results and becoming highly sought after in the labor market (Zhoc et al. 2018; MacCann et al. 2020; Pérez et al. 2022; Schlaegel et al. 2022; Xu and Choi 2023). EI contributes to academic success and predicts both future professional efficacy and personal

life satisfaction.

Other studies have demonstrated a relationship between EI and students' academic progress, where students with higher EI, as a rule, achieve higher marks and test results (Maguire et al. 2017; Chinyere and Afeez 2022). Consequently, these graduates become highly in-demand across companies. Eventually, these particular social and emotional competencies can result in the successful realization of personal potential in life. In addition, EI is associated with the life satisfaction of students, positive attitudes to life, and professional efficacy.

Literature Review

Significant emphasis has been placed on developing soft and transferable skills such as creativity, teamwork, communication, flexibility, and critical thinking, all of which are strongly influenced by an individual's EI – a critical factor in social interaction and emotional regulation. Much research demonstrates that elevated levels of EI can enhance creativity and teamwork, thereby improving academic and professional performance (Elfenbein and MacCann 2017; Kotsou et al. 2019; Moeller et al. 2020; Lituhayu et al. 2023). One of the central conclusions drawn from these studies is the strong connection between emotions and managerial indicators, such as organizational effectiveness, which subsequently impacts productivity and job satisfaction (Sembiring et al. 2020). Furthermore, emotions play a pivotal role in managing organizations and their personnel. While EI has been shown to enhance teamwork and motivation, it has limitations. For instance, individuals with high EI may sometimes employ their skills for manipulative purposes rather than for authentic leadership. Studies suggest optimal outcomes are achieved when EI is combined with ethical leadership, fostering organizational productivity and trust (de Geofroy and Evans 2017; Ouakouak et al. 2020).

Salovey and Mayer's (1990) foundational definition of EI frames it as the ability to perceive, generate, and regulate emotions to support emotional growth. While their model has significantly influenced EI research, its applicability in non-Western contexts such as Kazakhstan has been questioned, as cultural norms may alter how emotions are expressed and managed. Similarly, Bar-On and Parker's (2000) model, which defines EI as a set of emotional and social competencies, has faced criticism for its generalizations. In parallel, scholars like Cooper and Sawaf (1998) and Goleman (1998) have argued that while IQ was critical for business success in the 20th century, EI has become essential in the 21st century, influencing career progression and leadership. However, integrating EI in education, particularly in Kazakhstan, requires careful consideration of these cultural and contextual factors to ensure its relevance and effectiveness.

In recent years, numerous studies in education have supported the assertion that enhancing students' EI can significantly improve their academic potential. Research has

consistently demonstrated strong correlations between higher levels of EI and better academic performance, increased engagement, and better self-directed learning (Zhoc et al. 2018). The effectiveness of EI may depend on individual differences, including motivation and self-regulation abilities (Maguire et al. 2017; Chinyere and Afeez 2022). While EI fosters resilience and promotes self-directed learning, it is essential to recognize that students' academic engagement is also shaped by cognitive factors, which emotional abilities may not directly influence (Zhoc et al. 2020).

Moreover, several studies underscore the strong association between EI and life satisfaction, a positive outlook on life, and overall productivity (MacCann et al. 2020; Pérez et al. 2022; Schlaegel et al. 2022; Xu and Choi 2023). Emotional states significantly influence students' motivation to study, which, in turn, affects their academic progress. These findings suggest that while EI plays a crucial role in shaping educational outcomes, its influence is multifaceted and interacts with other cognitive and psychological factors.

Kazakhstani scholars have recently begun exploring the role of EI in education and management, emphasizing the need to adapt Western models to Kazakhstan's unique cultural and societal conditions. For instance, Algozhina et al. (2021) examined the application of EI in pedagogy and management, identifying a significant gap in cross-cultural research, particularly regarding measuring EI performance. In a related study, Bekenova (2022) investigated the impact of socio-economic factors on young people in Kazakhstan, emphasizing the importance of these factors in shaping public policy. Further contributing to the understanding of EI in Kazakhstan, Kredina et al. (2022) explored the influence of EI on students' internal experiences during communication and their attitudes toward public speaking. However, the authors noted that the tools used to measure EI were adapted from Western models, which may not fully account for the specific cultural nuances of emotional expression in Kazakhstan. This underscores the need to develop localized EI measurement instruments that reflect the nation's cultural context.

Building on the theoretical foundations discussed in the literature review, this study applies a combination of established psychological assessments to measure EI in students. The Bar-On Emotional Quotient Inventory (EQ-I) was chosen to evaluate students' emotional and social competencies, which are directly linked to stress management, adaptability, and interpersonal relationships – critical aspects of EI development highlighted in the literature (Bar-On and Parker 2000). The Big-Five personality traits model was then selected to assess core personality dimensions, as previous research has demonstrated its reliability in evaluating emotional stability and openness to experience – both of which are crucial components of EI (Maguire et al., 2017). Finally, the Lüscher color test was included to assess emotional states and stress resilience through non-verbal means, addressing the need for a culturally adaptive tool to capture emotional responses in a non-Western context, such as Kazakhstan's higher education system. These tools were selected considering

the cultural adaptations necessary to reflect the emotional and social dynamics specific to Kazakhstan accurately.

Objective

The primary objective of this study is to assess the level of EI among students and examine their attitudes toward life based on the data collected. The study also aims to provide recommendations for integrating emotional skills development into university education. These recommendations can be embedded into academic programs and contribute to shaping broader education policies that foster emotional resilience and enhance students' professional readiness.

Based on the purpose of the study, the following three hypotheses can be formulated.

Hypothesis 1(H1): Students' EI depends on their age.

Hypothesis 2 (H2): Students' EI depends on their gender.

Hypothesis 3 (H3): Students' EI depends on their year of study.

Research Methodology

This research employed qualitative data collection methods to focus on understanding EI in the context of Kazakhstan's higher education management and education policy development systems. The data collection aimed to provide evidence-based insights that could inform policy decisions and improve administrative strategies for enhancing student well-being. Three qualitative data collection methods were utilized to comprehensively analyze students' EI and its potential impact on educational outcomes.

The first instrument, the Big-Five personality traits model, was selected because of its established role in identifying personality dimensions closely related to EI, such as emotional stability and openness to experience (Costa and McCrae 1992). This model is widely regarded as a valid and reliable tool in personality and EI research (Gosling et al. 2003). By analyzing traits such as extraversion, agreeableness, and neuroticism, the Big-Five model helps identify how students' personalities influence their emotional adaptability and self-efficacy, which are critical for success in academic environments. Several studies have confirmed the psychometric robustness of the Big-Five in various contexts. For example, its internal consistency has been well-documented across diverse populations, making it suitable for cross-cultural research, including in Kazakhstan's educational context (Stajkovic et al. 2018). This ensures that the personality profiles generated from the data are reliable and relevant to the study's objectives.

The second instrument used in this study, the Bar-On EQ-I, was chosen as the primary tool for measuring students' EI. The Bar-On (2006) EQ-I is well-recognized in academic

research for providing a comprehensive framework to assess non-cognitive skills such as stress management, interpersonal skills, and self-motivation. The validity and reliability of the Bar-On EQ-I are well-supported in the literature. It has been widely used in studies on education and employment, where EI is a crucial determinant of success (Sánchez-Álvarez et al. 2016). The internal consistency of its subscales (e.g., intrapersonal and interpersonal intelligence) has been reported to be high, with Cronbach's alpha values exceeding 0.80 across different populations (Bar-On 2006). This ensures that the results from this inventory are consistent and aligned with the study's focus on emotional well-being in higher education.

In this study, the Bar-On EQ-I scale is represented by seven interrelated dimensions: (a) intrapersonal EI; (b) interpersonal EI (social understanding and interpersonal relationships); (c) stress management (self-control and stress handling); (d) adaptability (managing change); (e) general mood (self-motivation); (f) general; and (g) self-esteem. These components provide a holistic view of students' emotional capabilities, directly informing policy decisions on how best to support emotional well-being within the educational framework.

The third instrument applied was the Lüscher color test, which was included to provide additional insights into students' emotional states, mainly related to stress levels, psychophysiological states, and emotional resilience. The Lüscher test is a projective tool that can reveal unconscious emotional responses through color preferences (Lüscher and Scott 1969). Research has shown that the Lüscher color test can effectively identify stress indicators and emotional tension, offering insights that are particularly relevant in educational settings, where students often face high levels of academic stress (Kuznetsova 2020). Though it is not widely used in traditional EI assessments, the test complements the Bar-On EQ-I by focusing on the physiological manifestations of emotional states, which are crucial for understanding the overall emotional landscape of students. Regarding reliability, while the Lüscher test's projective nature may lead to variability in interpretation, studies have indicated that it remains a valuable tool for measuring stress and anxiety, primarily when used alongside other psychometric instruments (Kirk et al. 2008). Its use in this study provides an additional layer of data that helps to create a more comprehensive profile of students' emotional health, making it a valuable complement to the other methods used.

All three instruments used in this study are backed by evidence of their validity and reliability. The Big-Five personality traits model has demonstrated high reliability across cultures and effectively analyzes characteristics influencing EI. The Bar-On EQ-I is a validated tool with solid psychometric properties. Although the Lüscher color test is less common in EI research, it provides reliable insights into emotional stress and has been validated in studies on psychophysiological states. Together, these instruments offer a comprehensive and reliable assessment of students' EI, ensuring the relevance of the data for policy development to improve emotional well-being in higher education.

This study used various scales to collect comprehensive data on EI profiles. These data are essential for informing education policies to improve students' emotional skills and well-being.

The study involved 3,942 randomly selected students aged 17 to 21 from the University of International Business (UIB), Almaty, Kazakhstan. This sample provides essential insights into EI development during a crucial stage of students' academic growth. Ethical guidelines were strictly followed, with informed consent obtained from all participants ensuring the integrity and reliability of the data. Data collection took place between 2019 and 2023.

In the first phase of the research, a pilot study was conducted from 2019 to 2021, during which 504 surveys were collected. Of these, six surveys were excluded due to incomplete responses, resulting in a final sample size of n = 499. In the second phase, which took place between 2021 and 2023, 4,027 surveys were collected, with 85 partially completed surveys excluded, leading to a final sample size of n = 3,942. These phases allow for a robust dataset that reflects a wide range of student experiences, providing policymakers and university administrators with valuable insights into EI trends across multiple years.

Figure 1 illustrates the data collection and processing model used in this research.
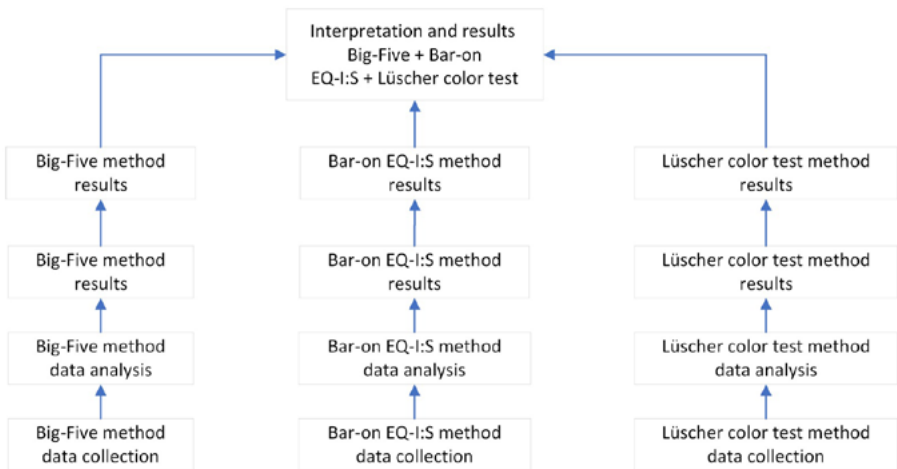
Figure 1. Model of data collection and processing

A variety of statistical methods were employed to analyze the data. Frequency and percentage distribution described respondent profiles, while Chi-squared analysis examined the relationships between demographic factors (age, gender, year of study) and EI levels. This approach provided critical insights into how these factors influence EI, offering valuable data for educational policy development.

Additionally, *t*-tests for independent samples and ANOVA were applied to assess significant differences in EI by gender or age. The nonparametric Chi-squared test validated the results (Barceló 2018), ensuring statistical robustness. These methods revealed patterns

in EI development, supporting the hypothesis that EI is critical for personal development and social adaptation (Sánchez-Álvarez et al. 2016; Cejudo et al. 2018).

This study offers actionable insights for university leaders and policymakers, enabling them to develop targeted interventions that foster EI and enhance student outcomes. These findings can help strengthen institutional support and contribute to national education strategies.

The results were processed using the STATA software.

The equation for the Chi-squared method is given below (1):

$$X^2 = \sum \frac{(\text{observed count} - \text{expected count})^2}{\text{expected count}} \quad (1)$$

where X^2 – Chi-squared test value (chi-squared test);
observed count – actual number of cases analyzed within the considered interval;
expected count – considered interval.

The higher the Chi-squared value, the more likely the null hypothesis will be rejected. After comparing the obtained Chi-squared and critical range values, the interpretation of the obtained results was conducted. If the Chi-squared value is higher than the critical value, this shows a statistical relationship between the phenomenon and the result, considering the significance value. Moreoverthe leading hypothesis is initially accepted until it receives a worthy refutation.

Results

Statistical analysis of the collected data involved using simple frequency and percentage distributions to describe the demographic profiles of the respondents. Additionally, a Chi-squared test was conducted to determine the relationship between students' demographic characteristics (such as age, gender, and year of study) and their levels of EI. This test allowed for statistically significant associations to be identified, providing valuable insights into how demographic factors influence EI.

Further statistical processing was performed to assess whether there were any significant relationships between students' EI and their emotional quotient. These findings offer evidence-based data to inform educational policy decisions and administrative strategies.

Table 1 presents the breakdown of the three methods used to assess EI, showing the distribution of respondents by gender.

Table 1. Descriptive data of methods used

Method	N	Male students	Female students	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Big-Five	3942			6.05	0.5513	0.0126	2.3	5.0
Bar-On EQ-I:S	3942	2050	1892	3.28	0.3072	0.0057	3.0	5.0
Lüscher color test	3942			7.25	0.6854	0.3540	1.0	7.0
Total	3942	52%	48%	5.52	0.0124	0.1241	1.0	7.0

The data summarize the descriptive statistics for the three methods used to assess students' EI. The data show that the Big-Five personality test produced an average score of 6.05, with a standard deviation of 0.5513, indicating moderate variability in personality traits relevant to emotional stability and self-efficacy. In contrast, the Bar-On EQ-I, which evaluates students' EI in stress management, interpersonal relationships, and adaptability, resulted in a lower mean score of 3.28, with less variability (a standard deviation of 0.3072). This suggests a more consistent emotional profile across respondents when measured through this tool. The Lüscher color test, which assesses stress resistance and emotional state through color preferences, revealed the highest average score of 7.25, accompanied by the most significant standard deviation (0.6854). These findings underscore the diversity of EI levels among students, which can be critical for informing educational policies.

Table 2 summarizes the descriptive statistics for students' EI scores, categorized by specific EI components.

Table 2. Average student EI scores

Type	Min	Max	Average	Standard deviation	Descriptive value
Intrapersonal	65	115	107.38	10.15	High
Interpersonal	65	112	105.98	9.38	High
Stress management	65	114	90.98	12.03	Medium
Adaptability	75	124	97.49	11.52	Medium
General mood	65	109	101.64	10.34	High
Overall EI	67	114.8	100.69	9.17	High

The analysis reflects the distribution of students' EI across five key dimensions: intrapersonal, interpersonal, stress management, adaptability, and general mood, as well

as the overall EI score. The intrapersonal and interpersonal components, which measure self-awareness and social understanding, respectively, show high average scores of 107.38 and 105.98. These scores suggest that students demonstrate strong abilities in recognizing and managing their own emotions, as well as understanding the emotions of others. The relatively moderate standard deviations of 10.15 and 9.38 indicate some variability among students but overall consistency in emotional competence in these areas. In contrast, the stress management and adaptability components show lower average scores, with 90.98 for stress management and 97.49 for adaptability, accompanied by higher standard deviations (12.03 and 11.52, respectively). These results suggest that students exhibit moderate stress management abilities and adaptation to new situations. The overall EI score across all dimensions was calculated to be 100.69, with a standard deviation of 9.17, placing students' general EI at a high level. These findings offer important implications for educational policy and university administration. The results indicate that educational programs should continue to foster the development of EI, particularly by offering targeted support in stress management and adaptability.

Table 3 presents the results of the Chi-squared analysis, which was employed to examine relationships.

Table 3. Correlation between profile and EI

Variable	Degrees of freedom	Chi-squared value	Value	Solution
Age	4	9.328	0.053	Accept H1
Gender	1	0.980	0.322	Accept H2
Year of Study	3	7.981	0.046	Reject H3

The analysis shows that the Chi-squared value for age is 9.328, with a p-value of 0.053, which is close to the typical significance threshold of 0.05. This result suggests that age may significantly influence EI, leading to the acceptance of H1, which posits that students' EI depends on their age. In contrast, the Chi-squared value for gender is 0.980, with a p-value of 0.322, which is far above the significance threshold. This result indicates no significant relationship between gender and EI, leading to the acceptance of H2 and confirming that EI does not depend on gender. For the year of study, the Chi-squared value is 7.981, with a p-value of 0.046, which is below the 0.05 threshold. This indicates a statistically significant relationship between the year of study and EI. Consequently, H3, which states that EI depends on the year of study, is rejected, as the data show that the study year influences EI.

These results highlight that while EI appears to be influenced by age and year of study, there is no significant correlation with gender. These findings have important implications for educational policy and university administration; they suggest that EI development programs could be tailored to students based on their age and stage in their academic journey, rather than relying on gender-based assumptions.

Table 4 provides a comparative analysis of EI between male and female students, as measured by three different methods.

Table 4. The difference in EI between male and female students

Variable	Big-Five	Bar-On EQ-I:S	Lüscher color test	General level EI	Significance t	Significance at 0.01
Male students	101	107	107.4	High	0.098	significant
Female students	99	100	107.8	High	0.107	significant

The Big-Five personality test shows that male students scored slightly higher in EI (101) than female students (99), indicating marginally stronger self-awareness and emotional stability among males. The Bar-On EQ-I revealed a more significant gender difference, with male students scoring 107 compared to 100 for females, highlighting potential disparities in stress management and interpersonal skills. This suggests the need for gender-specific interventions to enhance EI, particularly among female students. Conversely, the Lüscher color test results showed minimal differences between the sexes, with scores of 107.4 for males and 107.8 for females, suggesting comparable emotional resilience across genders. Overall, both male and female students demonstrated high levels of EI, though the t-values indicated statistically significant differences. These findings offer valuable insights for educational policy and institutional strategies, emphasizing the need for tailored EI training to support students – particularly in stress management and interpersonal skills.

Discussions and Recommendations

This research underscores the importance of EI for students and its relationship with life satisfaction and academic performance in Kazakhstan. The findings align with prior studies, confirming that higher EI levels are associated with better stress management, adaptability, and academic outcomes (Zhoc et al. 2018; Pérez et al. 2022; Maguire et al. 2017). Additionally, the results highlight the significance of emotional regulation and interpersonal skills, critical components of EI (Elfenbein and MacCann 2017).

The ANOVA results revealed significant gender-based differences in stress management and adaptability, which support previous research. Observations during the study confirmed that female students reported more difficulties in managing emotional overload, aligning with their lower stress management scores. Conversely, students with higher emotional awareness demonstrated better teamwork and received positive feedback from peers and instructors, reinforcing the role of EI in academic settings.

Therefore, EI development should be integrated into formal academic programs rather than existing solely in extracurricular activities. Senior students with higher EI scores displayed more mature conflict management and stress-related coping skills, suggesting the need for gradual EI development through tailored programs. As previous studies suggest, balancing social-emotional learning with technical skills prepares students for the complexities of modern life (Salovey and Mayer 1990). However, while these results validate prior research, certain limitations affect their generalizability. The impact of EI on leadership and resilience may vary across academic environments due to individual differences, such as motivation and engagement (Maguire et al., 2017). The ANOVA results also revealed that EI development depends on academic experience and age, supporting the idea that EI improves progressively over time (Goleman 1998).

This study emphasizes that extracurricular activities alone are insufficient for developing students' emotional skills. Instead, structured, formal programs focused on intrapersonal awareness are essential. Chi-squared analysis further showed that age and year of study significantly influence EI, while gender does not, contradicting some earlier studies and indicating the importance of context in EI development (Petrides and Furnham 2000).

To enhance student outcomes, universities should implement an interdisciplinary training module, combining formal and informal education. This module would include sociology, psychology, and management elements to improve leadership and social skills. It could also introduce a social-emotional grade point average to complement traditional grading systems, helping assess students holistically.

Given the growing importance of EI for academic success and personal well-being, integrating it into curricula should be a strategic priority. By doing so, universities will help students develop the emotional resilience and leadership skills needed in today's complex world, aligning with broader educational policies and global trends.

Future research should address the limitations of this study's, including its focus on a single institution and the influence of socio-economic factors and teaching strategies on EI development.

Conclusions

This study sought to analyze the relationship between EI and life attitudes among university students and provide policy recommendations for the education system in Kazakhstan. The findings support the hypothesis that EI significantly shapes students' life satisfaction and academic success. Specifically, the results show that EI positively correlates with critical factors such as leadership behavior, stress management, and adaptability to changing environments, emphasizing the critical need for integrating EI development into higher education.

Specifically, policymakers should consider:

1. Incorporating EI training into degree programs, focusing on critical areas such as stress management, interpersonal communication, and self-awareness, while fostering emotional competencies alongside traditional academic knowledge.
2. Developing a social-emotional grade point average to complement IQ-based assessments, which would provide a more holistic evaluation of students' skills and readiness for professional environments. Such a policy could enhance universities' ability to produce graduates with intellectual and emotional competencies.
3. Promoting gender-sensitive educational policies that offer differentiated approaches to EI development, recognizing the diverse needs of male and female students, and promoting inclusive well-being strategies.

Finally, this study underscores the need for comprehensive educational policy reforms that prioritize EI as a core competency in higher education. Policymakers should recognize EI as essential for developing emotionally resilient and professionally prepared graduates who can contribute to Kazakhstan's national educational outcomes and broader socio-economic development strategies.

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EMOCINIO INTELEKTO VERTINIMAS AUKŠTAJAME MOKSLE: POLITIKOS REKOMENDACIJOS KAZACHSTANO ŠVIETIMO SISTEMAI

Emocinis intelektas (EI) formuoja studentų akademinę sėkmę ir pasitenkinimą gyvenimu, lemia veiksmingesnius ir kokybiškus mokymosi rezultatus. Šiame tyrime vertinamas Kazachstano studentų EI ir gyvenimo požiūris, tiriamas šių kintamųjų ryšys, pateikiamos politikos rekomendacijos, kaip emocinių įgūdžių ugdymą integruoti į aukštąjį mokslą. Pasitelkus Big-Five, Bar-On Emotional Quotient Inventory ir Lüscher spalvų testą, nuo 2019 iki 2023 metų buvo renkami duomenys. Pirmajame etape (2019 2021 m.) buvo atliktas bandomasis tyrimas, kuriame dalyvavo 504 dalyviai, o po to – pagrindinis tyrimas (2021 2023 m.), kuriame dalyvavo 4027 dalyviai. Rezultatai rodo, kad EI reikšmingai koreliuoja su pasitenkinimu gyvenimu, streso valdymu ir lyderyste, o amžius ir lytis skirtingai. Tiesioginės koreliacijos tarp studijų metų ir emocinio intelekto nenustatyta. Šios išvados rodo, kad politikos formuotojai turėtų apsvarstyti galimybę įtraukti EI tyrimus į švietimo programas visuose Kazachstano aukštojo mokslo lygiuose, kad pagerintų studentų akademinius ir asmeninius rezultatus. Būsimi tyrimai galėtų ištirti tikslinių švietimo intervencijų vaidmenį gerinant ilgalaikę studentų sėkmę ir profesinį tobulėjimą, galimą pritaikymą kituose kontekstuose.

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THE IMPACT OF THE INTERNET ENVIRONMENT ON THE IMPLEMENTATION OF STATE POLICY

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Abstract. *The aim of this research is to analyze the impact of the number of Internet and*

social network users on indicators of citizens' trust in the government and the level of public participation in politics. The study employs correlation analysis, multiple regression analysis, and the descriptive method. The impact of indicators of citizens' trust in the government and public participation in political life on the electronic government (e-government) development rate is analyzed. The results of the study can be useful for the elaboration of digital development strategies for states, taking into account the connections and impacts identified.

Keywords: *Internet environment; social networks; state policy; political participation; trust in government; e-government.*

Reikšminiai *žodžiai*: *internetinė aplinka; socialiniai tinklai; valstybės politika; politinis dalyvavimas; pasitikėjimas valdžia; e. valdžia.*

Introduction

The spread of the Internet, especially social networks, led to a revolution in citizens' lives, enabling citizens and government officials to interact with each other effectively (Häussler 2021; Fatema et al. 2022). However, these directions of interaction also comprise the interactions of: citizens with each other and their associations; experts and critics (Postill 2020); journalists (Nuernbergk 2020; Splendore and Curini 2020); and persons who can spread propaganda (Schia and Gjesvik 2020; García-Orosa 2021). These relationships shape the system of complex interconnections that may affect state policy.

In terms of interaction with citizens, one of the most important implications of Internet use is the change in citizens' involvement in social and political life. A number of researchers (Boulianne 2020; Bessarab et al. 2022) deal with this issue; however, they differ in their conclusions and the level of effect identified. It is also assumed that the level of citizens' trust in the government could have changed due to increased access to information (Chen, Yang and Zheng 2023; Wang et al. 2023). Citizens' trust and participation are the main determinants of interaction between citizens and the state, particularly in the digital environment (Khurdei et al. 2023). These relationships are mediated by e-government. Thus, the effectiveness of the latter is a notable factor of the influence of the Internet on state policy.

The first hypothesis of this study is that citizens' trust and participation in politics, as the main determinants of interaction between citizens and the state in the digital environment, affect the effectiveness of state policy. In turn, the second research hypothesis postulates that citizens' trust and participation may correlate with Internet use – in particular, the number of Internet users.

The aim of this research is to analyze the impact of the number of Internet and social network users on citizens' trust and public participation in politics. This aim is pursued through the fulfilment of the following research objectives:

– study the impact of citizens' trust and public participation on e-government;

- study the impact of the number of Internet and social network users on the level of citizens' trust and public participation;
- study the impact of the number of Internet and social network users on the level of corruption perception and budget policy transparency.

Literature Review

The impact of the Internet on political participation

Many studies focus on the influence of the Internet and social networks on news consumption and the political participation of citizens. Shehata and Strömbäck (2021) came to the conclusion that social media is insufficient for learning about news and current events. However, many studies have noted the positive impact of social media on increasing citizens' activity in offline politics. Hoffmann and Lutz (2021) identified a positive impact of Internet use on the political participation of citizens, both offline and online. Kim and Ellison (2022) explained the mechanism of the influence of social media on citizens' participation in political life based on the social assimilation of political activity. Bhatti and Tareen (2021) investigated such influence in rural areas in Pakistan, and found that social networks contribute to increased offline engagement. Kipkoech (2023) confirmed the influence of using the Internet to obtain news on the political participation of citizens. Shandler, Gross, and Canetti (2020) noted that deprivation of access to the Internet reduces political participation within certain parameters. Gilardi et al. (2021) characterized the mutual influence of traditional and social media and the role of social media in shaping the agendas of different players. Some studies have also considered the individual tools used in the network to enhance the political participation of citizens (Farkas and Bene 2021; Johann 2022).

The influence of the Internet on trust in the government

Many studies have analyzed the influence of the Internet on citizens' trust in the government. Pérez-Morote, Pontones-Rosa, and Núñez-Chicharro (2020) emphasized the problem of insufficient use of e-government by citizens due to mistrust. Lee, Lee, and Lee-Geiller (2020) noted that new technologies benefit the state only if users are able and willing to use them. Such benefits can be expressed through citizens' trust in government portals. Lu, Tong, and Zhu (2020) and You, Yu, and Xiao (2022) determined the effect of Internet use on trust in the government in China. Guriev, Melnikov, and Zhuravskaya (2021) examined the effect of mobile Internet access on attitudes toward government.

The impact of online manipulation and disinformation

Online manipulation and the spread of disinformation in cyberspace remain hot topics. Reisach (2021) found that modern machine learning technologies are capable of increasing

the influence of propaganda on voter decisions. Bail et al. (2020) noted that social media can be used by countries such as Russia to implement campaigns aimed at deepening the political divide in the US. Bradshaw et al. (2020) and Pavlíková, Šenkýřová, and Drmola (2021) examined how social media was used to implement influence campaigns during the 2016 US presidential election. Baptista and Gradim (2022) noted that fake news was widely used as a political weapon during the 2019 Portuguese elections.

In most works, social networks are considered as a part of the Internet, and therefore the influence of the number of Internet users and the number of social network users on public policy as separate indicators is understudied. This study intends to fill this gap by considering these indicators separately.

Methods

Research design

The first stage of the study involved testing the relationship between the effectiveness of e-government and citizens' trust and participation. The aim of this stage was to assess whether the citizens' trust and participation really determine the effectiveness of e-government. The second stage included an analysis of the influence of the number of Internet and social network users on the level of citizens' trust and participation. This stage was aimed at identifying how the use of the Internet affects the level of trust and participation in order to determine the effectiveness of public policy. The third stage provided for an analysis of the influence of the number of Internet and social network users on corruption perceptions and the transparency of budget policy. The purpose of this stage was to obtain additional confirmation that the use of the Internet significantly affects public policy.

Sample

The sample of indicators for the study consists of the E-Government Development Index (United Nations 2024), Transparency (using the Open Budget Index; International Budget Partnership 2023), the Corruption Perceptions Index (Transparency International 2023), the Political Participation Index (Our World in Data 2024), Social Media Users by Country (World Population Review 2024a), and Trust in Government by Country (World Population Review 2024b). The sample contains data for 193 countries. The limitations of the study concern the absence of data on individual indicators for some countries. This may have slightly distorted the conclusions, but given the sample size, the results were not significantly affected.

Methods

Correlation analysis was applied to: 1) indicators and components of the E-Government Development Index; and 2) indicators of citizens' trust and participation (Trust in

Government by Country, Political Participation Index). The correlation analysis also revealed the relationship between: 1) the indicators of Trust in Government by Country and the Political Participation Index; and 2) the indicators of the number of Internet users (Users) and social network users (Share on Social Media). Multiple regression analysis was applied to the indicators of the E-Government Development Index as a dependent variable, and Trust in Government by Country and the Political Participation Index. Regression analysis was used to identify the influence of Users and Share on Social Media on the following dependent variables: Trust in Government by Country, the Political Participation Index, Transparency, and the Corruption Perceptions Index. The descriptive method helped to explain the results.

Results

The relationship between the effectiveness of e-government and the trust and participation of citizens was tested by applying correlation analysis (Table 1).

Table 1. Results of correlation analysis between: 1) the indicators of citizens' trust in the government and public participation; and 2) the E-Government Index and its components

	Trust in government	Political participation
E-Government Index	0.510*	0.298*
E-Participation Index	0.197	0.283*
Online Service Index	0.242	0.258
Human Capital Index	0.566*	0.331*
Telecommunication Infrastructure Index	0.515*	0.219

statistically significant correlation

The results in Table 1 show a positive, statistically significant relationship between the integral value of the E-Government Index and the majority of the Trust in Government and Political Participation indicators. Therefore, the indicators of citizens' trust and participation correlate with the e-government development rate. In particular, citizens' participation online through government portals is positively correlated with offline participation. Table 2 presents the results of regression analysis between the integral indicator of the E-Government Index (dependent variable) and the indicators of trust and participation of citizens.

Table 2. Results of regression analysis between: 1) indicators of citizens' trust in the government and public participation; and 2) the E-Government Index

	BETA	Standard error	B	Standard error B	t(165)	*p*-value
Free term			0.739*	0.049*	14.902*	0.000*
Trust in Government	0.482*	0.145*	0.201*	0.060*	3.329*	0.002*
Political Participation	0.057	0.145	0.003	0.008	0.391	0.697

* statistically significant correlation

These results indicate the statistically significant impact of Trust in Government on the E-Government Index. The influence of Political Participation on the E-Government Index is not statistically significant. Table 3 contains the results of correlation analysis between the indicators of the number of Internet and social network users and the indicators of trust and citizens' participation.

Table 3. Results of correlation analysis between: 1) the number of Internet and social network users; and 2) citizens' trust and participation

	Users	Share on Social Media
Trust in Government	−0.364	0.481
Political Participation	−0.299	0.216

Table 3 proves that the relationships between Trust in Government and both indicators of Internet use are statistically significant. The relationship between Trust in Government and Users is inverse, and the relationship between Trust in Government and Share on Social Media is direct. Therefore, an increase in the number of people using the Internet reduces trust in the government. In turn, an increase in the number of citizens registered on social networks has a positive effect on trust in the government. Table 4 shows the results of applying regression analysis to Trust in Government (dependent variable) and the indicators of Internet use.

Table 4. Results of regression analysis between: 1) Users and Share on Social Media; and 2) Trust in Government

	BETA	Standard error	B	Standard error B	t(165)	*p*-value
Free term			−0.320	0.229	−1.399	0.169
Users	−0.286*	0.131*	−0.159*	0.073*	−2.187*	0.034*
Share on Social Media	0.285*	0.131*	0.518*	0.238*	2.179*	0.034*

* statistically significant correlation

The results of the analysis indicate the statistically significant influence of both indicators of Internet use on Trust in Government. The influence of Users on Trust in Government is inverse, while the influence of Share on Social Media is direct. Table 5 contains the results of multiple regression analysis for Political Participation (dependent variable) and both Internet usage indicators.

Table 5. Results of regression analysis between: 1) Users and Share on Social Media; and 2) Political Participation

	BETA	Standard error	B	Standard error B	t(165)	*p*-value
Free term			0.039	0.072	0.542	0.588
Users	−0.031	0.073	−0.029	0.066	−0.433	0.665
Share on Social Media	0.484*	0.073*	0.473*	0.071*	6.657*	0.000*

* statistically significant correlation

Multiple regression analysis helped to identify relationships that were not detected using correlation analysis. A statistically significant direct influence of Share on Social Media on Political Participation was noted. The corruption rate and the transparency of budget policy are also important aspects characterizing state policy. Table 6 contains the results of regression analysis for Users, Share on Social Media, and the Corruption Perceptions Index (as a dependent variable).

Table 6. Results of regression analysis between: 1) Users and Share on Social Media; and 2) Corruption Perceptions Index

	BETA	Standard error	B	Standard error B	t(165)	*p*-value
Free term			0.040	0.059	0.684	0.495
Users	−0.039	0.059	−0.038	0.057	−0.664	0.507
Share on Social Media	0.652*	0.059*	0.635*	0.059*	10.931*	0.000*

* statistically significant correlation

Share on Social Media has a statistically significant, direct effect on the Corruption Perceptions Index. Therefore, the number of social network users has a significant impact on citizens' corruption perceptions. Table 7 contains the results of regression analysis for Users, Share on Social Media, and Transparency (as a dependent variable).

Table 7. Results of regression analysis between: 1) Users and Share on Social Media; and 2) Transparency (Open Budget Index)

	BETA	Standard error	B	Standard error B	t(165)	*p*-value
Free term			0.099	0.082	1.213	0.228
Users	−0.071	0.082	−0.057	0.066	−0.871	0.386
Share on Social Media	0.519*	0.082*	0.514*	0.0812*	6.335*	0.000*

* statistically significant correlation

This analysis also allows us to note that Share on Social Media has a statistically significant effect on Transparency. Therefore, increased numbers of social network users may increase budget policy transparency through increased awareness, enhanced citizen involvement, and the provision of wider control opportunities. Given the significant influence of social networks on public policy, it is worth determining which are the main sources of news for users. Table 8 provides a list of social networks used to access news.

Table 8. Indicators of the use of social networks for news (monthly data)

	Global active users, million	Use it as a news source, %	Use it as a news source, million
Facebook	3,065	59.1	1,811.415
Instagram	2,000	54.2	1,084
TikTok	1,582	41.7	659.694
Reddit	850	30.8	261.8
LinkedIn	830	28.6	237.38
Snapchat	800	21.2	169.6
X (Twitter)	611	61.1	373.321
Pinterest	498	14	69.72

Table 8 shows that Facebook, Instagram, and TikTok are the most popular social networks in percentage terms when it comes to accessing news. They cover more than three-quarters of users who use social networks to find out about the latest news (Figure 1).
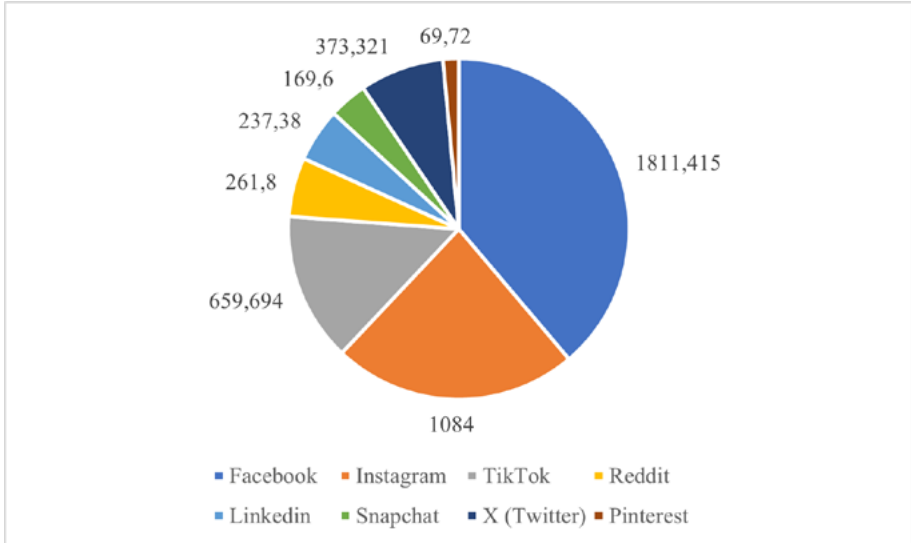
Figure 1. Number of users using specific social networks for news
(Source: created by the author based on Datareportal (2024))

The most popular social networks for news are Facebook, Instagram and TikTok. While X is used more for news in percentage terms, its reach is smaller due to the smaller total number of users.

Discussion

The results of the analysis conducted in this paper correlate with the conclusions of other authors (Lazor et al. 2024). Kipkoech (2023) established that the use of the Internet and social networks to raise awareness of politics has a positive effect on political participation. Shandler, Gross, and Canetti (2020) found that opportunities for political expression and civic association are significantly reduced without access to the Internet. Gilardi et al. (2021) found that the influence of social media outweighs the influence of traditional media. Kim and Ellison (2022) observed that cultivating the norms of citizenship involved in political life will increase citizens' participation offline. This work confirmed this using the multiple regression method. Hoffmann and Lutz (2021) found that the use of the Internet has a positive effect on citizens' participation, both online and offline. Bhatti and Tareen (2021) proved that information consumption through Facebook contributes to increased public participation away from the Internet.

However, some researchers do not consider social networks to be the most important

source of information. According to Shehata and Strömbäck (2021), the use of social media as the only source of news does not compensate for news consumption from traditional media and websites. Specific tools used on the Internet that contribute to increased engagement were considered by Farkas and Bene (2021), who established that visualization is widely used in political communication. Johann (2022) found that the use of political Internet memes contributes to increased participation.

A number of works confirmed the influence of the use of the Internet and social networks on trust in government. In some studies, attention is focused on the issues of using e-government. Pérez-Morote, Pontones-Rosa, and Núñez-Chicharro (2020) found that citizens' use of e-public services significantly depends on their evaluation of e-government, the digital divide, and trust in government. Lee, Lee, and Lee-Geiller (2020) found that usefulness and trust in a government portal depend significantly on information literacy and information overload. This reinforces the author's conclusions that state strategies for digital development should take into account the improvement of digital literacy.

Lu, Tong, and Zhu (2020) found a positive effect of Internet use on Chinese users' trust in government. In contrast, You, Yu, and Xiao (2022) found that new network users are characterized by lower trust in government. Accordingly, the spread of the Internet contributes to the reduction of political legitimacy in authoritarian countries. Guriev, Melnikov, and Zhuravskaya (2021) established that mobile Internet access helps to detect corruption and increase its perception. The present study also found that growth in the number of Internet users is negatively correlated with trust in the government. However, a positive relationship between trust in government and the number of social network users was found.

Many works deal with the relationship between Internet use, public policy, the spread of propaganda, and disinformation. Pavlíková, Šenkýřová, and Drmola (2021) studied various online propaganda tools, including the threat of deepfakes. Reisach (2021) noted that the current trends in the spread of online propaganda require the establishment of responsibility for social networks. Bradshaw et al. (2020), Bail et al. (2020), and Baptista and Gradim (2022) considered the impact of propaganda during elections. Machowicz (2022) emphasized the importance of information quality, as intentionally poor-quality information can have a negative impact on freedom of speech. The correlation between the use of the Internet and the spread of propaganda was not directly investigated in this study. However, countering propaganda is defined as one of the directions of an effective state digital development strategy.

Conclusions

Both hypotheses put forward in this research were confirmed: citizens' trust and participation affect the effectiveness of e-government as an important element of public policy.

While the influence of trust is more noticeable, the influence of political participation is not statistically significant. In turn, the level of trust and participation is influenced by Internet use. The influence of the number of users of social networks is statistically significant and has a direct impact on all of the studied indicators. The influence of the number of Internet users is statistically significant only in relation to Trust in Government, while the direction of influence is reversed.

Therefore, the development of digital development strategies is important in order to increase the effectiveness of state policy, and the following recommendations should be taken into account:

- it is essential to increase digital literacy through the implementation of educational programs;
- it is appropriate to improve access, including mobile access, to the Internet through the development of technological infrastructure in order to increase awareness and involvement;
- transparency should be ensured by providing access to budgetary information through state portals;
- it is necessary to strengthen the fight against disinformation by blocking certain web resources, imposing sanctions for social networks, ensuring accountability for persons spreading disinformation, etc.;
- political campaigns should focus on social media platforms such as Facebook, Instagram, TikTok, and X.

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INTERNETINĖS APLINKOS POVEIKIS VALSTYBĖS POLITIKOS ĮGYVENDINIMUI

Tyrimo tikslas – išanalizuoti interneto ir socialinių tinklų vartotojų skaičiaus įtaką piliečių pasitikėjimo valdžia rodikliams ir visuomenės dalyvavimo politikoje lygiui. Tyrime taikyta koreliacinė analizė, daugkartinė regresinė analizė ir aprašomasis metodas. Išanalizuota piliečių pasitikėjimo valdžia ir visuomenės dalyvavimo politiniame gyvenime rodiklių įtaka elektroninės valdžios (e. valdžios) raidos tempui. Tyrimo rezultatai gali būti naudingi dėl nustatytų sąsajų ir poveikio rengiant valstybių skaitmeninės plėtros strategijas.

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INTERACTIONS BETWEEN INCOME TAXATION AND EMPLOYMENT IN THE CONTEXT OF ECONOMIC DEVELOPMENT: THE CASE OF ARMENIA

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Abstract. *The purpose of this paper is to study trends in the labor market and employment dynamics in the context of the inclusive development of the economy of the Republic of Armenia, and to identify the nature and main features of the primary factors determining them, including: taxation of labor income, investments, and the impact of labor productivity. According to the results of this research, the impact of labor income taxation on employment in the Armenian labor market is restraining increases in labor productivity, contributes to the reduction of the percentage of the labor force involved in the economy, and increases unemployment. Conversely, the acceleration of growth rates of gross fixed capital formation has a positive impact on employment.*

Keywords: *employment; income tax; investment; labor productivity; development; labor market; additional taxation; cyclical gap.*

Reikšminiai žodžiai: *užimtumas; darbo mokestis; investicijos; darbo našumas; plėtra; darbo rinka; papildomi mokesčiai; ciklinis atotrūkis.*

Introduction

The relationship between personal income taxes and employment is of paramount importance in any modern economic order. These problems are even more urgent in the context of abrupt technological changes, when many traditional professions are rapidly becoming outdated and new professions, radically and qualitatively different from previous occupations, appear in the labor market. These circumstances present a serious challenge to both employees and employers within traditional professions, as well as to the state and

educational institutions. According to the World Economic Forum (2023, 6), in the next 5 years, the reduction of 83 million obsolete jobs and the creation of 69 million new jobs are expected in the global labor market. At the same time, job cuts will be more intense in medium and low-tech industries, and in the transport, finance, trade, and services sectors.

In the conditions of rapid technological changes and structural shifts in the labor market, it should be noted that the labor markets in post-Soviet countries are more complicated. This is because, despite liberal reforms, their institutional structures have not yet been formed and their regulation tools are not yet adapted to new technological and investment challenges. One of the main reasons for this situation is that the liberal reforms of the 1990s led to the disintegration of industrial systems and a severe reduction in investment, resulting in massive job losses and unemployment. From this point of view, the economy of the Republic of Armenia is not an exception. However, in the case of Armenia, the complex geopolitical situation in the region played an additional strongly negative role in the dynamics of the labor market, which, in turn, led to the large-scale emigration of unemployed people.

Nevertheless, currently, the most important factor affecting the structure of the dynamically developing labor market of Armenia and determining its development vector continues to be investment activity caused by technological changes in the economy. Current investment activity in the Armenian economy, especially in the context of digitalization and the introduction of new telecommunications technologies, is also a serious factor in increasing labor productivity (Margaryan, Terzyan and Grigoryan 2020, 8).

Tax policy systems in emerging markets are involved in the process of institutional formation and dynamic development. In this sense, state regulation of the labor market is not systemic in nature, and is often subordinated to the situational and short-term goals of fiscal policy, rather than solving issues of the progressive structural transformation of the labor market.

In addition, the challenge of ensuring the inclusiveness of tax policy arises from the requirement of establishing and continuously ensuring a reasonable balance between fairness and efficiency. The fact that income taxation policy should solve not only fiscal (short-term) but also structural (long-term) issues of labor market development stems from the need to increase the competitiveness of the economy.

From the viewpoint of the dynamics of income taxation in Armenia, the choice of income taxation regime remains an important issue. Until 2020, a progressive personal income taxation system was operating in Armenia; starting from 2020, a transition was made to the principle of flat-rate taxation. It is difficult to give an unequivocal answer as to what the effects of this system have been due to the short length of the period time after the reform, although some preliminary conclusions can be made even now.

This study discusses the dynamic effects of income tax collection on the labor market of Armenia, taking into account investment in the economy. In this context, it considers the effects of changes in labor productivity on labor market movements.

Literature review

The impact of taxes on labor market components is direct and decisive. Tax rates and tax collection regimes affect both labor supply and demand. This refers to both personal income and salary taxation systems. There are many publications in the economic literature regarding the effects of the tax system, and income (wage) taxes especially, on the supply of labor. These studies approach the formulation of the problem from very different points of view, and also record different results. The discourse among researchers on this issue has undergone an evolution as a response to dynamic changes in the labor market caused by both internal and external factors.

Lowering the tax burden and expanding the tax base creates serious grounds for stimulating investment and business activity. From this point of view, it is also necessary to mention the significance of taxation thresholds, because the lowering of the threshold is usually accompanied by the creation of new jobs, as well as the disclosure of shadow jobs and the expansion of employment (Jensen 2019, 33) . Analysis of the relationship between tax policy changes and the labor market has led a number of researchers to the conclusion that, depending on the level of development, the reduction of income taxes in some countries leads to the reduction of gender disparities in employment. Accordingly, the participation of women in low-income groups in the labor market increases. This phenomenon has been observed in Italy in particular (Rubolino 2022, 47).

In the 1960s and 1990s, the dominant view in the literature was that raising taxes on labor income by increasing labor costs led to a reduction in labor demand among employers, while tax cuts, on the contrary, increased demand, which in turn favored households by increasing the labor supply (Baran and Industry Canada 1996). Later researchers (Arpaia and Carone 2004, 59) consider the interactions between the tax system and the labor market in a more targeted manner, and the effects of tax factors on changes in both labor supply and labor demand are discussed separately. As a result of their study, Arpaia and Carone concluded that if the increase in income taxes in the short term reduces the supply of labor to some extent, then in the long term the supply adapts to the changes made and the balance of the labor market is restored.

A number of researchers (Barany 2018, 21–22) have studied the impact of income tax changes on structural shifts in the labor market from the perspective that income taxation policy should be structured in such a way as to take into account the requirement to ensure an optimal balance between employment and self-employment. However, earlier research (Long 1982, 211–212) was dominated by the view that increases in income taxes push wage earners into self-employment. A number of researchers have discussed this issue from the perspective of the effects of technological changes and innovative entrepreneurship. In particular, Hansson (Hansson 2008, 17–18), based on micro-data from the Swedish labor market, noted that changes in both average and marginal tax rates have a minor impact on the business behavior of subjects, with a tendency towards innovative entrepreneurship,

while factors such as age, education, and marital status have more significant impact. Rapid technological changes over the last two decades have created new realities in terms of the effects of tax leverage on work and employment.

In order to ensure the effectiveness and inclusiveness of development-oriented tax policy, it is very important to correctly combine its functional and spatial aspects. From this point of view, the decentralization of tax policy is quite an interesting approach (Sakti et al. 2024, 65). Experience shows that the use of tax decentralization tools allows the equalization of differences between regions with different levels of development to be achieved.

Moreover, some researchers are of the opinion that an increase in taxes has a negative impact on economic growth and employment. There is a wide variety of views among researchers on this issue. Theorists especially emphasize the different manifestations of the behavioral response to tax changes by different groups of workers. According to a research group led by Emmanuel Saez (Saez, Slemrod and Giertz 2012, 42–43), estimates of the elasticity of taxable income regarding changes in the marginal tax rate in the long run are characterized by extremely difficult identification problems. According to Matthew Gudgeon and Simon Trunkle (2020, 30–31), there is some variability in the response to tax changes among firms as a whole, as well as among different groups of workers in those firms, so tax policymakers should consider these factors due to asymmetric responses when planning tax changes. Some researchers (Ivashko 2022, 154–155) pay attention to the fact that the reduction or increase of tax rates in a country sometimes cannot provide the desired results – that is, lead to an increase in both jobs and the state budget. This is because, especially in the case of small, open economies, labor outflow will occur (in the case of an increase in income taxes), while at the same time foreign direct investments will decrease alongside the reduction of the tax competitiveness of the country.

The viewpoint according to which investments are one of the most important factors affecting employment dynamics is widely observed in the economic literature. Especially in the conditions of a small, open economy, the investment component can be of decisive importance for the formation and maintenance of the natural level of unemployment. In particular, this issue has been comprehensively considered (Hoon, Margarita and Zoega 2019, 2–3) using the example of Singapore, where increases in investment in such countries reduce the unemployment rate both in the short term and in the long term.

In the economic literature, in the context of studying factors influencing the employment problem, the study of the interactions between labor productivity and real wages is the subject of wide discussion. Combining many theories and models that reflect the interaction of these indicators, a number of researchers have come to the conclusion that changes in both real wages and labor productivity have contradictory effects on employment levels. According to some researchers (Okudaira, Takizawa and Tsuri 2013, 26–27), institutional factors have a significant impact on the labor market, under the influence of which problems arise when adjusting labor supply and increasing labor productivity. According to Carl Magnus Bjuggren's (Bjuggren 2018, 146) observation, the more flexible and

adaptive the labor market, the higher labor productivity. The increase in labor productivity is mainly due to the increase in the efficiency of the use of production factors.

Research Methodology and Database

Within the framework of this research, the interactions between employment time, income tax,[*] the gross accumulation of fixed assets, and labor productivity were studied using the example of the economy of Armenia. The basis for the research was the time series included in the database of the Statistical Committee of the Republic of Armenia (ARMSTAT) and the Ministry of Finance of the Republic of Armenia. The quarter-on-quarter growth rates of these variables from the 4th quarter of 2006 to the 4th quarter of 2023 were considered as a statistical sample for modeling. During the modeling process, the sample was automatically adjusted from the 4th quarter of 2007 to the 3rd quarter of 2023.

The time series is stationary, and was also adjusted for seasonality. In the case of income tax, the historical trend of taxation growth was evaluated and the difference between the trend of taxation growth and its actual size was considered, representing a cyclical gap of income taxation in the model. This made it possible to identify the effect of additional taxation (cyclical gap), differing from the growth rate of trend taxation, on employment (see Figure 1).
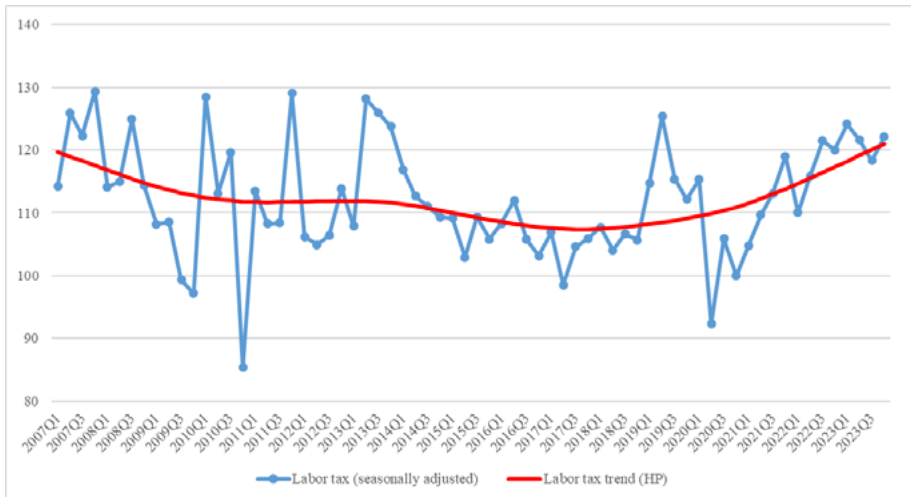
Figure 1. Dynamics of actual income tax collection and trend rates for 2007–2023

Source: ARMSTAT (n.d.); Ministry of Finance (n.d.).

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[*]   In order to more accurately approximate the tax burden of the employed, the amount of income tax paid from salary, social contributions, the income tax refund (which is provided to income tax payers for the purpose of servicing mortgage loan interest payments), tuition fee compensation, and the refunds received from dividends were considered as income tax in the research.

The trend growth of taxation and the cyclical gap were estimated using the Hodrick–Prescott filter. The model was estimated using the method of least squares, with the following specification:

$$Empl_t = \beta_0 + \beta_1\, Inv_t + \beta_2\, Lab\_Tax\_Cyc_t + \beta_3 Prod_t + \beta_4\, Empl_{t-1} + \varepsilon_t$$

Where: $Empl_t$, $Lab\_Tax\_Cyc_t$, Inv_t, $Prod_t$ are the subsequent growth rates of employment, income tax cycle, gross fixed capital formation, and productivity in quarter t. $\overline{t = 2006q4, 2023q4}$

Analysis and Results

Within the framework of the research, the long-term behavioral effects of the factors determining employment in the considered period under the conditions of the Armenian economy were studied.

In particular, the study revealed that during the 2006–2023 period, changes in income tax collection were somewhat comparable to changes in employment rate. The observed feature here was that during the crisis periods of the given sample (2007–2008, 2013–2014, 2019–2020), sharp jumps in income tax collection were accompanied by milder changes in employment growth (see Figure 2). At the same time, at the end of the considered period (2021–2023), there is a noticeable divergence of the curves, which should perhaps be explained by the disclosure of a significant number of shadow-economy jobs caused by political changes in Armenia representing large-scale labor income taxation.

Figure 2. Dynamics of average annual growth rates of employment and income tax
collection in Armenia, 2006–2023
Source: ARMSTAT (n.d.); Ministry of Finance (n.d.).

In Armenia, investment plays a significant role in the factors determining the dynamics of employment. In our model, the dynamics of gross fixed capital formation are included as an indicator describing investments. Such an approach allows for a more complete understanding of the dynamics of the effects of both domestic and foreign direct investment on employment. In the observed period, curves representing the dynamics of investments and employment had cyclical-oscillating trajectories. In certain periods (2007–2013, 2015–2021), the growth of these indicators had the same direction, and in other periods (2006–2007, 2014–2015, 2022–2023) the trajectories of these indicators diverged (see Figure 3). In the 2006–2009 period, employment was characterized by a relatively weak fluctuation, while the decline of investments was significant, up to around 40% (see Figure 3).
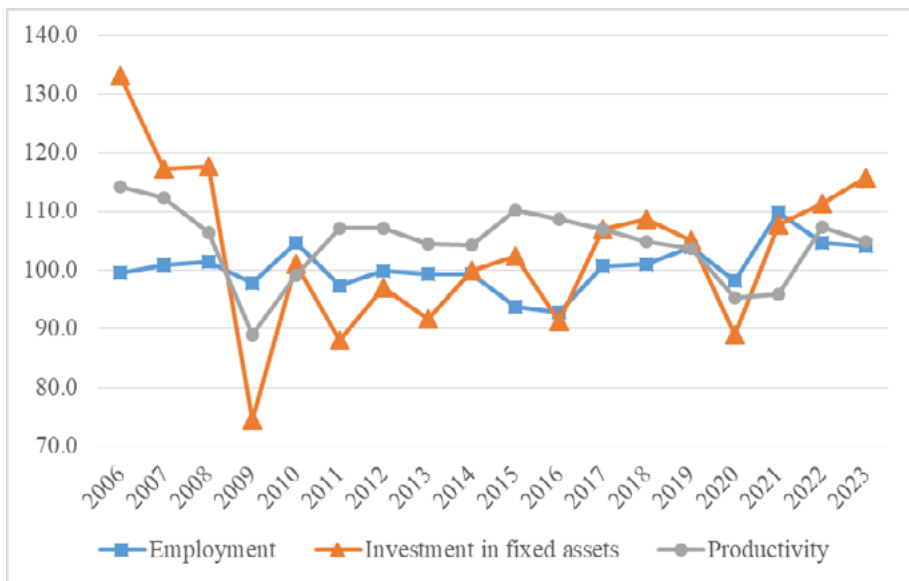
Figure 3. Dynamics of indicators of employment and gross fixed capital formation in Armenia, 2006–2023

Source: ARMSTAT (n.d.); Ministry of Finance (n.d.).

In 2006–2008, there was a sharp decline in labor productivity in Armenia by around 27%. Nevertheless, during this period, employment continued to experience a small increase, which was followed by a decline. Then (2009–2019), labor productivity and employment indicators diverged, after which the curves representing these indicators continued to experience comparable dynamics (see Figure 3).

Based on an econometric model built on the foundation of the chosen methodology, the impacts and interactions between the relevant indicators were assessed. The results can be summarized in the following model:

$$Empl_t = 89.24 + 0.22\,Inv_t - 0.12\,Lab\_Tax\_Cyc_{t-3} - 0.41\,Prod_t + 0.32 Empl_{t-1} + \varepsilon_t$$

The adjusted *R*-squared of the model is close to 1 (0.7), which indicates its high explanatory power. The coefficients of the explanatory variables are significant, as the Durbin–Watson statistic is close to 2, which proves the absence of autocorrelation (see Annex 1). The absence of heteroskedasticity in the model was also confirmed by the Breusch–Pagan–Godfrey and White tests.

The abovementioned criteria for the quality of the model provide grounds for forming certain conclusions.

- An increase in additional taxation of one percentage point above the historical income tax trend (cyclical gap) results in a 0.1 percentage point decline in employment after three quarters.
- An increase in additional taxation of one percentage point in gross fixed capital formation results in a 0.2 percentage point increase in employment.
- An increase in additional taxation of one percentage point in labor productivity results in a 0.4 percentage point decrease in employment.
- The impact of the inertial component of employment is 0.3.

Conclusions

1. From the study of the interactions between financial (income tax system) and real factors (investments and labor productivity) affecting the dynamics of employment in Armenia, it follows that the volume of income tax and the dynamics of collection significantly affect the behavior of labor market components, and these impacts are cyclical in nature. This is also due to institutional factors – in particular, the increase in income taxes play a significant restraining role in expanding the supply of jobs and creating new jobs. Increasing the volume of taxation leads to a decrease in the level of employment, with a certain lag (after three quarters).

2. According to the results of the study, increasing labor productivity also works towards reducing the employed labor force in Armenia. All other things being equal, an increase in labor productivity leads to a decrease in the level of employment, since the use of new, more productive technologies leads to an intensification of the process of replacing labor with capital.

3. The use of new technologies and technical means, machinery, and digital solutions exerts considerable pressure on the labor market, forcing some workers in certain sectors to requalify and change the nature of their work or become self-employed or unemployed. On the other hand, the implementation of investments on the new technological basis – that is, the accumulation of fixed capital – creates an additional demand for the preparation of a new labor force with an appropriate level of education, qualification, abilities, and skills, and for the implementation of programs of inclusion in the economy.

4. One of the interactions revealed within the framework of the research refers to the significance of the impact of the inertial component of employment. In Armenia, both the business and the labor market as a whole are significantly influenced by informal rules and routine factors. On the one hand, institutional factors play a role here. In particular, employment based on informal standards leads to a loss of efficiency (productivity) as a result of job occupation. On the other hand, rapid technological changes and innovations pose serious challenges to labor market

entities and force them to fit within the framework of the general trend of efficiency. However, this general trend experienced certain deviations in the post-COVID-19 period: at the beginning (2020), the increase in investments was accompanied by an increase in employment; later (2021–2023), the further increase in investments was combined with a decrease in employment.

5. According to the results of the model, the elasticity of the labor market or the inertial component of employment is 0.3, which implies the existence of a certain level of flexibility and adaptability of the labor market. On the other hand, this represents an impetus for both business and government to improve the tools of labor market regulation and adapt them to the requirements of technological changes. From this point of view, income tax policy is considered the most effective tool. However, in Armenia, fiscal problems were primarily solved through income tax policy for a long period of time, rather than problems of development and welfare growth.

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Andranik A. Margaryan

DARBO PAJAMŲ MOKESČIO IR UŽIMTUMO SĄVEIKA EKONOMIKOS PLĖTROS KONTEKSTE: ARMĖNIJOS ATVEJIS

Anotacija. Tyrimo tikslas – ištirti darbo rinkos ir užimtumo dinamikos tendencijas įtraukiosios Armėnijos Respublikos ekonomikos plėtros kontekste, nustatyti pagrindinių jas lemiančių veiksnių – darbo apmokestinimo, pajamų, investicijų ir darbo našumo poveikio – pobūdį ir pagrindinius bruožus. Remiantis tyrimo rezultatais galima teigti, kad, viena vertus, darbo pajamų apmokestinimo įtaka užimtumui Armėnijos darbo rinkoje ir jų tendencijų pokyčiai yra varžantys, kita vertus, darbo našumo didėjimas prisideda prie ekonomikoje dalyvaujančios darbo jėgos mažinimo ir nedarbo didėjimo. Ir atvirkščiai, bendrojo pagrindinio kapitalo formavimo augimo tempų spartėjimas teigiamai veikia užimtumą.

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Annex 1. Estimation output

Variable	Coefficient	Std. Error	*t*-statistic	Prob.
Dependent Variable: EMPLOYMENT_SA				
Method: Least Squares				
Date: 04/03/24 Time: 15:53				
Sample (adjusted): 2007Q4 2023Q3				
Included observations: 64 after adjustments				

Variable	Coefficient	Std. Error	*t*-statistic	Prob.
LABOR_TAX_SA_CYCLE(-3)	-0.120927	0.047049	-2.570232	0.0127
INVESTMENTS_SA	0.215277	0.033276	6.469452	0.0000
EMPLOYMENT_SA(-1)	0.319120	0.080318	3.973235	0.0002
PRODUCTIVITY_SA	-0.409694	0.060755	-6.743383	0.0000
C	89.23754	9.908734	9.005948	0.0000

R-squared	0.691305	Mean dependent var		100.5379
Adjusted R-squared	0.670377	S.D. dependent var		5.209332
S.E. of regression	2.990824	Akaike info criterion		5.103879
Sum squared resid	527.7566	Schwarz criterion		5.272542
Log likelihood	-158.3241	Hannan–Quinn criterion		5.170324
F-statistic	33.03184	Durbin–Watson stat		1.993451
Prob(F-statistic)	0.000000			

THE SYNERGY OF PUBLIC INFORMATION DISSEMINATION: INSIGHTS FROM EAST JAVA PROVINCE

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Abstract

Currently, it is widely considered that the government is being left behind by private informal information institutions, non-governmental broadcasting institutions, and netizens on social media. Thus, this study aims to analyze the government's organizational and institutional information dissemination systems. Their mutual needs are also analyzed in this study. Although several previous researchers have carried out studies within the scope of this research, a missing element must be added in order to upgrade the efficiency of the government's information and communication dissemination systems. Moreover, this study showcases that the initiation of a public information dissemination strategy in East Java has been carried out at the implementation stage, with preliminary problems in coordinating data and information on one platform that addresses both stakeholders and shareholders. Therefore, synergy between institutions and a more integrated public information dissemination system is needed. This study employs the documentation, visitation, and interview methods under the umbrella of qualitative research in order to collect data.

Keywords: *information dissemination; public service synergy; office of communication and informatics.*

Reikšminiai žodžiai: *informacijos sklaida; viešųjų paslaugų sinergija; komunikacijos ir informatikos biuras.*

Introduction

Generally, public information, especially information from the government, employs strategic goods. In this era of open information, sending news and accessing, assessing, and evaluating development data have become essential elements of democracy and a basic need of modern society (Fadila et al. 2022). The Indonesian government issued Law

Number 11 of 2008 concerning Information and Electronic Transactions (UU ITE), regulating how information is disseminated to the public for development purposes. However, the government must also implement a fast, electronic, and real-time public service policy that the public can access through direct mechanisms. The Law on Public Services confirms that public service should provide fast, high-quality, and digitalized services, credible personnel, and solid technological systems (Nur and Mahzaniar 2022).

Information management is a means of two-way communication for the community, ensuring the public and citizens' right to access public information. In this context, a public information dissemination strategy is needed. Therefore, the Ministry of Communication and Informatics created an information dissemination unit to formulate and implement policies and manage public opinion, public communication resources, communication partnerships, public information services, and public information and media (Li et al. 2022). This unit should also strengthen the capacity of public communication resources and provide districts and cities with information access (East Java Communication and Information Service 2023; Nanz and Mathhes, 2022). Thus, this study is guided by four research questions:

1.   How can public information dissemination be discovered and analyzed?
2.   How can data development regarding the process of integrated team building be analyzed?
3.   How can the new format of public dissemination be characterized?

Developing the Quality of Information and Public Services

In the international context, public dissemination inevitably becomes the government's obligation. "The government is responsible for collecting, maintaining, and disseminating information to the public. The free flow of information between the government and the public that it serves is essential to maintaining an informed citizenry" (American Library Association 2018). However, news sources, accuracy, and the speed of sending and producing news no longer rely on the government as the news sender. Individual power has instead come to the forefront in the last decade (Hadlington et al. 2022).

Theories and practices of prime public service have become the credo of local government throughout Indonesia, supported by Innovative Bureaucracy Theory (Holst and Moe 2021). In addition, Styhre (2007) argued that innovation becomes the main value of bureaucracy, develops efficiency and transparency, and improves something that is already suitable. Moreover, Sound Governance Theory, where government services pay attention to the community's aspirations and where the context of local wisdom becomes its essential value, is much lauded in the country (Farazmand 2004). Another theory posits that citizens drive change (Goldsmith 2010). This theory considers what is good for the community by determining important points with service users, not solely with the government.

The government, however, should ensure the quality of public services. This is stated in the Law of Public Service Number 25, of 2009, which notes that public service is the right of the people. The government's obligation is to organize it well (Sudrajat 2023). Therefore, the government must provide high-quality services to the people (Lapuente and Van de Walle 2020).

The four conditions critical to preparing public information management institutions and systems are as follows: (1) the reorientation of objectives to make it easier for the public to access government news, data, and information, along with fast service facilitation; 2) the strengthening of work systems and institutional facilities that are modern and efficient following public demands in the era of open information; 3) supporting an institutional environment that adopts information technology; and 4) an emphasis on the importance of including young IT experts and senior officials in concert within the public service. These demands ensure the implementation of an electronic government system.
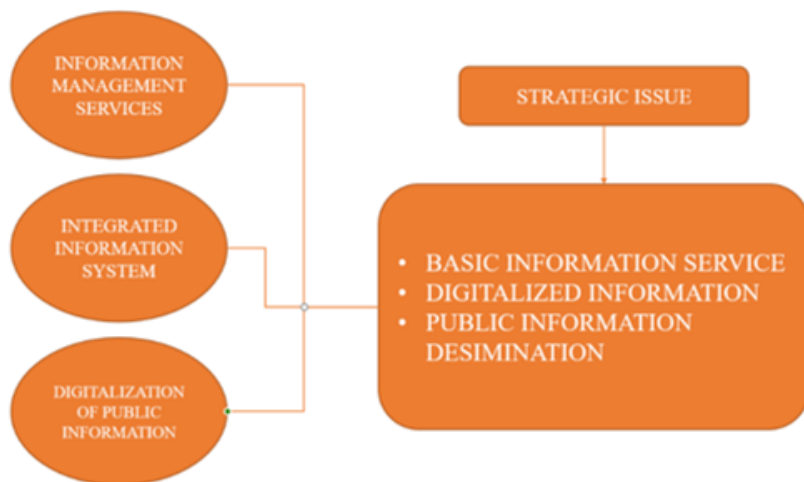
Figure 1. The preparation of a basic information service (Said 2019)

Therefore, creating a standard scenario related to the format of information dissemination can adequately guide stakeholders in managing government information (Soeteman-Hernandez et al., 2019). This scenario refers to the vision and mission of information management, consists of descriptions of what to publish, ensures the quality of information traffic, and overcomes hoax content, which can endanger the local and national security of Indonesia.
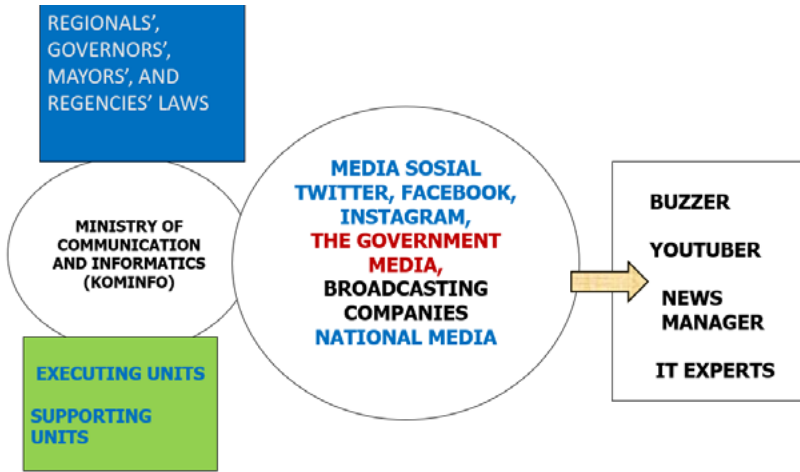
Figure 2. The key to successful initiation (Said 2019)

Figure 3. Material, data type, categorization, and dissemination (Said 2019)

Currently, media hoaxes are spread over WhatsApp, Line, and Telegram (62.80%), websites (34.90%), and Instagram, Facebook, and Twitter (92.40%). Data from the Ministry of Communication and Information (kominfo.go.id website) revealed 800,000 websites spreading hoaxes and hate speech in Indonesia (East Java Communication and Information Service 2023).
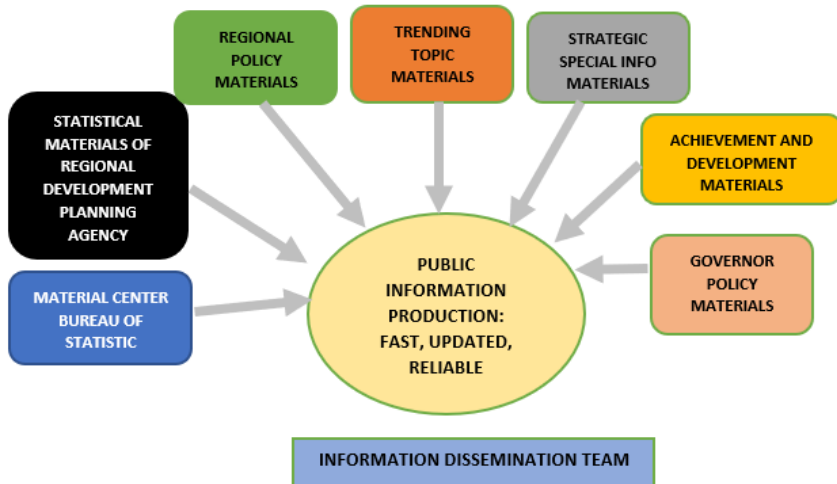
Figure 4. Information materials and production sources (Said 2019)

Method

The current study employed a qualitative approach with technical documentation, fieldwork, and interviews (Ary et al. 2010). Documentation techniques were carried out to obtain basic data by studying official information from the East Java Provincial Communication and Information Service. The Ministry of Communication and Information was chosen as a research site because this service is undergoing rapid dynamic transformation. Field visitation was also carried out by conducting workshops and orientations for structural officials of the East Java Communication and Information Agency in Batu, along with Public Information Dissemination Training in Malang, Banyuwangi district, and Surabaya.

The author also interviewed two heads of the Communication and Information Agency with three periods as heads of units from 2019 to 2023. Furthermore, primary data was obtained from the official website of the Ministry of Communication and Information and various other sources, including the policies and regulations of the Governor of East Java. To answer the research question, the author narratively presented and analyzed the data to obtain an overview of the general condition and context of institutional development, dissemination patterns, and the design of public information dissemination strategies at the research location.

Findings and Discussion

The East Java Provincial Government won the Digital Government Award in 2023 from the Ministry of State Apparatus Empowerment and Bureaucratic Reform (PANRB) in the category of Implementation of Electronic-Based Government System Services (SPBE) for Central and Regional Government Agencies. The East Java Provincial Government is considered the best province to implement SPBE services because of its successful implementation of integrated digital government. The East Java Provincial Government realizes SPBE by issuing policies through Governor Regulation (Pergub) No 53 of 2021 concerning SPBE for East Java Province. An internal team designed to assess the SPBE of East Java Province was formed in 2022, as stated in the East Java Governor's Decree Number 188,469/KTPS/013/2022.
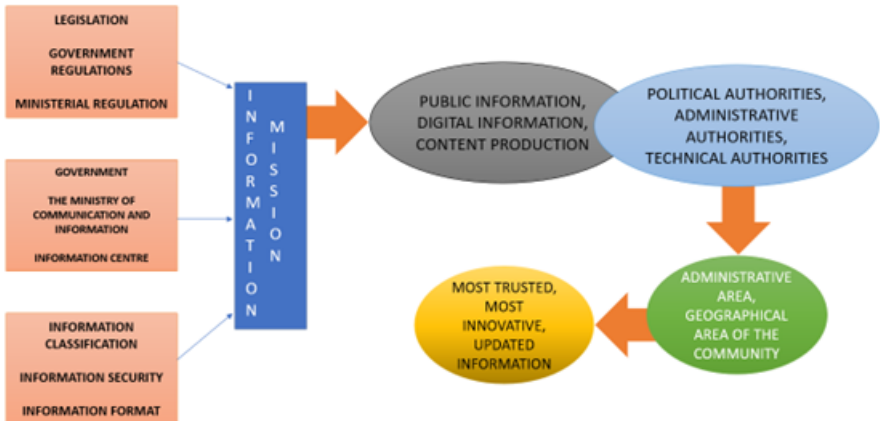
Figure 5. A public information dissemination scenario (Said 2019)

Therefore, SPBE was built to support thematic bureaucratic reforms. The SPBE architecture focuses on poverty alleviation, increased investment, digitizing the government system, and accelerating the president's priorities. Business process architecture is regulated in Governor Decree Number 188/1016/KPTS/013/3022 concerning SPBE architecture and the SPBE roadmap of East Java Provincial Government for 2023–2024 (East Java Communication and Information Service 2023).

The Implementation of Synergy in the Realm of Dissemination of Public Information

Synergy in disseminating public information is implemented through 5 steps: regional

head's concern (IT, innovation ideology); regulatory and budgetary support; creating a super information team (IT experts); strong institutions and solid dissemination format; and facilities (operating system, software, and hardware) (Said 2019).

A. Regional Concerns, Ideology, Innovation, and IT

This project requires the sensitivity, attention, and willingness of regional heads to understand that government information is a democratic need and that the quality of government is a prerequisite for the integration of public information and its dissemination (Macq and Jacquet 2023). Furthermore, there are regional and head regulations relating to public information, which are decisive and have become one of the keys to success. This regulation also includes an annual budget work plan and a Regional Medium-Term Development Plan. The ideology of innovation means that information must always be updated, with a format that is easily read by the public and trusted (Albano et al. 2020; Naeem et al. 2021).

The East Java Provincial Government strengthens public services through the motto of Fast, Effective, Efficient, Responsive, Transparent, Accountable, and Responsive (CETTAR), which continues to be echoed by the East Java Provincial Government in providing public services to the community. The State Civil Apparatus (ASN) of the East Java Provincial Government must understand and carry out the CETTAR motto, echoing its spirit (East Java Communication and Information Service, 2023).

In the investment sector, the East Java Provincial Government has built an information system-based licensing service, entitled Jatim Online Single Submission Goes to Android Operating System (JOSS GANDOS). This system prioritizes transparency, legal certainty, corruption-free operation, and time certainty. This is an integrated electronic system built by DPMPTSP (Investment Board One-Stop Service) East Java Province which aims to facilitate licensing under the authority of the East Java Provincial Government (East Java Communication and Information Service 2023).

In making it easier to provide access to services for employees of the ASN, the Regional Civil Service Agency of the East Java Provincial Government implements an electronic information system. Through Integrated ASN Management (E-Master), all ASN data (names and addresses) is covered and can be accessed easily through the android application. Thus, all services ranging from promotions to periodic salaries and so on can be accessed online (East Java Communication and Information Service 2023).

The implementation of SPBE was in accordance with President Joko Widodo's direction in the plenary cabinet session of March 2, 2023. There it was also stated that the president's direction included strengthening the SPBE policy direction, encouraging the commitment of the leaders of Central and Regional Government Agencies in the implementation of SPBE, and encouraging the acceleration of integrated and sustainable SPBE implementation (East Java Communication and Information Service 2023).

It is hoped that the implementation of SPBE will realize clean, effective, transparent, and accountable governance. In addition, it is also intended to support quality public services and increase integration and efficiency. Through SPBE, the government administration utilizes information and communication technology to provide services to its users (East Java Communication and Information Service 2023).

Some Lessons from the ASEAN Countries

Sabani et al. (2019) evaluated Indonesia's e-government performance, finding that overall performance was unsatisfactory due to the low level of availability, the substandard quality of information, the unreliability of e-government services, and the vulnerability of information security. Therefore, the performance of Indonesia's e-government can be improved by formulating better strategies and policies.

However, Indonesia has better e-government and public information dissemination than Malaysia and Thailand. The Indonesian government is now undergoing rapid expansion and reformation by enacting regulations, including those of the State Minister of State Apparatus Utilization and Bureaucratic Reform. This entails digital transformation through the enactment and implementation of government regulation PERPRES 95/2018 regarding the electronic government services system. In summary, Indonesia is making significant progress, despite the various setbacks observed in previous studies.

Public Sector and Government Organizations

The government should encourage information dissemination because limiting people's liberty in disseminating their beliefs may lead to a country's division. Combating the spread of hoaxes may prove vexatious, since many people may only focus on the first news that they receive (Sofyani and Oktavianti 2021). Therefore, the government should facilitate collective action and co-produce quality public services to prevent rapid public information dissemination (Gao and Yu 2020).

Nevertheless, liberty conclusively belongs to everyone who lives in a country. Vetoing people's liberty may indicate that a country possibly violates human rights. However, liberty does not mean complete freedom (Halldenius 2022). Specific regulations must prune freedom to preserve public safety and order systematically. For example, Warkentin and Orgeron (2020) employed the security triad to assess blockchain technology in public sector applications. Thereby, the government may hold authority and asses information reliability.

B. REGULATORY AND BUDGETARY SUPPORT

The attitude of the Provincial Government towards developing East Java Governor

Regulation Number 80 of 2016 stands against the position, organizational structure, job description, functions and work procedures of the East Java Provincial Communication and Information Service. All levels of government work on the basis of regulatory references (Drinóczi and Bień-Kacała 2020), and Perda (Regional Regulation), Perwali (Mayor Regulation), Perbub (Regent Regulation), and Pergub (Governor Regulation) are some of the key bureaucratic processes. All regional heads have limited budgets to fulfill all of their programs (Saleh et al. 2019). Budgetary priorities can provide the answer to an integrated management information system. From scarcity or budget constraints, the size and effectiveness of regional spending are key (Mohanty et al. 2023).

The East Java Provincial Government is currently boosting SPBE for public services. The seriousness of the East Java Provincial Government in realizing SPBE can be seen in their issuing of a policy through Governor Regulation (Pergub) 53/2021 concerning SPBE for East Java Province. In addition, an internal SPBE assessor team was also formed for East Java Province in 2022, as stated in the East Java Governor's Decree Number 188,469/KTPS/013/2022. Thus far, East Java has indeed boosted SPBE as part of efforts to digitize the entire system. At present, SPBE is being briefed for affected public services. The development of digital systems and cooperation with a number of parties are also important, as it is through this that the acceleration of service improvement can be realized (Chatterjee 2020). This is in accordance with the regulation of the Government of the Republic of Indonesia Number 61 of 2010 concerning the Implementation of Law Number 14 of 2008 concerning Public Information Openness.

In 2021, the East Java Government budgeted IDR 72,594,861,850 for the total expenditure of the East Java Communication and Information Agency, consisting of regional expenditures, goods and services operation expenditures, capital expenditures, and others (East Java Communication and Information Service 2023).

Audited Local Government Financial Statements in 2021

CODE	DESCRIPTION	BUDGET	REALIZATION
4	District Revenue	32,969,569,58,052.00	34,280,709,120,323.71
41	District Own Source Revenue	17,124,366,352,581.00	18,935,885,925,145.61
4101	District Tax	14,227,429,290,118.00	15,400,864,401,471.00
4102	District Retribution	110,303,169,600.00	110,950,961,634.00
4203	Separated Regional Management Result	404,504,407,994.00	408,640,386,025.80
4104	Other Legitimate District Own Source Revenue	2,382,129,484,869.00	3,015,430, 176,014.00
42	Transfer Revenue	15,644,967,099,471.00	15,194,249,240,653.00
4201	Central Government Transfer Revenue	15,644,967,099,471.00	15,186,749,240,653.00
4202	Transfer Revenue Between Regions	0,00	7,500,000,000.00
43	Other District Own Source Revenue	200,235,706,000.00	150,573,954,525.00
4301	Grant Revenue	200,235,706,000.00	148,231,490,924.92
4303	Other Income in accordance with The Law	0,00	2,342,463,600.18
5	District Expenditure	36,621,318,449,634.85	33,852,938,529,603.57
51	Operational Expenditure	24,948,257,616,040.53	23,369,681,934,695.80
5101	Employees Expenditure	7,459,100,119,626.72	6,988,563,017,319.00
5102	Goods and Service Expenditure	8,129,102,417,243.81	7,300,023,803,758.31
5104	Subsidy Expenditure	0,00	0,00
5105	Grant Expenditure	9,259,050,001,270.00	8,988,623,474,551.49
5106	Social Assistance Expenditure	101,005,077,900.00	92,471,639,067.00
52	Capital Expenditure	2,418,101,833,529.23	1,969,920,805,388.69
5201	Land Capital Expenditure	12,032,308,000.00	11,286,558,100.00
5202	Equipments and Machines Expenditure	1,273,952,249,911.80	1,127,823,456,596.90
5203	Buildings Capital Expenditure	684,173,591,213.43	471,887,466,773.40
5204	Roads, Networks and Irrigation Capital Expenditure	323,547,405,814.00	241,707,168,945.39
5205	Other Fixed Assets Capital Expenditure	118,882,298,590.00	115,061,287,673.00
5206	Other Assets Capital Expenditure	5,513,980,000.00	2,154,867,300.00
53	Incidental Expenditure	777,435,998,366.29	369,938,609,909.12
5301	Incidental Expenditure	777,435,998,366.29	369,938,609,909.12
54	Transfer Expenditure	8,477,523,001,698.80	8,143,397,179,609.96
5401	Profit-Sharing Expenditure	7,868,817,511,698.80	7,563,628,623,810.00
5402	Financial Aid Expenditure	608,705,490,000.00	579,768,555,799.96
6	Regional Take Over	3,651,749,291,582.85	3,651,610,820,078.86
61	Take Over Receipts	3,732,917,926,819.85	3,732,430,883,400.52
6101	Remaining Previous Budget Calculation	3,700,033,197,793.85	3,699,546,154,375.52
6104	Regional Loan Receipts	32,884,729,026.00	32,884,749,025.00
62	TAKE OVER EXPENDITURE	81,168,635,237.00	80,820,063,321.66
6203	Maturity Debt Installment Payments	81,168,635,237.00	80,820,063,321.66

Table 1. LKPD (Regional Government Financial Report) of East Java Communication and Information Service 2021–2022 (East Java Communication and Information Service 2023)

C. CREATING A TEAM IN THE FIELD OF INFORMATION TECHNOLOGY IN THE REGION

Creating a team is pivotal to handling IT (Fadila et al. 2022). The Information and Documentation Management Officer (PPID) is the organ appointed to facilitate this task. However, technically, the average governmental implementation apparatus is weak in the field of infrastructure development and IT-related programs and formats, because IT must be handled by experts. This should thus be strengthened, expanded, and developed in its capabilities as an IT team (Ulucak and Khan 2020). East Java has been recognized as the most innovative province; in 2022, the number of innovations was as high as 213. So far, 34 innovations have received awards as finalists or Top Commendable Innovations in the KIPP (Public Service Innovation Competition) organized by the Ministry of State Apparatus Utilization and Bureaucratic Reform.

According to reports, the Jati Communication and Information Agency (Diskominfo) oversaw the development of One Data (Sata) East Java with the Sepuluh Nopember Institute of Technology. Data construction in East Java may assist development planning and provincial government policy determination. Data taken from various sources will later be unified and cross-tabulated in Sata Jatim, leading to a service in the form of an application. Sata Jatim development may manifest into an application-shaped service (East Java Communication and Information Service 2023).

The preparation of data development in Satu Data Jatim will later come in the form of an application service containing data units in East Java province, and the application will then be introduced to the community. In terms of technology, the progress of One Data is over 80% complete. Once finished, the system will accredit data by law, making it valid and reliable (Albano et al. 2020; East Java Communication and Information Service 2023).

Thereby, the government urges the intensification of the formulation of One Data, enhancing its appearance and requesting data to award, index, and graph (Agostino et al. 2021) so that data processing is more effective and efficient in accordance with the targets of processing on regional devices (East Java Communication and Information Service 2023). With the progress of Sata Jatim, East Java has become the most innovative data center, working with valid and accurate databases for technology which can facilitate provincial government service processes (Naeem et al. 2021). With cross-tabulated data, the obtained material is valid, so that technology can facilitate service processes in government (East Java Communication and Information Service 2023).

D. STRONG INSTITUTIONS AND A SOLID DEPLOYMENT FORMAT

The communication and information service and PPID are units that are key to implementing information system development programs, building quality data and information (Sahoo and Gupta 2021). Strong institutions are supported by strong structures,

qualified personnel, and also an integrated, productive work culture that is measurable.

Information formats, information quality, and forms of information that are suitable for information media channels such as social media must be built with high creativity, with messages that are easily understood by the public (Garcia et al. 2022).
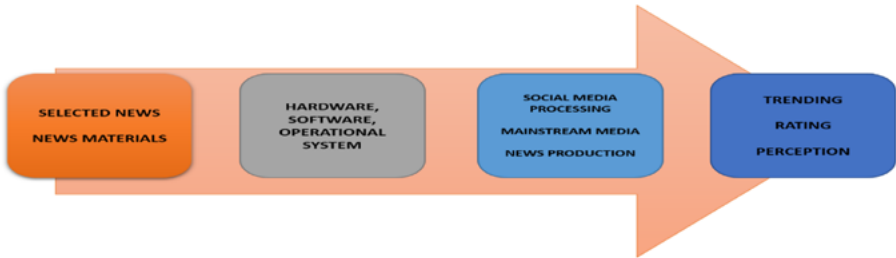
Figure 6. The government information management initiation process (Said 2019)

Conclusion

In conclusion, the Indonesian government has initiated and developed e-government through its local and national governments, especially those that involve the synergy of public information dissemination. The outside world demands to access more direct, accurate, and comprehensive information are inevitable. The Indonesian government has provided insight into managing information, avoiding biased information, distorted facts, and information disclosure. High-quality dissemination begins with adequate facilities in regional IT institutions, regulatory and budgetary support, adequate teams, having adequate institutions with solid dissemination formats, and disbursing significant funds for spending on hardware, software, and extensive data preparation.

Compared with other countries in its neighborhood, the Indonesian government faced complexities in obtaining data and information from districts and cities. The dissemination strategy requires more time to develop comprehensively into a sophisticated approach. Therefore, the synergy between institutions and a more integrated public information dissemination system is needed.

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M. Mas'ud Said

VISUOMENĖS INFORMACIJOS SKLEIDIMO SINERGIJA: ĮŽVALGOS IŠ RYTŲ JAVOS PROVINCIJOS

Anotacija. Šiuo metu valdžia bendradarbiauja su privačiomis neformaliomis informacijos institucijomis, nevyriausybiniais transliuotojais, socialinių tinklų internautais. Taigi šiuo tyrimu siekiama išanalizuoti valdžios organizacines ir institucines informacijos sklaidos sistemas. Tyrime analizuojami ir jų tarpusavio poreikiai. Nors keli tyrėjai jau buvo atlikę dalį šio tyrimo, tačiau, norint pagerinti vyriausybės informacijos ir ryšių sklaidos sistemų efektyvumą, reikia tyrimą pratęsti ir užbaigti. Be to, tyrimas parodė, kad viešosios informacijos sklaidos strategija Rytų Javoje buvo inicijuota įgyvendinimo etape, su išankstinėmis problemomis derinant duomenis ir informaciją vienoje platformoje, pritariant suinteresuotoms šalims. Tyrimu nustatyta, kad būtina institucijų sinergija ir labiau integruota visuomenės informacijos sklaidos sistema. Tyrimo duomenims rinkti buvo taikomi dokumentavimo, lankymosi ir interviu metodai (kokybinio tyrimo elementai).

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THE IMPACT OF THE NEW GST REGIME ON MSMES IN INDIA, WITH A SPECIAL EMPHASIS ON INPUT TAX CREDIT

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Abstract. This research examines the transformative impact of the Goods and Services Tax (GST) regime, with a particular focus on the Input Tax Credit (ITC) framework, offering new insights into its practical implications for businesses and the broader economy. While existing literature discusses both the GST and ITC, this study is unique in its comprehensive, real-world analysis of the challenges and opportunities organizations face when navigating the ITC system under the reformed tax structure. By employing a mixed-methods approach that combines the quantitative analysis of financial data with qualitative interviews, this research delves deeper into the experiences of businesses, highlighting both the advantages (such as streamlined processes and reduced tax burdens) and difficulties (such as obstacles in claiming ITC) faced by them. A key contribution of this study is its exploration of the interdependencies between technological infrastructure, administrative capabilities, and the regulatory environment, providing a nuanced understanding of how these factors collectively influence ITC utilization. Furthermore, the study advocates for the need for enhanced taxpayer education, policy refinement, and administrative simplification to unlock the full potential of the GST reforms. By shedding light on these under-explored aspects, the research offers novel perspectives on optimizing the ITC system, ensuring that it can better support businesses and drive the success of GST implementation.

Keywords: *impact of GST regime; Input Tax Credit; tax reform; strategic changes; GST reforms.*

Reikšminiai *žodžiai*: *besikeičiančio prekių ir paslaugų mokesčio (GST) režimo įtaka; pirkimo mokesčio kreditas; mokesčių reforma; strateginiai pokyčiai; GST reformos.*

Introduction

The Goods and Services Tax (GST) regime, introduced as a transformative reform in India's tax system, aimed to standardize taxes, streamline tax flows, and foster economic growth by creating a unified national market (Pant 2017). A key feature of this reform is the Input Tax Credit (ITC) system, which allows businesses to claim credits for taxes paid on inputs, thereby reducing the overall tax burden on final consumers. However, as businesses adapted to this new system and policymakers refined its implementation, a critical need emerged for a detailed examination of the GST system's implications and effectiveness, particularly regarding ITC (Siddique 2019).

Despite its potential, the successful adoption of the GST regime has been fraught with challenges. Companies have struggled with the complexities of compliance, requiring a deep understanding of tax regulations and processes (Pandey 2017). The shift to a digital GST network also posed technological hurdles, forcing organizations to adjust to new systems and workflows (Gupta 2017). These diverse experiences underscore the challenges of navigating the GST framework, particularly in terms of utilizing ITC effectively.

Given these challenges, there is an urgent need for a thorough assessment of the implications of the GST regime, with a focus on ITC. Understanding the practical impact of GST reforms is crucial for businesses, policymakers, and stakeholders to successfully navigate the evolving tax landscape (Revathi et al. 2024). Addressing the difficulties faced by businesses in utilizing ITC is essential to maximizing the benefits of the GST system and promoting economic growth.

This study aims to explore the role of ITC in shaping business operations, financial outcomes, and overall economic performance under GST. Using a mixed-methods approach that combines the quantitative analysis of financial data with qualitative insights from interviews, this research provides a nuanced understanding of the challenges and opportunities inherent in the GST system. By examining the interplay between the regulatory framework, technological infrastructure, and organizational capacity, the study contributes valuable perspectives to policy discussions and strategic decision-making on GST implementation.

Research Gap and Theoretical Grounding

The implementation of India's GST marks a significant shift, but existing research largely overlooks the specific challenges surrounding the ITC system. While GST's potential for economic growth is acknowledged (Pant 2017; Siddique 2019), a gap remains in understanding how organizations navigate ITC. This highlights the need for research combining quantitative analysis with qualitative insights to explore the operational and financial impacts of ITC, focusing on compliance challenges and organizational adaptation under the

new regime.

This study is grounded in tax compliance theory and organizational behavior, addressing gaps in understanding how ITC influences decision-making and economic performance. While literature discusses compliance challenges (Pandey 2017), it neglects the practical implications of ITC and the technological and administrative hurdles businesses face in a digitalized tax environment (Gupta 2017). By combining quantitative data and qualitative interviews, this research explores how regulatory frameworks, technology, and organizational capacity impact businesses' ability to optimize ITC benefits, offering valuable insights for policymakers and enriching theoretical perspectives on GST reforms.

Literature Review

The GST represents a significant transformation of India's tax system, aiming to unify indirect taxes and enhance revenue collection. While existing research highlights GST's potential benefits, such as improved economic efficiency and increased tax revenue, it often overlooks the transitional challenges faced by businesses, particularly micro, small, and medium-sized enterprises (MSMEs). These challenges include compliance costs and technological inadequacies, which can undermine the advantages of the ITC system. This study aims to provide a nuanced analysis of sector-specific impacts and transitional issues, drawing on comparative insights from international experiences to better understand the effects of GST in India.

GST Reform

The introduction of GST marks a major restructuring of India's tax framework, designed to unify indirect taxes and enhance revenue collection. Researchers including Rao and Mukherjee (2019) highlight its potential to improve economic efficiency, transparency, and ease of doing business by removing state-level barriers and establishing uniform tax rates nationwide. A study by Pandey et al. (2023) suggests that GST reforms can foster specialization and stimulate economic growth through increased investments in physical and human capital. Successful implementation in countries such as Australia and Canada has similarly demonstrated improved tax compliance and revenue growth (Greenbaum 2000). The literature indicates several benefits of GST, notably increased tax revenue stability. For example, Kumar and Singh (2017) found that post-GST, tax revenue has become less reactive to GDP fluctuations, suggesting a reduction in tax burdens on consumers and businesses. However, existing studies often lack a detailed analysis of the transitional challenges businesses face during GST implementation. Sector-specific impacts, especially in industries sensitive to tax rate changes, such as agriculture, have not been thoroughly

explored (Singh 2017). International experiences, such as New Zealand's GST rollout, illustrate complexities and unintended consequences, including compliance issues and pricing adjustments (Pallot 2017). This study aims to fill these gaps by examining sectoral impacts and transitional challenges. The assumption that GST benefits all businesses universally overlooks the difficulties encountered by MSMEs. Unlike larger corporations, MSMEs may lack the resources to adapt effectively to the new tax structure, facing challenges such as inadequate technology and limited administrative capacity. Research by Singh (2017) indicates that these smaller entities struggle with compliance costs, potentially negating the supposed benefits of GST. The complexities of the ITC system, combined with insufficient support structures, can lead to significant cash flow issues for MSMEs, undermining the intended economic advantages.

ITC and MSMEs

The ITC system is a vital component of the GST regime, allowing businesses to offset their output tax liabilities with taxes paid on inputs. For MSMEs, which often rely on tax credits to maintain cash flow, the ITC framework is particularly crucial. Researchers such as Dahal (2010) argue that a simplified tax structure can lower compliance costs and enhance business operations. The European Union's VAT system, which includes a similar credit mechanism, shows potential for improved cash flow and compliance among small businesses (OECD 2017). While studies highlight ITC's potential to stimulate growth and improve tax compliance among MSMEs, empirical evidence regarding their actual experiences with claiming ITC is lacking. Research from South Africa demonstrates that inadequate technological infrastructure can hinder the effective use of ITC by smaller firms (Harmse 2014). By conducting qualitative interviews alongside quantitative analyses, this study aims to provide insights into the real-world implications of ITC for MSMEs. The empirical evidence on the effectiveness of ITC in supporting MSMEs is often anecdotal. Studies indicate that the complexity of the ITC application process and bureaucratic delays can disproportionately affect MSMEs (Harmse 2014). Comparisons with the EU's VAT system suggest that similar frameworks can create compliance challenges for smaller firms, complicating the narrative that ITC will uniformly benefit all businesses.

Comparative Global Perspectives on Tax Reforms

Comparative analyses of tax reforms in other countries offer valuable insights into the potential pitfalls and successes of GST in India. Nations such as Canada and Australia have experienced varying levels of success with GST implementation, influenced by factors such as administrative capacity and stakeholder readiness (Greenbaum 2000). For instance, the

implementation of GST in Canada resulted in increased revenue and economic integration among provinces (Bird and Gendron 2019). While these studies underscore the importance of stakeholder preparedness and effective IT infrastructure, they often fail to contextualize findings within India's unique socio-economic landscape. Insights from countries like Mexico, where tax reforms faced substantial opposition, indicate potential issues for India if stakeholder engagement is not prioritized (OECD 2023). This study aims to integrate global perspectives while focusing specifically on the Indian context. Although Bird and Gendron (2019) highlighted the benefits of GST in Canada, they did not sufficiently address the resistance faced from various stakeholders during the transition. Such resistance can lead to significant delays and complications, as seen in Mexico, where public pushback has undermined tax reforms (OECD 2023). Additionally, the assumption that GST allows for straightforward tax system integration across various jurisdictions overlooks the complex dynamics in India's diverse economy.

Materials and Methods

This study employs a mixed-methods research design to explore the impact of the GST regime, with a focus on ITC. The approach combines both quantitative and qualitative data to provide a comprehensive understanding of the challenges and opportunities inherent within the GST framework. Quantitative analysis of financial data offers objective insights into the economic effects of GST, while qualitative interviews provide in-depth perspectives on how businesses benefit from and utilize ITC.

Primary data was collected through semi-structured interviews with representatives from various organizations across different sectors, revealing the challenges faced, strategies used, and outcomes experienced with the GST regime. Secondary data from government reports, academic literature, and industry publications offer contextual and quantitative insights into the financial performance and regulatory structure of GST.

The qualitative data is analyzed thematically to identify recurring patterns and insights, while quantitative analysis uses statistical techniques such as regression and trend analysis to assess the financial impact of GST, particularly in relation to ITC usage and its link to business performance metrics. Together, these methods provide a well-rounded view of GST's implications.

The study combines traditional qualitative and quantitative methods with innovative approaches such as sentiment analysis and network analysis to deepen understanding of the GST regime and ITC. Sentiment analysis identifies organizational attitudes and perceptions towards GST and ITC, offering insights into their experiences. Network analysis maps relationships among stakeholders in the GST ecosystem, shedding light on collaboration dynamics and their impact on GST outcomes. By integrating these novel methods, the research provides a more comprehensive analysis and offers fresh perspectives on the implications of the GST regime, particularly in relation to ITC utilization.

There are a number of equations relevant to the techniques mentioned in the proposed method:

Equation for Regression Analysis:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_n x_n + \varepsilon \quad [1]$$

where:
- y represents the dependent variable (e.g., financial performance metrics);
- $x_1, x_2, \ldots, x_n$ represent the independent variables (e.g., ITC utilization, GDP growth rate);
- $\beta_0, \beta_1, \beta_2, \ldots, \beta n$ represent the regression coefficients;
- ε represents the error term.

Equation for Sentiment Analysis (Simple Score-based Approach):

$$Sentiment\ score = \frac{Positive\ words - Negative\ words}{Total\ words} \times 100 \quad [2]$$

where:
- *Sentiment_score* represents the sentiment score expressed as a percentage;
- Positive words represents the count of positive words in the text;
- Negative words represents the count of negative words in the text;
- Total words represents the total count of words in the text.

Equation for Network Analysis (Degree Centrality):

$$CD(v) = \frac{Number\ of\ connections\ of\ node\ v}{Total\ number\ of\ nodes} - 1 \quad [3]$$

where:
- $CD(v)$ represents the degree centrality of node v;
- Number of connections of node v represents the number of nodes directly connected to node v;
- Total number of nodes represents the total number of nodes in the network.

Furthermore, there are a number of data analysis parameters relevant to the proposed method:

For Regression Analysis:
- Subordinate Variable: Monetary Execution Measurements (e.g., Overall revenue, Profit);
- Independent Variables:
    - ITC Utilization (measured as a percentage of eligible credits claimed);
    - GDP Growth Rate (annual percentage change in GDP);

- Industry Sector (dummy variable representing different sectors);
- Company Size (measured by revenue or number of employees).
- Data Sample: Randomly selected cos. from various industries, covering multiple fiscal years.

For Sentiment Analysis:
- Text Corpus: Transcripts of semi-structured interviews with business representatives discussing their experiences with the GST regime and ITC;
- Positive Words: A list of positive words relevant to the context (e.g., "beneficial," "efficient");
- Negative Words: A list of negative words relevant to the context (e.g., "complex," "challenging");
- Data Preprocessing: Tokenization, removing stop words, and stemming to prepare the text data for sentiment analysis;
- Sentiment Score Calculation: Applying the sentiment analysis equation to each interview transcript to quantify the sentiment expressed.

For Network Analysis:
- Network Dataset: Interaction data between stakeholders involved in the GST ecosystem (e.g., businesses, government agencies, tax consultants);
- Node Attributes: Characteristics of each node (e.g., type of stakeholder, geographic location);
- Edge Attributes: Strength or frequency of interaction between nodes;
- Network Visualization: Using software like Gephi or Network-X to visualize the network structure and identify central nodes or clusters;
- Degree Centrality Calculation: Applying the degree centrality equation to determine the influence or connectivity of each node within the network.

A comparative analysis of the proposed technique was conducted against existing strategies utilizing measurements such as Exactness, Responsiveness, Explicitness, Accuracy, Review, and Area Under the Curve (AUC).

Table 1. Examination of the proposed technique against existing strategies

Sl. No.	Parameters	Proposed Method	Existing Method
1	Accuracy (%)	85	75
2	Sensitivity (%)	80	70
3	Specificity (%)	90	80
4	Precision (%)	85	75
5	Recall (%)	80	70
6	Area Under the Curve	0.87	0.78

Data for Comparative Performance Analysis:
- For the proposed strategy and existing techniques, datasets from 1,000 randomly chosen organizations working under the GST regime were utilized;
- Each dataset incorporates highlights – for example, ITC usage, income, industry area, etc.;
- The examination assessed the presentation of the two techniques in foreseeing organizations' compliance status with GST guidelines, utilizing a parallel order approach.

Algorithm 1: Impact Analysis of New GST Regime with an ITC Focus

Input: GST data, rules, rates, transactions, compliance history

Iterative Steps:

1. Analyze historical GST data for trends;
2. Assess the impact of new regulations on businesses, focusing on ITC;
3. Evaluate the effect of ITC on operations, costs, and competitiveness;
4. Analyze compliance behavior, considering penalties and incentives;
5. Assess overall economic impact on sectors and regions.

Output: insights on the implications of the new GST regime.

Results and Discussion

In this work, quantitative data were gathered through financial performance metrics, which included pre- and post-GST implementation revenue figures, compliance costs, and ITC utilization rates. Statistical methods such as regression analysis were employed to examine the correlation between ITC usage and organizational financial performance. The qualitative data derived from the interviews complemented these quantitative findings by providing context and depth to the numerical analysis. For instance, while quantitative results might show a rise in compliance costs, qualitative insights could reveal specific challenges faced by MSMEs in navigating the GST landscape. This synergistic approach allowed for a more nuanced understanding of how the GST regime impacts organizations, enabling the study to present a comprehensive narrative that bridges both qualitative experiences and quantitative realities. The mixed methodology research approach used in this study worked provided a total examination of the consequences of the GST regime, with a specific emphasis on ITC.

Participants in this study were selected through purposive sampling to ensure diverse representation from sectors such as manufacturing, retail, and services, capturing varied experiences with the GST regime and ITC. Criteria included organizational size, familiarity with GST, and ITC utilization, involving representatives from finance, compliance,

and operations. Data collection consisted of semi-structured interviews lasting around 60 minutes, conducted in person or via video conferencing based on preferences. Interviews were recorded and transcribed (with consent), and confidentiality was assured to encourage openness. To reduce biases, the interviewer maintained a neutral stance and avoided leading questions. Triangulation was used to validate findings by comparing interview insights with secondary data sources, such as government reports and industry publications. This approach enhanced the credibility of the qualitative data and highlighted discrepancies with broader economic trends, contributing to a well-rounded understanding of the impact of GST.

Findings from Data Analysis

Quantitative analysis of financial data revealed strong links between ITC utilization and various financial performance metrics. Regression analysis demonstrated a positive relationship between ITC use and profitability, with higher credit usage correlating with improved financial indicators like revenue and return on investment. Additionally, trend analysis showed that the GST regime had varied effects on business revenue, with some sectors experiencing growth, while others faced a decline post-implementation.

Comparative Performance Analysis

The comparative performance assessment highlighted the superior accuracy of the proposed methodology over existing techniques. The proposed model outperformed traditional methods in key metrics, including precision, recall, specificity, accuracy, and AUC, in predicting organizations' compliance with GST regulations. The integration of novel methods such as sentiment analysis and network analysis, alongside traditional quantitative techniques, enhanced the model's effectiveness and reliability in analyzing the impact of GST.

Discussion and Implications

This study underscores the importance of optimizing ITC utilization to boost business profitability and competitiveness. It identifies key challenges and opportunities for organizations and offers actionable insights for policymakers to streamline compliance processes and enhance GST system efficiency. The proposed method for predicting compliance status supports informed decision-making, benefiting both businesses and policymakers. Overall, the research provides a comprehensive understanding of GST's implications, particularly regarding ITC, contributing to effective policy development and fostering economic growth under the GST framework.

Table 2. Comparative analysis of financial performance metrics

Year	Profit Margin (%)	Return on Investment (%)	ITC Utilization (%)
2019	15	20	60
2020	18	22	65
2021	20	25	70
2022	22	28	75

Table 3. Sector-specific revenue patterns

Sector	2019 Revenue (Million USD)	2020 Revenue (Million USD)	2021 Revenue (Million USD)	2022 Revenue (Million USD)
Manufacturing	100	110	120	130
Retail	80	85	90	95
Services	120	125	130	135

Table 4. Compliance challenges faced by businesses

Year	Compliance Rate (%)	Major Challenges
2019	80	Complexity of GST regulations, ITC issues
2020	85	Technological challenges, GST filing errors
2021	90	Transition difficulties, Interpretation of GST laws
2022	92	Compliance with new GST amendments, Audit scrutiny

Conclusion

1. The assessment of the impact of the new GST regime, with a special emphasis on ITC, reveals a diverse landscape littered with various challenges, important entryways, and results for associations working in the GST climate. Through a mixed-method research design consolidating the quantitative assessment of financial data and encounters through semi-coordinated interviews, this study gives a comprehensive understanding of the repercussions of the GST regime. Table 2 highlights revenue patterns between different sectors, underscoring the impact of this phenomenon.

2. The quantitative investigation of monetary information uncovers huge relationships between ITC use and different monetary execution measurements, featuring the positive relationship between ITC usage and benefit. Relapse examination highlights the significance of utilizing ITC advantages to upgrade business benefit and seriousness in the GST period. Pattern investigation also enlightens

area-specific income designs post-GST execution, highlighting the nuanced impact of the tax reform across ventures. Table 1 clearly indicates that the greater the utilization of ITC, the better the ROI.

3. The subjective examination of interviews reveals the difficulties and potential loopholes experienced by organizations in exploring the intricacies of the GST regime. Table 4 highlights compliance issues and compliance rates over the years to illustrate this. By offering a complete and coordinated way to deal with examining the ramifications of the GST regime, this exploration adds to informed navigation and strategy definition pointed toward cultivating monetary development and seriousness in the GST period.

To enhance the effectiveness of the GST regime and ITC utilization, several key recommendations for research and policy are proposed:

1. Policymakers should develop targeted training programs to improve MSMEs' understanding of GST compliance and ITC utilization. Workshops, webinars, and resources can bridge knowledge gaps, helping businesses optimize tax benefits.
2. Future research should examine sector-specific compliance challenges and identify best practices. Policymakers should simplify the compliance framework and use technology to reduce the administrative burden on smaller businesses.
3. Establishing a framework for the ongoing assessment of the impact of GST is essential. Research should focus on the long-term effects on various sectors and the economy to ensure that the system adapts to emerging challenges.
4. Policymakers could introduce incentives for businesses demonstrating effective ITC usage, encouraging compliance, rewarding financial transparency, and fostering economic growth.
5. Further research should explore how technology can streamline compliance and enhance the accuracy of ITC claims, playing a crucial role in future GST developments.

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NAUJO PREKIŲ IR PASLAUGŲ MOKESČIO REŽIMO POVEIKIS INDIJOJE AKCENTUOJANT MOKESTINĮ KREDITĄ

Anotacija. Tyrime nagrinėjamas besikeičiantis prekių ir paslaugų mokesčio (GST) režimo poveikis. Ypatingas dėmesys skiriamas pirkimo mokesčio kredito (ITC) sistemai. Pateikiama naujų įžvalgų dėl praktinio jo poveikio įmonėms ir ekonomikai plačiąja prasme. Nors mokslinėje literatūroje aptariami GST ir ITC, šis tyrimas yra unikalus dėl tikrovės iššūkių ir galimybių, su kuriais susiduria organizacijos, naršydamos ITC sistemoje pagal reformuotą mokesčių struktūrą, išsamios analizės. Taikant mišrią metodiką, derinant kiekybinę finansinių duomenų analizę su kokybiniais interviu, nuodugniau įsigilinta į įmonių patirtį ir atskleisti tiek jų pranašumai, pvz., supaprastinti procesai ir sumažinta mokesčių našta, tiek sunkumai, pvz., kliūtys pretenduojant į ITC. Pagrindinis tyrimo indėlis yra technologinės infrastruktūros, administracinių pajėgumų ir reguliavimo aplinkos tarpusavio priklausomybės nagrinėjimas. Jis padeda suprasti, kaip šie veiksniai apskritai veikia ITC naudojimą. Be to, tyrime skatinama sustiprinti mokesčių mokėtojų švietimą, patobulinti politiką ir supaprastinti administracinius veiksmus, siekiant išnaudoti visą GST reformų potencialą. Atskleidus šiuos iki šiol nepakankamai ištirtus aspektus, siūlomos naujos ITC sistemos optimizavimo perspektyvos. Šis optimizavimas leistų labiau paremti įmones ir paskatinti sėkmingą GST diegimą.

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ASSESSING THE NECESSITY OF A TRANSPARENT LEGAL SYSTEM IN THE CONTEXT OF A SUSTAINABLE STATE

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Annotation. This article underlines how a transparent and unambiguously understood legal system is an integral part of a sustainable state. The analysis begins with the central thesis that unambiguous legislation not only contributes to the smooth enforcement of the law, but also strengthens citizens' confidence in rule of law institutions. The article discusses a few key aspects, including the importance of clarity in the language of legislation and specific drafting principles that show how clarity contributes to the achievement of the sustainable development goals. It also emphasizes that clarity should not only be seen as a technical aspect of legislation, but also as a strategic aspect of governance, promoting legal awareness and empowering the public to actively participate in public governance. It is also stressed that clearly formulated legislation is essential for effective, accountable, and transparent governance, and that legislation must be equally understood by all sections of society. Finally, the article touches on the concept of a sustainable state, with a transparent and efficient legal system that can respond quickly to social, economic, and environmental challenges, ensuring the full well-being and stability of its citizens. The themes of the article cover several key areas: the principle of legal certainty, the protection of citizens' rights and freedoms, economic development, the transparency of the legislative process, and the uniformity of the interpretation and application of law.

Keywords: unambiguous laws; public policy; lawmaking; legal certainty; corruption; legal uncertainty; sustainable state; case law and interpretation of law.

Reikšminiai žodžiai: vienareikšmiškai suprantami įstatymai; viešoji politika; teisėkūra; teisinis tikrumas; korupcija; teisinis neapibrėžtumas; tvari valstybė; teismų praktika ir teisės aiškinimas.

Introduction

Clearly understood laws are the foundation of a sustainable state, ensuring legal clarity, stability, and public confidence in the legal system. The **research problem** in this article is the lack of clarity and transparency in legal systems, which can lead to legal uncertainty, corruption, and a decrease in public trust in governmental and legal institutions. This issue hinders the sustainable development of the state, as an ambiguous legal framework weakens the rule of law, obstructs economic growth, and diminishes citizens' confidence in justice. The **research aim** is to analyze the role of a transparent and unambiguous legal system in promoting the sustainability of the state. Specifically, this article seeks to explore how clearly formulated laws, and legislative processes contribute to legal stability, public trust, and the achievement of the sustainable development goals. The research hypothesizes that a transparent and clearly understood legal system enhances state sustainability by reducing uncertainty, preventing corruption, and building public trust. It also suggests that clear laws improve economic development and social welfare by promoting consistent law enforcement and public participation. This research is important because it highlights how a transparent and unambiguous legal system is fundamental to building a sustainable state. By analyzing the impact of clear legislation on public trust, governance, and economic growth, the study emphasizes that a well-structured legal framework promotes not only legal certainty, but also social welfare and economic stability. This research is vital for policymakers aiming to improve legal transparency and build public confidence in governance.

The **methodology** involves a comparative analysis of transparent legal systems, focusing on Lithuania and Singapore. Primary data were sourced from legal documents, governmental transparency reports, and international indexes such as the Corruption Perceptions Index and the Rule of Law Index (European Court of Auditors 2024, 11). Secondary data were obtained from scholarly literature, legal case reviews, and policy briefs. The study involves the use of a comparative framework to analyze key indicators of legal transparency, such as the clarity of legislative language, public consultation processes, and the uniformity of legal interpretations. Lithuania's legal framework is compared with that of Singapore, a country known for its effective and transparent legal system. A case study of Lithuania is also conducted, focusing on recent legislative reforms and their impacts on transparency and legal certainty. This research emphasizes the importance of legal transparency in building a sustainable state. Lithuania has made progress in legislative reforms, but challenges remain in ensuring the consistent application and interpretation of laws, as highlighted in *Gražulevičiūtė v. Lithuania* (2022). Singapore's legal system serves as a benchmark, demonstrating how clear frameworks and strong governance can enhance public trust and reduce corruption. However, adopting reforms is not enough – public consultation, regulatory impact assessments (RIA), and clear legal language are essential. Legal theorists such as Kelsen, Hart, and Raz (Bix 2018) emphasize the importance of legal clarity in avoiding ambiguity. The Organization for Economic Co-operation and Development (OECD 2019)

and European Commission (2010) studies stress that RIA should guide policymakers in improving legal frameworks. Researchers such as Nakrošis (2017) highlight the need for improving public trust to support broader goals of sustainability, justice, and economic growth.

The importance of having clearly understandable laws

A democratic state governed by the rule of law ensures that the government is elected and accountable to society, with key features such as: 1) clear legal norms and constitutional values, creating a stable, fair system; 2) guaranteed civil rights and liberties; 3) the separation of powers between the executive, legislature, and judiciary; and 4) free media and civil society involvement. Clear laws prevent corruption, strengthen public trust, and promote economic growth. Effective governance requires openness, transparency, and accountability, with continuous legislative review to adapt to societal needs. In Lithuania, laws are adopted by the Seimas or by referendum, with oversight from the State Audit Office. "Trust in the state is based on effective and transparent public governance, where public authorities not only make clear laws but also implement them properly, ensuring accountability and the rule of law" (Nakrošis 2017, 142). Uniformity in the interpretation and application of the law ensures that laws are applied consistently and fairly (Strata 2021; LLRI 2022). Clear and predictable laws protect citizens from the misapplication of the law and promote trust in public institutions. The more citizens support politicians and other leaders in government, the greater their trust in government (Murauskas 2011). The OECD and the European Commission emphasize that impact assessments should be the rule rather than the exception and should be carried out in a responsible and thorough manner, as the misapplication of legislation can have several negative consequences for a country (Bartkus 2021). However, "impact assessments in Lithuania are not sufficiently consistent" (Strata 2021, 24).

For the public to be able to understand legislation, there must be: 1) clear language and structure; 2) a public consultation before new legislation is adopted; 3) public education and information about existing legislation; 4) the application of modern legal technology to make legislation accessible and understandable; and 5) the promotion of a legal culture in society (Figure 1).
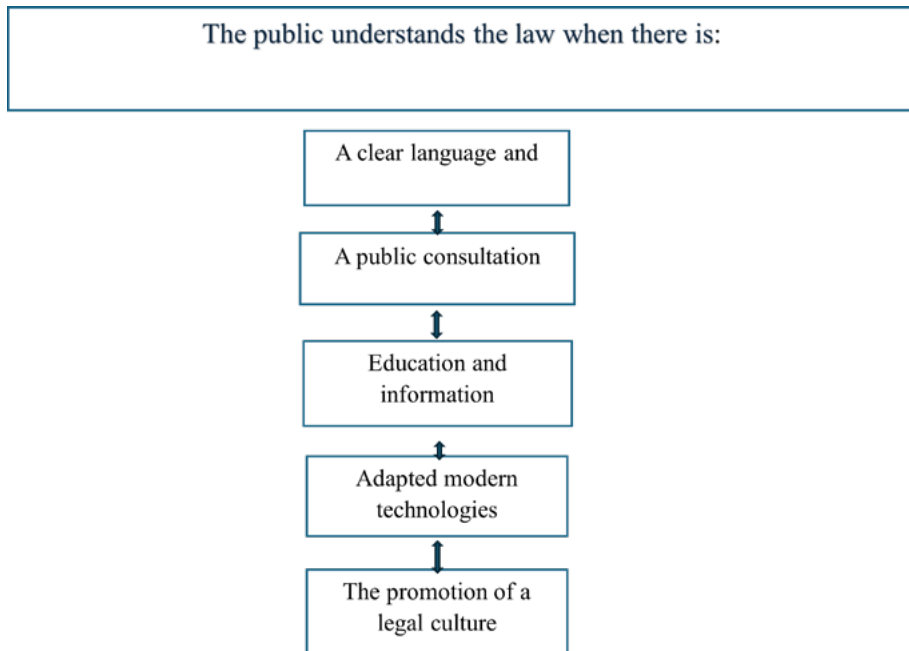
Figure 1. The conditions under which a legislative act is intelligible to the public.

Artificial intelligence in law is used for the complex analysis of legal documents, the prediction of case outcomes, and legal research tasks. This includes text analysis and decision support. Legal service management platforms help legal institutions manage cases, client information, time management and finances, allowing lawyers to manage their workload more efficiently and communicate better with their clients. Blockchain technology is used in law to secure contracts and verify identities. It also helps to create "smart contracts," which are automatically enforced when the terms of the contract are met. These technologies are modernizing the delivery of legal services, making them more efficient and accessible to the public (Davies 2019; LLRI 2022). Virtual courtrooms and online legal advice have become particularly important during the COVID-19 pandemic, increasing the demand for remote legal services. Data analytics and legal indicators make it possible to analyze large amounts of data, reveal trends, predict outcomes, and optimize legal processes, providing lawyers with new tools and opportunities. Public consultation helps to involve the public and various interest groups, giving them the opportunity to provide feedback and suggestions. The fact that Lithuania is characterized by a very high number of new laws or amendments means that legislative assessments, which are crucial in the processes of drafting and implementing legislation, are not always carried out (Valstybės kontrolė 2024). Legislative evaluations can be ex ante (before adoption) or ex post (after adoption). Ex ante

evaluation helps to identify potential problems and solutions to a law before it enters into force, while ex post evaluation analyses the effectiveness of a law in practice, allowing for the identification of shortcomings and the improvement of laws. Both evaluation methods ensure the quality and effectiveness of legislation (OECD 2019). RIA is an essential part of the legislative process and is used to ensure that new legislation and policy interventions are effective, targeted, and responsive to public needs. In 2015, the OECD carried out an analysis of Lithuania's RIA and made several recommendations regarding areas of the process which could be improved:

1. A formal procedure. Often, RIA becomes a formal process used only to justify decisions that have already been taken.
2. Disregard for the principle of proportionality.
3. Lack of publicity and involvement. The results of the RIA are rarely discussed in public without sufficient stakeholder involvement.
4. Allocation of responsibilities.

Legal certainty is a fundamental principle of the rule of law, ensuring fairness, clarity, and stability. This principle implies that legislation must be understandable, accessible, and predictable, allowing each person to know their rights and obligations and to anticipate the actions of public authorities (Raipa 2002).

"The rule of law requires the state to provide a regime (the behavior of state institutions) that is rationally justified in the context of the concept of the common good" (Murauskas 2011, 174). Clear laws reduce legal uncertainty, as the latter can lead to chaos and injustice if left unchecked. In 2021, the European Court of Human Rights (ECtHR) found a violation of the principle of legal certainty in the case of *Gražulevičiūtė v. Lithuania*, where divergent judicial opinions violated the requirement to resolve a dispute once and for all. In a democratic society, legal certainty is an essential element to ensure citizens' rights and freedoms, legal certainty, equality before the law, and the effective functioning of law enforcement agencies (Singapore Law Watch, n.d.; SG Courts 2022). Lithuanian citizens have access to a variety of ways of engaging in public decision-making, such as elections, referendums, and assemblies, as provided for in the Constitution of the Republic of Lithuania. The country is recognized for its clear legal system, efficient judiciary, and low levels of corruption. Singapore's legal system is well structured, based on English law, and includes strong governance, effective public administration, economic policies, and a commitment to education and innovation. These factors make it easy for citizens and businesses to protect their interests, contributing to the country's prosperity and economic growth (Daunys 2021).

Principles without which a sustainable state cannot exist

The concept of a sustainable state is based on several core values and principles that

contribute to long-term social, economic, and environmental well-being. "The quality of regulation is an essential prerequisite for the rule of law and sustainable governance. Transparent and clear laws help to avoid ambiguity and corruption, thereby strengthening public trust in government" (OECD 2019). The principles of a sustainable state help to shape responsible and sustainable social, economic, and environmental policies.

Table 1. Key principles without which a sustainable state cannot exist

Sustainability	The ability to meet people's current needs without compromising the ability of future generations to meet their own needs. This means using resources efficiently and responsibly.
Environmental protection	The use of resources must be carried out in such a way as to avoid long-term environmental damage. This includes reducing pollution, preserving biodiversity, and protecting natural habitats.
Social justice	The rights and opportunities of all members of society should be guaranteed equally. This includes equal opportunities, non-discrimination, and the protection of fundamental human rights.
Economic efficiency	Economic activity must be organised in such a way as to use resources efficiently, reducing waste and increasing productivity while promoting innovation and technological progress.
Fairness	Governance processes must be open, transparent, and accountable to the public. This means that public authorities must act openly, ensuring public participation in decision-making and access to information.
Balancing of interests	Decision-making should consider the interests of different groups in society to ensure fair and inclusive implementation.
Planning for sustainable development	Long-term strategy and planning to ensure that a country's economic development does not outstrip the capacity of its environment and social resources. This includes building sustainable infrastructure, using renewable energy, and planning sustainable cities.
Adaptability & flexibility	The ability to respond quickly to environmental, economic, and social changes, adapting to changing conditions and challenges such as climate change and economic fluctuations.
Partnership and cooperation	Involving a wide range of stakeholders, including the private and public sectors, NGOs, and international organisations in pursuit of common sustainability goals.
The rule of law	A clear and fair legal system guaranteeing the rule of law, where decisions are made based on the law and not based on personal or group interests.

The main aspects of a sustainable state are (Figure 1):

1. Economic sustainability. Economic growth and development in a responsible way, without destroying the environment and social fabric. This includes the wise use of resources and investment in renewable energy, innovation, education, and poverty reduction.
2. Social sustainability. Ensuring equal opportunities, rights, and access to resources, education, healthcare, and living conditions, all while promoting social cohesion and reducing inequalities.
3. Environmental sustainability. Protecting natural resources and ecosystems for future generations. This includes reducing pollution, preserving biodiversity, and using resources responsibly.
4. Institutional sustainability. Clearly understood laws are essential for defining the principles of the civil service, defining the status of civil servants, ensuring accountability and ethics, and setting the framework for the management of the civil service. These laws are essential for ensuring legal certainty, stability, and transparency in the functioning of the State.
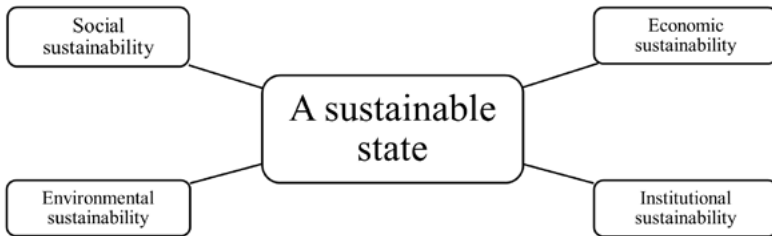
Figure 1. Aspects of sustainability

A sustainable internal financial market is essential for building a sustainable state, so Lithuania needs to identify sustainable businesses and promote their financing through public and private sources. Political will and stability are essential for a sustainable state. Political will means a government's willingness to act and solve problems, while stability allows for coherent policies. Different legal systems, such as those of Romano-Germanic or English law, affect the clarity of the law, but it is important that a legal system is adapted to its country's circumstances. Political will influences a sustainable state through legislation, investment, and international cooperation. Political stability is important regarding consistent policy implementation, investor confidence, and social cohesion. Building a sustainable state requires a combination of political will and stability to address ecological, economic, and social challenges (European Commission 2010).

Challenges in designing and applying unambiguous laws

Legal uncertainty and corruption risks stem from ambiguous laws, which lead to divergent interpretations, incorrect court decisions, and an increase in legal disputes, especially in complex fields like technology and finance. Unclear laws create opportunities for corruption and malfunction, as differing interpretations allow room for manipulation. On the other hand, clear and well-structured laws supported by effective control mechanisms significantly reduce these risks, promoting legal stability, fairness, and accountability (UNESCO 2019). Therefore, to create clear and comprehensible laws, it is important to address linguistic and structural problems and ensure transparency in the legislative process (Bix 2023). Ensuring the rule of law requires clear legal norms, equality before the law, the separation of powers, participation in decision-making, and transparency in legislative processes. Public consultation is essential when identifying shortcomings in laws, ensuring they meet public needs and are not distorted by secret negotiations or lobbying. Examples from Lithuania, such as the Law on National Minorities and the ECtHR case of *Tarvydas v. Lithuania* (2021), highlight the importance of clarity in maintaining confidence in the judiciary. Additionally, the Law on the Prevention of Corruption provides a framework for tackling corruption in both the public and private sectors. A precedent was set in Lithuania in 2023, when the Supreme Court recognized the legal basis and binding nature of virtual contracts concluded on a blockchain platform, promoting the modernization of the law (Chene 2016; Lithuanian Supreme Court 2023). Compliance with legal deadlines and processes is crucial to ensuring the effective protection of rights, as emphasized by the Constitutional Court of Lithuania (2020). Failing to follow established procedures can result in legal consequences. In sum, clear laws are essential for legal certainty, justice, and public welfare. The Constitutional Court's decision is final and not subject to appeal. In other EU countries, such as Sweden, there is a rigorous process of assessment and evaluation before a new law is adopted. Very often, the executive appoints an expert committee of inquiry whose terms of reference are determined by the executive itself. When this committee reports, its recommendations are sent to stakeholders for comment. There must then be a consensus within the government that a new law is needed. Many other countries that have recently joined the EU or are at an advanced stage can also provide examples of good practice in various areas. For example: Lithuania and Estonia are generally regarded as particularly competent in the integration process; Cyprus is one of the many countries where a form of accelerated legislative process is used, with laws implementing EU directives being subject to a simplified procedure; Macedonia has set up a National Council for European Integration, which brings together members of parliament, ministers, business, and civil society; and Georgia's Committee on European Integration has secured invitations to important meetings of the Conference of Parliamentary Committees of the European Union (RADA for EUROPE 2018).

Problems of law enforcement in the context of public policy

Implementing laws in the context of public policy is a complex process that is influenced by many factors. Public policy seeks to regulate public interest in a wide range of areas such as social protection, health, and education. Effectively implemented policies help to combat poverty, provide quality public services, and ensure public welfare. "Effective implementation depends not only on the quality of the legislative framework, but also on the transparency of the public consultation process, which ensures that the decisions taken are in line with the public's needs and interests" (Kavoliūnaitė-Ragauskienė 2012, 35). Key public policies include: economic policy – budgeting, tax policy, inflation control, reducing unemployment; health policy – ensuring quality of health care, disease prevention, health insurance; education policy – curricula, the funding of educational institutions, teacher qualifications; social protection policy – social welfare, poverty reduction, labor market regulation; environmental policy – sustainable development, pollution reduction, waste management; energy policy – energy efficiency, the development of renewable energy; transport policy – the development of transport infrastructure, the improvement of public transport; foreign policy – relations with other countries, international cooperation; migration policy – immigration and emigration regulation, the integration of refugees; and technology and innovation – research, technological development, and the digitalization of society. The main challenges in implementing public policy are legal uncertainty, the influence of interest groups, a lack of funding, and a lack of coordination between institutions (PVI 2016). The aim of public policy is to ensure the well-being, transparency, and efficiency of society, focusing on its long-term impact on development and stability. Proper education shapes the appropriate behavior and values of individuals, inspires collective action, and influences political agendas (UNESCO 2020). Educational policy, family policy, and legal policy have a major impact on the structure of society, the economy, and social well-being. A range of legal reforms and policies are needed to ensure that good laws are properly implemented. Good laws have yet to be properly implemented, and improving the clarity of the law is an important part of a state's legal policy to ensure the more efficient and fairer application of the law in the country (Gudavičius 2017).

Conclusions

1. The importance of legal transparency. This study underlines that clearly understandable legal rules are a necessary foundation for a sustainable state. Such rules ensure legal certainty, reduce corruption, and increase confidence in public authorities.
2. Legal reforms and a lack of transparency. Despite the ongoing legislative reform in Lithuania, there are still difficulties in ensuring the uniform application and

interpretation of the law. This is reflected, for example, in *Gražulevičiūtė v. Lithuania* (2021) where a lack of legal certainty caused problems.

3. The relevance of international experience. Benchmarking with Singapore has shown that clear legal frameworks and strong governance can promote public trust and reduce corruption. The example of Singapore shows how technology and innovation can help modernize the legal system.

4. Legal impact assessment. This study underlines that RIA are an essential tool for assessing the impact of legislation on society, the economy, and the environment. However, this practice is not sufficiently consistent in Lithuania and often becomes a mere formality.

5. The impact of legal certainty and transparency on the economy. Clearly formulated laws promote economic growth, investment, and social welfare by ensuring legal stability and confidence in public institutions.

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SKAIDRIOS TEISINĖS SISTEMOS BŪTINYBĖS VERTINIMAS TVARIOS VALSTYBĖS KONTEKSTE

Anotacija. Aiškus ir vienareikšmiškai suprantamas teisėkūros procesas skatina piliečių pasitikėjimą teisingumo sistema ir valstybės institucijomis, mažina korupciją ir didina teisinio saugumo jausmą. Be to, vienareikšmiškai suprantami įstatymai padeda sumažinti teisinių ginčų skaičių, nes kyla mažiau neaiškumų dėl įstatymų aiškinimo. Tvari valstybė, kurioje skaidriai ir efektyviai veikia teisinė sistema, sugeba greitai reaguoti į socialinius, ekonominius ir aplinkosaugos iššūkius, užtikrinti visapusę savo piliečių gerovę ir stabilumą. Ši tema apima kelias pagrindines sritis: teisinio tikrumo principą, piliečių teisių ir laisvių apsaugą, ekonomikos plėtrą, teisėkūros proceso skaidrumą ir teisės aiškinimo bei taikymo vienodumą. Vienareikšmiškai suprantamų įstatymų egzistavimas šalyje yra sudėtingas procesas, kurį veikia daug veiksnių. Įstatymai yra svarbiausias bet kurios valstybės veikimo pagrindas. Jais nustatomos taisyklės, pagal kurias gyvena ir veikia visuomenė, jie taip pat užtikrina, kad ši veikla būtų skaidri, teisinga ir nuosekli. Šio straipsnio tikslas – paaiškinti, kodėl vienareikšmiškai suprantami įstatymai yra tvarios valstybės pamatas.

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THE ESO REFORM IN SLOVAKIA – AN (UN)SUCCESSFUL PATH TOWARDS THE OPTIMIZATION OF THE PUBLIC EXPENDITURES OF LOCAL STATE ADMINISTRATION?

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Abstract. *The primary purpose of this article is to evaluate the economic predictions of the ESO reform in Slovakia based on public expenditure analysis. We focus on the identification of the current expenses of district offices as bodies of local state administration in the period from 2011 to 2022, and evaluate whether, in the long term, the ESO reform has fulfilled one of its primary objectives of reducing public expenditures. The article is intended to open and expand the neglected scientific discussion surrounding public spending and the efficiency of district offices as bodies of local state administration in Slovakia. The study points to the fact that the ESO reform did not bring about the fundamental optimization of public expenditures. On the contrary, the results of the article point to the continuously increasing year-on-year expenditures of district offices – from the most significant percentage increase in 2014, when the reform began to be fully implemented (+128.4%), to the smallest increase (+1.54%) in 2016. The reduction of current expenses for district offices occurred only in the transitional years of 2013 (–3.68%) and 2022 (–48.30%).*

Introduction

State administration is an integral component of political and public administration structures. Its heterogeneous character represents a set of the most widespread activities implemented by state bodies. Its comprehensive scope also intervenes in all domestic and external affairs and ensures the complete fulfilment of the public interest in society (Dean 2023, 1). We may also look at state administration from a static perspective. In this sense, it represents an institutional base serving the ruling political parties. In the European system, ministries create individual national policies, prepare draft laws, and produce other strategic documentation. In this context, state administration goes beyond the exclusive understanding of the public administration subsystem and affects the functioning of the wider political sphere (Vági and Kasemets 2017, 10; Peters et al. 2022, 963).

In the Slovak Republic, public administration is divided into central and local state administration and territorial self-government. Regional self-government consists of eight self-government regions, and local self-government includes approximately 2,900 municipalities. The central state administration comprises 15 ministry departments and other state administration authorities with nationwide competences. At the level of territorial state administration, there are district offices and other specialized offices of local state administration (Nemec 2018, 117).

The district offices, a body of local state administration in Slovakia, are the subject of this contribution. The article's primary purpose is to evaluate the economic predictions of the ESO reform based on public expenditure analysis. We focus on the identification of the current expenses of district offices as bodies of local state administration in Slovakia in the period from 2011 to 2022, and evaluate whether, in the long term, the ESO reform has fulfilled one of its primary objectives of reducing public expenditures. The paper summarizes the management of district offices in Slovakia and points to the effects of the ESO reform over a period of 10 years. Subsequently, we quantify individual interannual percentage changes in the volume of current expenditures. We also try to identify correlations or differences in public expenditures when comparing development trends between the current expenses of the Ministry of the Interior of the Slovak Republic and the current expenses of territorial self-governments in Slovakia. This issue is largely neglected in the country – during the literature review, we could not point to any similar study focusing on the financing of district offices as bodies of local state administration or other sub-areas of state administration. Therefore, we assume that after 10 years of the existence of district offices, this is the first comparison of public expenditures which includes district offices in its scope, and which examines and elaborates on the issue of local state administration from a fiscal perspective.

Theory and the ESO reform

Reforms and reorganization processes are integral to innovating and modifying public administration structures. They are applied to streamline the implementation of individual state policies, the provision of public services, and the increase in the overall quality of the redistribution of public goods, which is comprehensively beneficial for the whole of society (Zhao et al. 2021, 2). However, it is necessary to point out that state administration or self-government reform also represents an individual state policy through which political elites focus on changing the institutional structure, competence frameworks, and other administrative mechanisms (Saputra 2022, 88). Even today, well-developed models of public administration are being reformed, but these modifications often feature dimensions of a particular institution, competence adjustment, or innovations in management (Cohen 2022, 406). To correctly understand the short-term and long-term effects of public administration reforms, it is necessary to follow their development trajectory (Capano 2021, 13) and the specifics of a particular state.

The implementation of reforms at the level of local state administration has been the subject of many European countries in the recent past. Relatively large-scale changes in the system of organization of local state administration have taken place in several countries since 2010. While territorial state administration was abolished in Lithuania in 2010 (Guogis et al. 2023, 325), in Hungary it was established in 2012 (Hegyesi 2022, 48), and Slovak district offices were created in 2013 (Šamalík and Horváth 2022, 133). In the case of the Czech Republic, district offices were abolished in 2003 (Špaček 2018, 157). Territorial state administration bodies were also abolished in Croatia in 2022 (Lopižić and Barta 2022, 252).

The ESO (Efficient, Reliable and Open State Administration) reform represented a qualitative public administration reform, the primary purpose of which was to relieve the state and citizens by cutting down on overspending. Its objective was the integration of the institutional structure of offices of specialized local state administration under one general district office. Other focal aims included, e.g., reducing the number of civil servants and creating new communication channels across the entire public sector. Act No. 180/2013 Coll. Organisation of Local State Administration as a legislative pillar was enacted on October 1, 2013, and established the institutional structure of 72 district offices with a general scope. District offices carry out the responsibilities of trade, personal documents, the environment, crisis management, forestry, cadastral matters, offences, and other partial agendas, e.g., in transport, land, or state defense (Ministry of Interior of the Slovak Republic 2024).

The current structure of district offices is divided into three categories. District offices in regional towns have the most extensive scope. District offices of the second type have fewer competencies, and territorially minor districts of the third degree have only four primary agendas. The organizational structure of district offices was also centralized – e.g.,

cadastral offices (Cepek et al. 2018, 166). The required financial savings should have been achieved by establishing categories of district offices, distributing competencies between three levels, and centralizing them under one general office.

The initial intention of the reform was of an economic nature. This arose because of the economic recession, to which the government responded by trying to save public expenses in the state administration (Hamalová et al. 2014, 264). In 2012, before the implementation of the ESO reform, the ruling government announced savings of approximately €100 million and a complete streamlining of the financing of local state administration authorities in the period from 2013 to 2016 (Ministry of Interior of the Slovak Republic 2013b). However, they did not specify the exact mechanism for achieving such savings. As a rule, these were general proposals such as reducing the number of employees, the rationalization of state administration tasks, or relief from bureaucracy. On the other hand, many phases of the reform were applied through internal regulations, which reduced the possibility of monitoring progress (Hrtánek 2013). In the initial stages of the reform, it became the subject of professional debate due to numerous and unsystematic organizational changes. Cirner (2013) pointed to several shortcomings associated with institutional and organizational modifications when, in particular, the initial plans of the reform indicated a significantly expanded competence framework for district offices. From the point of view of our study, it can be predicted that if such changes in the content of the reform had not occurred in the initial stages of its implementation, the total expenditures of the district offices would have been even more significant.

Methodology and data

The primary purpose of this article is to evaluate the economic predictions of the ESO reform based on public expenditure analysis. One of the main objectives of the reform was the reduction of public expenses intended to carry out the competencies of district offices. A 10-year period offers a sufficient time frame for evaluating the entire process of optimizing financing and comparing the development of current expenses. We had to adapt several research parameters to the conditions of Slovak local state administration and the ESO reform, including both the methodological technique that we propose and apply in this contribution and the criteria of the ESO reform. However, this creates the possibility of further modification and adaptation to the evaluation of other reforms.

We define the time frame of the research as the period from 2011 to 2022. The ESO reform came into effect on October 1, 2013, a transitional year, while the initial change in public spending was only reflected in 2014. The years 2011 and 2012, when county offices (predecessors of district offices) were in operation, allow us to compare the original current expenses and the changes caused by the ESO reform. On the contrary, 2022 represents the last annual report available from the district offices. We also specify the basal value,

meaning the point from which we will examine all subsequent changes and developments in current expenses in order to carry out the competencies of district offices. The basal value was €46.65 million in 2012, the last year before the ESO reform was implemented.

To achieve the primary purpose of the study, we operated with one independent variable: the impact of implementing the ESO reform on current expenses to carry out the competencies of district offices. New processes and mechanisms assumed that public expenditures intended to carry out the competencies of district offices would be cut. The primary scientific method of the study was a comparison focused on the development and volume of current expenses. The comparison aimed to examine individual interannual changes and development trends in current expenses intended to carry out the competencies of district offices from 2011 to 2022.

For our study, we refer only to current expenses intended to carry out the competencies of district offices. This is because current expenses are more stable and may reflect the development of public expenditures more precisely. In the period under investigation, district office capital expenditures changed dynamically, mainly because district office buildings were renovated, representing a relatively robust expenditure. Thus, capital expenses could indicate various redundant and often significant changes. Capital expenses are also not directly related to expenditures to carry out the competencies of district offices. The dominant component of current expenses is wages and taxes, which create approximately 60%–70% of total current expenses. The next part of expenditures are central subsidies intended to be redistributed to municipalities by district offices to ensure the transferred scope of state administration, amounting to approximately 12%–13%. The third significant item of current expenses is carrying out the competencies of district offices. These competencies include activities in hearing offences, trade, real estate cadaster, forestry, state defense, crisis management, transport, and other sub-agendas.

The primary data sources for the analysis in this paper are the annual reports of the Ministry of the Interior of the Slovak Republic. Through the annual reports, we identified the total current expenses to carry out the competencies of district offices as Slovak bodies of local state administration. Within the annual reports, the district offices present a special expenditure section. According to the economic and functional classification, this is named: Class 01.1.1 Executive and legislative authorities. Subsequently, we extracted only a group of current expenses. In this way, we wanted to identify and compare current expenses.

Subsequently, we focused on quantifying the percentage share of current expenses of district offices from the current expenses of the Ministry of Interior of the Slovak Republic. District offices are subordinate organizations of the Ministry of Interior. The percentage share indicates an accurate representation of the increase and decrease of public spending in the ministry. We could identify and compare the impacts of the ESO reform and current expenses for carrying out the competencies of district offices to the budget of the Ministry of Interior of the Slovak Republic. We used the following formula for quantification:

percentage share % $= (\frac{Current\ expenses\ to\ carry\ out\ the\ competencies\ of\ district\ offices\ in\ year\ y}{expenses\ of\ the\ Ministry\ of\ Interior\ of\ the\ Slovak\ Republic\ in\ year\ y}) \times 100$ (1)

In order to precisely understand the development trajectory of current expenses related to ensuring the activities of district offices, we focused on a comparison between the Ministry of Interior of the Slovak Republic and territorial self-governments (local and regional). Current expenses of the Ministry of the Interior indicated the trend and the impact of the financial burden of district offices on the Ministry of Interior's budget. With every change in expenses to carry out the competencies of district offices, there may be an analogous change in the expenditures of the Ministry of Interior, which allows the observation of trends in current expenses. We chose a similar approach and focused on summarizing the current expenses of territorial self-governments. These are provided in Slovakia by the Iness statistical application. District offices, as bodies of territorial state administration, regularly cooperate with territorial self-governments to fulfil transferred state administration competencies and other areas of multi-level governing. Quantification was based on the following formula, which we applied to current expenses to carry out the competencies of district offices, the Ministry of Interior of the Slovak Republic, and accumulated current expenses of local and regional self-governments:

percentage increase/decrease % $= (\frac{Current\ expenses\ in\ the\ previous\ year\ y}{expenses\ in\ the\ following\ year\ y} - 1) \times 100$ (2)

Results

District offices in Slovakia, as local state administration bodies, are subordinate organizations of the Ministry of Interior of the Slovak Republic. Thus, district offices do not have budgets, but are financed by the ministry (Act No. 180/2013 Coll. Organisation of Local State Administration 2023).
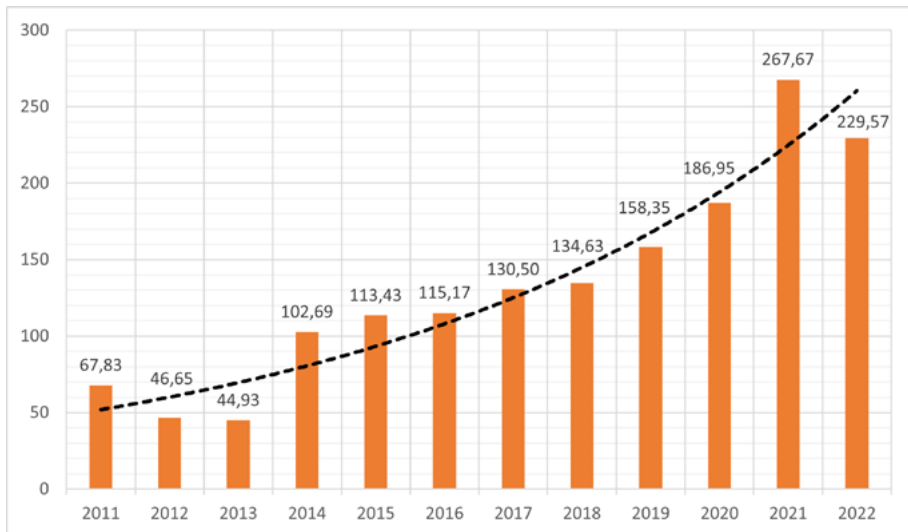
Figure 1. Current expenses to carry out the competencies of district offices (million €)
Source: authors' creation based on the Ministry of Interior of the Slovak Republic (2023)

Figure 1 illustrates the total current expenses to carry out the competencies of district offices. In 2013, when the ESO reform began to be applied, a decrease in expenses was identified. However, this was a transitional year, as the reform only took effect on October 1, 2013. In the following years, when the reform took effect in full, current expenses escalated markedly. During the next period, expenses increased relatively continuously. A massive increase was observed in 2021, when expenditures increased by more than €80 million, which was caused by the COVID-19 pandemic. On the contrary, a year-on-year decrease occurred between 2021 and 2022, when pandemic subsidies decreased.

The figure above also illustrates the years 2011 and 2012, when county offices existed as predecessors of district offices. We examine them to compare the previous state with the period after the implementation of the reform. The basal year of 2012 represents a year-on-year decrease in expenses. This occurred because the county offices financed excessive expenses due to failed court cases in 2011. Therefore, 2012 was a stabilized period in which the standard activities of the county offices were carried out. On the contrary, it is impossible to observe guaranteed deceleration, stabilization, or reduction in any phase of expense development. This is precisely what the ESO reform aimed to address.

The first noticeable decreases occurred in 2012 and 2013, while 2011 was problematic as it was the year in which county offices had to refund approximately €21.22 million for lost lawsuits. In the following periods, there was a common increase in all types of expenses, whether in wages, current expenses to carry out the competencies of district offices,

expenditures for transferred competencies of state administration for local governments, etc. However, it is possible to perceive the increase in wage costs rather negatively, as this constitutes the most of all expenses. Labor costs were the most problematic increase in expenses in 2014, when they grew from €18 million to €55 million. This phenomenon was caused by the expansion of personnel apparatus among district offices, although the ESO reform was supposed to reduce the number of officials.

In the following period, there was a complex and gradual increase in all expenditure items, which was also associated with economic growth in society. In 2020 and 2021, extraordinary expenses related to the COVID-19 pandemic were included in annual reports. District offices redistributed €88.4 million more than normal in 2021. These were expenses related to testing, vaccination, and other expenditures.
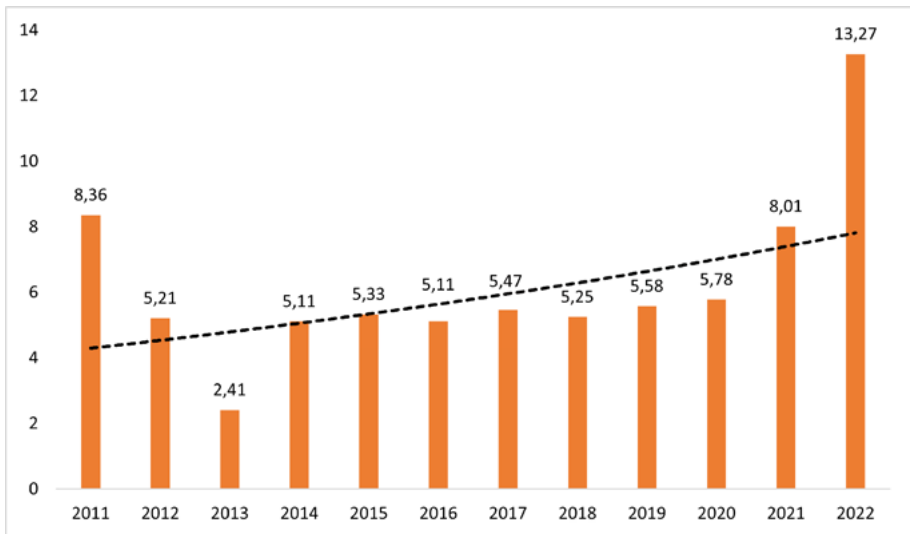
Figure 2. The percentage share of current expenses for the scope of district offices from the Ministry of Interior of the Slovak Republic's budget (%)

Source: authors' creation based on the Ministry of Interior of the Slovak Republic (2023)

Figure 2 illustrates the percentage share of current expenses for the scope of district offices from the Ministry of the Interior of the Slovak Republic's budget. The examined period shows an average share of 5.55%. In individual years, the total amount changed slightly. In 2011, county offices had to overfund lost lawsuits, significantly increasing current expenses. On the contrary, in 2021, when a higher percentage was observed, the district offices carried out new tasks related to the COVID-19 pandemic. A fundamental change came in 2022: although spending was around the same as in 2021, the overall spending of the ministry decreased rapidly, which caused a significant percentage burden. The percentage

value was lower in 2013, the transition period before the ESO reform. Except for 2022, the district offices did not have a noticeable impact on the current expenses of the ministry despite the increasing volume of their expenses.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
MI SR	9,4%	109,9%	7,78%	6,02%	6%	5,76%	9,39%	10,74%	14,03%	3,42%	-48,30%
DO	-31,22%	-3,68%	128,54%	10,45%	1,54%	13,30%	3,16%	17,61%	18,06%	43,17%	-14,23%
CE SG	2,14%	2,66%	1,48%	1,53%	-5,61%	2,5%	1,9%	4,94%	24,3%	12,2%	0,72%
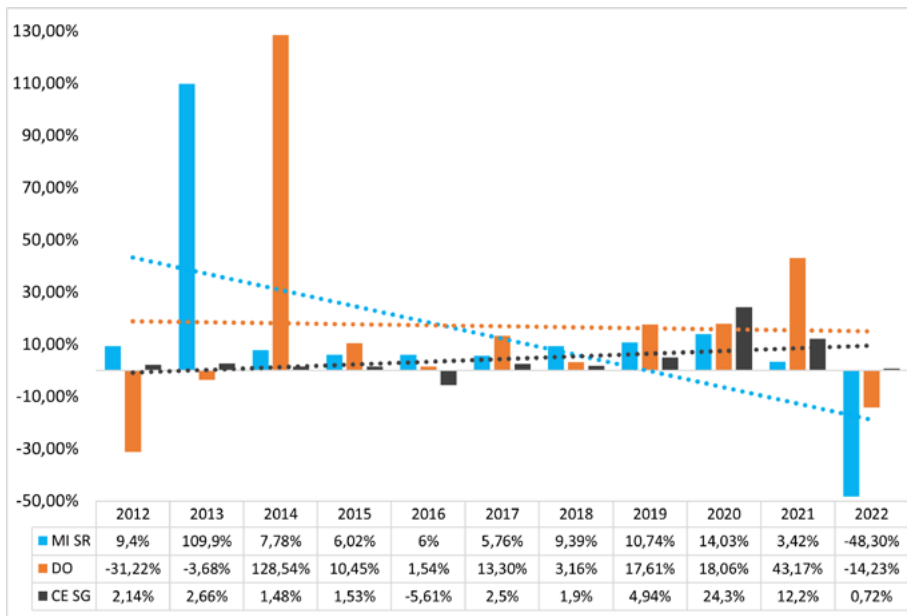
Figure 3. Trends in the current expenses of the Ministry of Interior of the Slovak Republic (MI SR), district offices (DO), and accumulated current expenses of territorial self-governments (CE SG)

Source: Authors' creation based on the Ministry of Interior of the Slovak Republic (2023) and Iness, 2023.

Figure 3 illustrates the trends in the current expenses of the Ministry of Interior of the Slovak Republic, district offices, and accumulated current expenses of territorial self-governments. All three examined expenses have continuously increased. However, it is possible to capture interannual changes when increases or decreases in current expenses were more significant. In the case of district offices, this mainly occurred in 2014, when the ESO reform took place. There was a more significant escalation in 2020 and 2021 for all current expenses investigated. This was caused by the COVID-19 pandemic, when district offices redistributed more subsidies among local self-governments. In 2022, the validity of many regulations ended. Therefore, significantly decreasing current expenses can be observed, especially for district offices and the Ministry of Interior of the Slovak Republic.

Discussion

As part of this discussion, several findings can be arrived at. In the context of the primary purpose of our study and the comparison of the economic prediction and the actual impact of the ESO reform, it is possible to state that the opposite effect from that intended occurred regarding expenses. In the first year in which the reform took full effect (2014), current expenses escalated significantly (+128.54%). However, Capano (2021) points out that the development tendency may provide the actual effects of the reform, e.g., financial savings, in 2 or 3 years. In some cases, this many only be observed across a long-term time interval. A similar situation occurred in a case study by Hauptmeier, Heipertz, and Schuknecht (2006). They noted that the effects of reforms become apparent only after some time, and in some cases, they may imply increased costs in the initial phase of the reform. This trend was observed in less frequently reforming countries, a group into which Slovakia may categorized. However, within our study, the ESO reform had a quite clearly negative impact on the current expenses of district offices, and the economic predictions of the government implementing the reform were not fulfilled. Although there were also interannual changes which we may consider as specific stabilized increases in 2016 (+1.54%) and 2018 (+3.16%), there has been no significant decrease since the basal year of 2012. Subsequently, the development trend culminated only with the COVID-19 pandemic, when there was another massive increase of 43.17% between 2020 and 2021.

The partial results also indicate that the development of the current expenses of territorial self-government generally proceeds continuously along a growth trajectory. There was a significant increase in district offices in 2014, when the effect of the ESO reform became apparent for the first time. In the Ministry of the Interior, there have been massive changes in selected cases caused by an unexpected societal situation – for example, an immigration crisis, the COVID-19 pandemic, etc. In principle, when examining interannual changes between three groups of expenses, a similar trend may only be observed during the COVID-19 pandemic. On the one hand, increased expenses (2020 and 2021) are specific. On the other hand, the reduction after the release of anti-pandemic regulations (2022) occurred only in the case of district offices and the Ministry of Interior. In the case of territorial self-governments, the increase continued even into 2022.

For our study, we investigated only current expenses. In some years, excessive changes could occur in the total volume accounting for capital expenditures, which could change the partial results. As we pointed out in the methodology of this paper, the average percentage of the total expenditure on employees is approximately 60%–70%. This share may be identified in the final accounts of the Ministry of Interior in each year. In monetary value, this figure increased from €18 million to €55 million in 2014. We believe that the failure of one of the sub-aims of the reform, i.e., reducing personnel and labor costs, directly affected the primary objective of saving public finances.

We may clearly state that the development trajectory of current expenses intended for

the scope of the district offices in the period from the implementation of the ESO reform between 2013 and 2022 had an escalating tendency. The increasing interannual current expenses prove this. Based on the intentions of our study, it may be concluded that the reform did not fulfil the declared aim of saving public expenditures.

Conclusion

- The ESO reform came into effect on October 1, 2013. This was a first transitional year, and the initial change in public spending was reflected in 2014. It was during this period that the highest historical percentage increase in current expenses on district offices occurred (128.54%).
- Reforms tend to be a financial burden in the initial phases, and their effects are only provable in the long term. In the period until 2022, however, expenses were continuously increased to ensure district office scope. The lowest increase occurred in 2016 (1.54%).
- Another significant escalation was caused by the COVID-19 pandemic, when the competence framework of district offices was expanded and they observed an increase in expenses by 43.17% in 2021. This year represents the largest overall figure for expenses – €267.67 million.
- It is possible to conclude that the development trajectory of current expenses to carry out the competencies of district offices in the period from the implementation of the ESO reform in 2013 to 2022 had an escalating tendency. This can be observed in the increasing interannual changes in current expenses to carry out the competencies of district offices. Based on the intentions of our study, it can be concluded that the reform did not fulfil the objective of saving public expenditures.

Acknowledgements

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ESO REFORMA SLOVAKIJOJE − (NE)SĖKMINGAS KELIAS VIETOS VALSTYBĖS ADMINISTRAVIMO VIEŠŲJŲ IŠLAIDŲ OPTIMIZAVIMUI?

Straipsnio tikslas – įvertinti vykdomos ESO reformos deklaruojamas ekonomines prognozes remiantis viešųjų išlaidų analize. Daugiausia dėmesio skiriama rajonų įstaigų, kaip vietos valstybės administracijos įstaigų Slovakijoje, einamųjų išlaidų identifikavimui 2011–2022 m. laikotarpiu. Vertinama, ar ESO reforma ilgalaikėje perspektyvoje pasiekė vieną iš pagrindinių tikslų – sumažinti viešąsias išlaidas. Straipsnis skirtas atverti ir papildyti menkai plėtotą mokslinę diskusiją apie valstybės išlaidas ir rajonų biurų, kaip vietos valstybės administracijos institucijų, efektyvumą Slovakijoje. Mokslinis tyrimas atkreipia dėmesį į tai, kad ESO reforma nepadėjo optimizuoti esminių valstybės išlaidų. Priešingai, straipsnio rezultatai rodo, kad rajono įstaigų išlaidos kasmet didėja nuo mažiausios vertės (+1,54 proc.) 2016 m. iki didžiausio procentinio (+128,4 proc.) padidėjimo 2014 m., kai reforma buvo pradėta visapusiškai įgyvendinti. Einamosios išlaidos rajonų įstaigoms sumažėjo tik pereinamaisiais 2013 m. (−3,68 proc.) ir 2022 m. (−48,30 proc.).

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PROJECT MANAGEMENT TOOLS FOR THE EFFICIENT USE OF RESOURCES IN THE PUBLIC SECTOR

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Abstract. *The relevance of this research lies in the necessity of applying strategies to increase the efficiency of resource usage in the public sector. One of these strategies is project management. Project management implies the development and implementation of projects which are time- and resource-limited. A project has distinct targets, task decomposition, and certain measures of success (targets to be achieved). In public management, projects are often implemented to manage investments and to achieve a high social impact considering the conservation of resources. Projects are also executed to accommodate strategic planning in the development of specific branches and sectors. The objective of this research is the evaluation of project management in order to increase the efficiency of resource use in the Republic of Kazakhstan. To achieve the objective, the general principles of the project management approach as a tool for increasing the efficiency of resource usage in public management are given consideration, and the implementation of the project management approach in strategic planning and public-private partnership is assessed.*

Keywords: *project management; national projects; state programs; public-private partnership projects; resource management; program-target management; resource efficiency.*

Reikšminiai žodžiai: *projektų valdymas; nacionaliniai projektai; valstybės programos; viešojo ir privačiojo sektorių partnerystės projektai; išteklių valdymas; programos taikinio valdymas; išteklių efektyvumas.*

Introduction

The relevance of this research lies in the achievement of a large number of socially significant objectives funded by the state administrative body and enabled by increased efficiency of resource use. In this case, project management works as a tool for increasing the efficiency of resource use. The project itself is a time-limited set of acts which have

a distinct and measurable target, deadlines, resources, and person responsible for implementation (Radujković and Sjekavica 2017, 608). The project is supposed to include a set of operations intended to achieve its objectives considering efficient resource use. The set of operations mentioned above are planned in such a way that the tasks meet a target date (Müller 2023, 14–15). Project management in the public sector is also used in order to control changes in the work of public authorities, to achieve the social significance of investment activities, and to enable strategic management (via the creation of large-scale development projects) (Tileubayeva et al. 2017, 147). Taking this into account, project management can be considered from different perspectives. The project approach has been applied in public management in economically developed countries such as Japan, Canada, and the United Kingdom (Aleinikova et al. 2020, 565–567; Kuntuov and Abil 2023, 155–156). In Kazakhstan, before 2021 project management was mainly connected with investment activity (including public-private partnership), managing social changes, and other local projects implemented by public authorities. However, since 2020 Kazakhstan has begun to transition from accountability management to project management in the main sectors of social and economic development.

The objective of this research is the evaluation of project management in public governance in order to increase the efficiency of resource use in Kazakhstan.

Literature review

The issue of project management in the public sector has not been studied in great depth in the scientific literature. This issue concerns projects that are planned and implemented by public (state and municipal) management bodies.

In academic publications, the definition of the term "public project" has provoked a number of approaches. Krpan et al. (2023, 143) defined a public project as a project that meets the criteria of having a goal and "volume–price–time–quality" constraints, which help to ensure the "optimal spending of budget funds with maximum benefit to society". This therefore requires the high-quality selection of strategic development projects financed from the state or local budget. Gasik (2016, 351) defined a public project as a "project implemented by or with the help of public administration, or the project implemented with the attraction of financial resources from public administration". This is a broad definition which can include different kinds of projects which are implemented in the public sector and correspond with the main specific features of the "project" which were mentioned above: a distinct and measurable target, deadlines, committed resources, and a person responsible for implementation. There is also a similar definition of "community projects," provided by Liviu et al. (2014), which are implemented at the regional or national level. These types of projects involve multiple institutions, not just government organizations. The projects executed by these institutions are implemented in the short-term (most often

around 1 year, while in the case of large-scale work and investments they may take longer). Conversely, strategic long-term projects are similar to programs which include a set of operations, different objectives, and target indicators (Liviu et al. 2014, 1734). Mikkelsen and Røiseland (2024) pointed to specific features of projects in public management, including their orientation towards the public good and the optimal selection of initiatives for implementation in order to maximize the production of public goods, which is the task of public management. Wagner (2022, 6) also pointed out that goal orientation plays a key role in the management of public projects, as these projects are implemented to achieve a socially significant goal (social effect).

Žurga (2018) pointed out that a public project (using the European Union as an example) is a sequence of actions to achieve goals, which consists of the following phases: programming, identification, planning, implementation, and evaluation upon completion. In the European Union, there are projects that are financed by European funds. That is, first, the areas in which projects should be selected to form portfolios must be identified, then the projects themselves are selected, and after planning, they are implemented and must be evaluated for the success of their implementation (Žurga 2018, 147).

Sidorova et al. (2019), Miroshnichenko and Shpiro (2019), and Atamas (2020), who inquired into the matter of project management in the public sector, defined the following types of projects: "strategic development project," "investment project," and "organizational project" (or "change project"). These definitions correspond to short-term, medium-term, and long-term projects in the system of public management. There are also different approaches to defining projects. According to some authors, the word "project" can be considered as a mainly short-term process with a distinct, reachable aim. Strategic projects can be related to longer-term programs, even though they do not include process management – they only represent measures for development. This can be depicted in the following scheme (Figure 1).
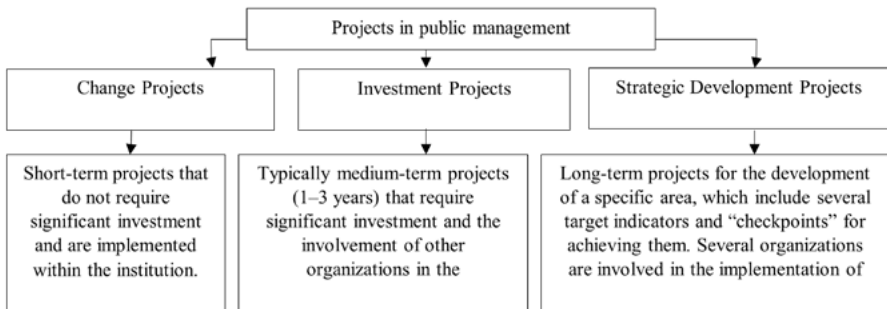

Figure 1. Types of projects in public management

Source: compiled by the author based on Sidorova et al. (2019), Miroshnichenko and Shpiro (2019), and Atamas (2020).

Liviu et al. (2014, 1734) pointed out that public projects can be grouped as follows:

1) the pipeline of projects – a set of projects in one sphere which are implemented sequentially or at the same time in order to achieve closely-related objectives;

2) the program – an implementation schedule for projects, the pipeline of projects, and process management in order to achieve goals in a particular sphere.

Krpan et al. (2023, 143) divided project groups into types:

1) project portfolio: a group of unrelated projects aimed at achieving similar goals with a common source of funding from the budget. The selection of projects in the portfolio and the distribution of resources for funding between them is one of the most important tasks of public management;

2) program: a group of interrelated and complementary projects aimed at achieving one goal;

3) project chain: a group of interrelated projects implemented sequentially (the output results of one project are the input resources for another project).

Common factors in public management include: the requestor – the public authority which approves a project; the executor – the project committee, which works under the supervision of a project manager and implements the necessary project operations; and the project manager – the person responsible for the supervision of the implementation of a project, the allocation of resources, and the results of the work (Gasik 2016, 355).

Considering this, the following important elements of a project are highlighted: target indicators; practical mechanisms for achieving the targets; and the amount of finance (Khalimon et al. 2019, 106).

The application of the project approach is oriented towards development rather than funding, as in particular spheres it is necessary to boost figures, set goals, and achieve them using resources. This is why in Kazakhstan in 2017 (before the application of project management), it was noted that project management with the optimal utilization of budgetary resources would encourage goal setting and achievement in the spheres of education, public health, employment, tourism, sport, etc. (Tileubayeva et al. 2017, 147). The application of projects also facilitates the introduction of new products and the implementation of services in the public sector. The project approach, unlike the traditional process approach, is innovative (Selepe and Thusi 2023, 207). Project management in the public sector makes it possible to develop and improve controllable objects, create new innovations, and at the same time use budgetary resources efficiently or attract extra-budgetary resources (da Assunção Moutinho and Rabechini 2020, 1261). The scheme of project financing and the achievement of socially significant goals can be depicted as follows (Figure 2).

Figure 2. The interrelation of a goal, target indicators, project activities, and project financing

Source: compiled by the author based on Khalimon et al. (2019) and da Assunção Moutinho and Rabechini (2020).

The planning system for short-term projects can be fairly simple. Long-term projects, however, require the following:

1) a common methodology for all the institutions involved in project activities;
2) expert personnel capable of providing project management;
3) the help of a coordinating body – a project management office which can help with project development and the coordination of plans (Project Portfolio Management Office, PPMO) – if necessary (Gasik 2016, 352);
4) program material which helps optimize and accelerate planning processes (Hurochkina and Zvonar 2020, 567).

A supervisory control system for the implementation of projects in the public sector is also required (Khalimon et al. 2019, 106). The scheme of supervision over long-term strategic projects can be depicted as follows (Figure 3):
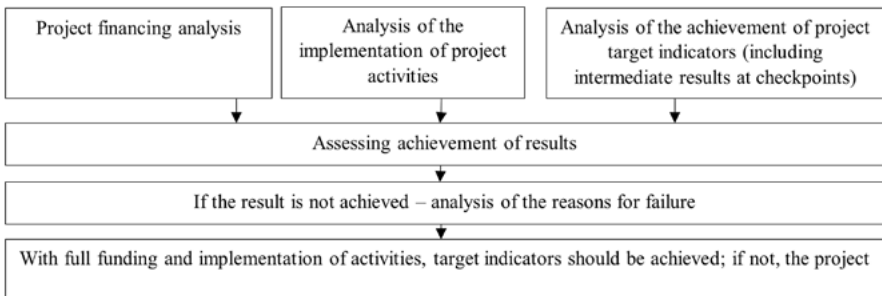

Figure 3. The organization of project implementation supervision
Source: compiled by the author based on Gasik (2016) and Khalimon et al. (2019).

Supervision functions are usually exercised by PPMOs, which assess project success regularly (Gasik 2016, 352).

Materials and Methods

In this study, reports on the implementation of project management in the fields of state strategy planning in Kazakhstan (the operation of national projects) and the application of public-private partnership projects were examined. The data used for the analysis were derived from: the Center of Public-Private Partnership of The Republic of Kazakhstan (https://ppp-center.kz/), and the National Project Management Office of The Republic of Kazakhstan (https://ujo.kz/).

The period under analysis is 2017–2023.

Results

It is necessary to further examine project management in Kazakhstan. Before 2020, there was no particular system of project management in the country. However, when legislative projects such as the "Plan of the Nation – 100 Concrete Steps" (2015) were adopted by the President, it was often mentioned that a management system should be orientated towards results, with standardized and minimum monitoring procedures as well as adequate evaluation and supervision. The "Plan of the Nation" also noted the necessity of cutting some government programs and reconsidering strategic development plans. For this purpose, it was proposed to proceed to project management in public management, but there was not yet a common system of project management (Tileubayeva et al. 2017, 146). However, in 2015 the Law "On public-private partnership" (October, 31, 2015, No. 379-V) was adopted. In this law, the approach towards project management is described. The concept of a project is defined as a set of sequential measures on the implementation of public-private partnership, which are taken in a limited period of time and remain in place until the end of the project, according to the current law and Kazakhstan's budget legislation. In compliance with this law, project activity financing major projects began. These major projects were connected with the achievement of socially significant targets and the attraction of private partners. Although the center of public-private partnership was established in 2008 (after the adoption of the Law of Concessions in 2006), new types of public-private partnership were only integrated into the system in 2015. New types of public-private partnership included life cycle contracts, service contracts, fiduciary management, and contracts for research and development, which complemented concessions. Before 2015, concessions were the only type of public-private partnership. As a result, in Kazakhstan there are currently 1,073 public-private partnership projects, which can be broken down into the following sectors (Figure 4):
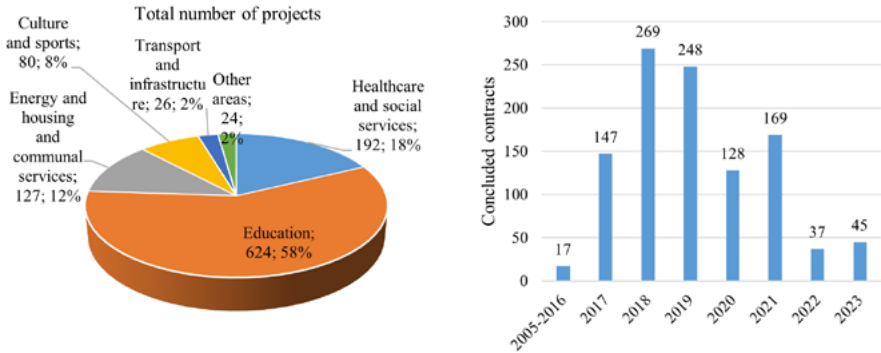
Figure 4. Implementation of public-private partnership projects in Kazakhstan as of August 1, 2024

Source: compiled by the author based on Kazakhstan PPP Center (2024).

Analyzing the diagram, it can be seen that most contracts were concluded in the fields of education and healthcare and social services. The brisk growth of public-private partnerships began in 2017, after the law on public-private partnerships came into effect. Currently, most contracts are concluded at the local level (1,059 contracts with a total value of 0.9 trillion tenge). As for the national level, this comprises only 14 contracts, with a total value of 1.2 trillion tenge (Kazakhstan PPP Center, 2024).

In 2020, it was decided to integrate project management in state strategic planning. On September 1, 2020, the President of the Republic of Kazakhstan stated that "the preparation of government programs with a great number of aggregate targets and indicators should be stopped. It's time to switch to intelligible national projects which are comprehensible for all citizens. The primacy of result over the process should be determined." This resulted in the scuttling of state programs and their substitution for national projects. The list of national projects was established by the Decree of the President of the Republic of Kazakhstan on October 7, 2021. The national projects that were initially included in the list of projects are shown in Figure 5. In 2022, three new, more detailed projects were approved: "Modernization of Rural Healthcare," "National Project in the Field of Education "Comfortable School"," and "National Project in the Field of Communications "Accessible Internet"" (Sembieva and Alikulova 2022, 15). These projects were devised for a period of 5 years (p. 16). In 2023 the National Project Office and project offices of State executive bodies were established.

However, the implementation of the first list of projects faced substantial problems connected with both funding and missing deadlines for the execution of project activities. In Figure 5, the levels of achievement of target indicators for 9 national projects approved in 2021 are shown.

Figure 5. The levels of achievement of target indicators in the 9 national projects of the Republic of Kazakhstan approved in 2021

Source: compiled by the author based on NPO of the Republic of Kazakhstan (2023).

It can be seen from Figure 5 that the levels of achievement of target indicators in 2022 were worse than in 2021. Complete success was not achieved by any project. In contrast with 2021, there was a decrease in the efficiency of national project implementation in 2022 (with the exception of the "Green Kazakhstan" project). In addition, the level of efficiency of project implementation was low. The implementation of actions in national projects is depicted in Figure 6.
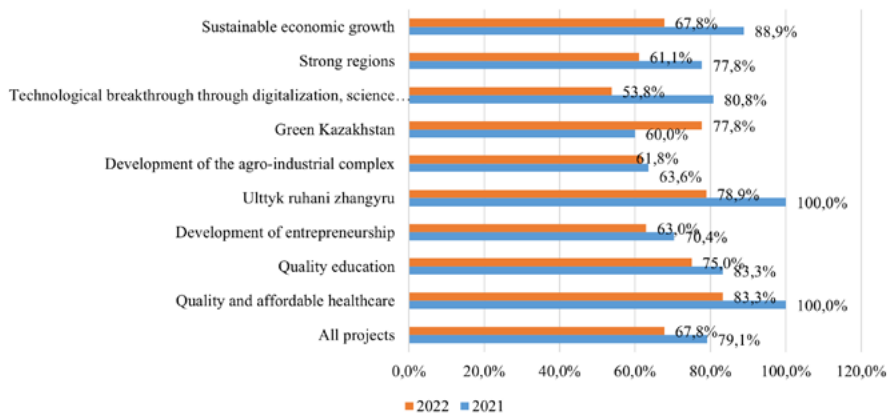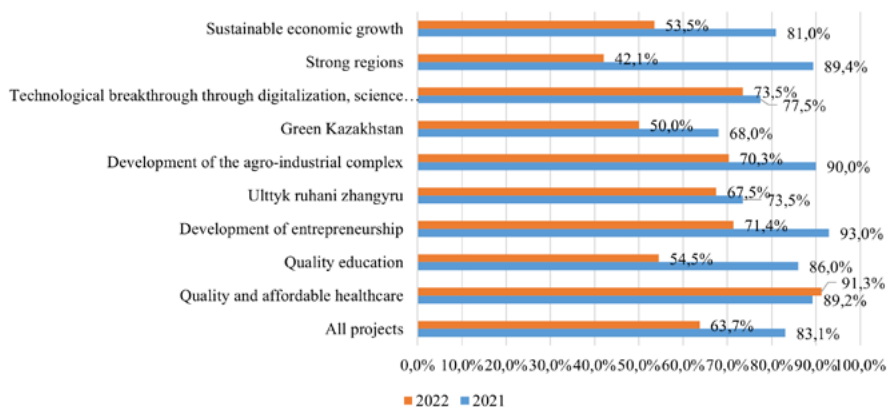

Figure 6. The implementation of actions in the 9 national projects of the Republic of Kazakhstan approved in 2021

Source: compiled by the author based on NPO of the Republic of Kazakhstan (2023).

Figure 6 also shows the decline in the implementation of national projects. In 2021, this figure for all projects was 83.1%, but in 2022 it fell to only 63.7%. This is connected with the underfinancing of projects (though in 2021 funding is 90.8% , and in 2022 financing amounted to 94.5%, without taking into account the influence of inflation). It is also related to a slow policy decision-making process, which is aligned with the implementation of project actions. Taking into account all of these points of weakness, the Government of Kazakhstan issued decree No. 828 "On recognition of invalidation of some decisions of the Government of Kazakhstan" on September 22, 2023. The decree shut down 9 projects; hence, only 3 projects approved in 2022–2023 are now officially being implemented.

Discussion

The negative experience of Kazakhstan in the implementation of national strategic management projects along with the full substitution of state programs for national projects have come under discussion in numerous scientific publications. The flaws of national projects rejected in 2023 have also been pointed out. Akhmetov, Evniev, Abil, and Zhumagali (2023) highlighted the following flaws: the low skill level and lack of expertise among civil servants working in the sphere of project management; the lack of a centrally directed IT solution system which could manage projects and supervise them; challenges in the relevance and reliability of data in the information project management system; weak interdepartmental and interpectoral interaction (including interaction among heads of state bodies) when planning projects; the lack of public access to the project offices of state bodies (lack of public reports); and the lack of access to the project offices of state bodies for the expert community (Akhmetov et al. 2023, 30–33).

There have also been concerns that these national projects were too complex in structure as there were too many target indicators and approved actions. All of these weaknesses were evidenced across the previously existing national programs (Askerov 2024). It was thus decided to cease working with vast, complex projects, and instead to work with more narrowly focused projects. This decision was oriented towards defining clear goals and objectives, aligning the responsibilities of state bodies in particular directions.

Akhmetov et al. (2023) also suggested the improvement of the project management system in the following directions:

1) the establishment of a "competence center" based on the National Project Management Office;
2) capacity building of civil servants in the sphere of project management along with the increase in their motivation to take part in project activity;
3) systematized cooperation between state bodies' project offices;
4) the integration, development, and enhancement of the unified management and planning system;

5) the enhancement of collaboration with the expert community;
6) the provision of access to project offices to society (Akhmetov et al. 2023, 33).

It is also important to take into account the experience of foreign countries in this sphere. In the UK, the Government Major Projects Portfolio, a pipeline of national projects, has been successfully applied for more than 10 years. Projects which are included in the pipeline for prioritized selection are analyzed by certain criteria, and are approved only if more than one department is working on them, demand a rise in budget expenditures, risk unwanted rises in expenditures, or require changes in the law. In addition, much attention is paid to the systematic analysis of project execution, including interim results. Based on this analysis, a project can be rejected or changed (Gerasimova and Ivchenko, 2019).

In Kazakhstan, the project management system is now changing. Currently, the concept of a three-tiered system of project management is under consideration:

1) at the highest tier – the pipeline of project management through the implementation of national-level priorities with the help of the Government Office of the Republic of Kazakhstan;
2) at the middle tier – program management in state bodies, with the implementation of the national planning system;
3) at the lowest tier – project management which is implemented by project teams (where the project becomes a part of a program) within particular short-term goals (Schwarzkopf 2023)

In 2024, legislation was introduced that defines the terms "project," "pipeline of projects," and "state program." The interconnection of these terms was also introduced in the legislation. The proposed law also suggested the development of the legal regulation of project activity within the Administrative Procedure Code of the Republic of Kazakhstan (the procedure code was adopted in 2020, and now, in 2024, there are minimum regulations of project management, as set out in Article 3-1 of the Law of the Republic of Kazakhstan "On Introducing Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan on Project Management Issues").

Conclusions

1. Increasing the efficiency of resource use in the public sector can be achieved by using a project approach to management, when quantitatively measurable goals are set and actions to achieve them, deadlines, and resources are planned. Projects are selected for project portfolios based on the principle of maximum social efficiency. The success of a project is determined by the results of monitoring and analysis, and depends on achieving goals while observing resource and deadline constraints. Therefore, projects are implemented both for change and investment management and for strategic public administration.

2. In 2015, the necessity of transitioning to project management was stated in the Republic of Kazakhstan. This transition began in several sectors – for example, in public-private partnership, where the adoption of the law on public-private partnership fostered the number of projects implemented in this sphere. However, it was not until 2020 that it was decided to replace state programs with national projects in the strategic planning system. In total, 10 projects were approved in 2021; in 2022–2023, 3 of them (more detailed and narrow-focused) were singled out.

3. The repeated failure to achieve target indicators and the ongoing non-execution of activities in projects adopted in 2021 led to their cancellation. This decision was based on 2021 results, although the 2022 indicators were even worse. Only 3 narrow projects were retained. Now, the establishment of a three-tiered system of project management (pipelines of projects–programs–projects) is under discussion.

4. Challenges with the implementation of national projects approved in 2021 were connected with the complexity of these projects, as well as with poor project work organization at the first stage of project management development. Poorly organized interactions between state bodies, project offices, and the expert community was another reason for underachievement and underperformance. At present, the development of the legal regulation of project activity within the Administrative Procedure Code of the Republic of Kazakhstan is under discussion. The improvement of the organization of project office functions and the development of an analysis system to select and evaluate them are currently being discussed.

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Nurlan Kuntuov

PROJEKTŲ VALDYMO ĮRANKIAI, SKIRTI EFEKTYVIAI NAUDOTI IŠTEKLIUS VIEŠAJAME SEKTORIUJE

Anotacija. Tyrimo aktualumas yra būtinybė pritaikyti strategijas siekiant padidinti išteklių naudojimo efektyvumą viešajame sektoriuje. Viena iš šių strategijų yra projektų valdymas. Projektų valdymas reiškia projektų, kurie yra riboti laike ir ištekliuose, plėtrą ir įgyvendinimą. Projekto tikslai skirtingi, nevienodos užduotys, jam būdingos tam tikros sėkmės (tikslų pasiekimų) priemonės. Viešajame valdyme projektai dažnai įgyvendinami siekiant valdyti investicijas, tikintis reikšmingo socialinio poveikio, atsižvelgiant į išteklių taupymą. Projektai taip pat vykdomi siekiant įgyvendinti strateginį konkrečių šakų ir sektorių plėtros planavimą. Tyrimo tikslas yra projekto valdymo vertinimas siekiant padidinti išteklių naudojimo efektyvumą Kazachstano Respublikoje. Siekiant tikslo straipsnyje aptariami bendrieji projekto valdymo principai kaip priemonė didinti išteklių naudojimo viešajame valdyme efektyvumą, taip pat įgyvendinti projekto valdymo metodą, strateginį jo planavimą viešajame ir privačiame sektoriuose.

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HOW POLITICAL SKILLS SHAPE INNOVATIVE WORK BEHAVIOR IN LOCAL GOVERNMENT: THE MEDIATING EFFECT OF JOB SATISFACTION

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Abstract. *This study aims to explore the relationship between political skills and innovative work behavior, with job satisfaction as a mediating factor. The research focuses on public sector organizations, specifically the Government of Kupang City, Indonesia. While numerous previous studies have examined the influence of political skills on innovative work behavior, few have investigated the role of job satisfaction as a mediating factor in this relationship. The respondents in this study comprised 657 employees working in the offices of the Government of Kupang City. Data collection was conducted using a closed-ended questionnaire that was validated for reliability. A Likert scale ranging from 1 to 5 was employed in the questionnaire. Data analysis techniques included descriptive analysis and Structural Equation Modeling*

(SEM). The findings reveal that job satisfaction plays a crucial role as a mediating factor, strengthening the positive impact of employees' political skills on innovative work behavior. The novelty of this study lies in how it uncovers the mediating mechanism of job satisfaction in the relationship between political skills and innovative work behavior, which has not been extensively studied in public sector organizations in Indonesia. Public sector organizations should enhance employees' political skills and prioritize their job satisfaction to foster organizational innovation. The findings of this study can serve as a consideration in formulating human resource management strategies to promote innovative work behavior among employees.

Keywords: *political skills; job satisfaction; innovative work behavior; local government; Indonesia.*
Reikšminiai žodžiai: *politiniai įgūdžiai; pasitenkinimas darbu; novatoriškas darbo elgesys; vietos valdžia; Indonezija.*

Introduction

In recent years, the role of innovation in organizational success in public sector organizations has become increasingly evident. Innovation enables organizations to continuously evolve to meet societal needs by improving service quality and operational efficiency (Pradana, Kumorotomo, and Susanto 2023; Pradana 2024). The implementation of the Electronic-Based Government System (SPBE) demonstrates significant progress in innovation within Indonesia. According to a survey conducted by the United Nations Department of Economic and Social Affairs (UNDESA) in the 2022 E-Government Survey entitled "The Future of Digital Government," Indonesia ranked 77th out of 193 UN member states in SPBE implementation, an improvement of 11 positions from its previous rank of 88 in 2020.

The central government's efforts to foster innovation are supported and followed by local and city governments across Indonesia, including the government of Kupang City (Pradana, Susanto, and Kumorotomo 2022). The Kupang City Government has launched several application programs to support public services and improve the SPBE index in the Province of East Nusa Tenggara (NTT). In 2022, Kupang City's SPBE Index score was 2.05, reflecting an increase of 0.58 from 2019. Innovation within the Kupang City Government continues, supporting the Information and Communication Technology (ICT) revolution and aiming to provide effective and efficient services to other government agencies, business actors, and the general public.

The rapid development of public sector organizations today underscores the crucial role of innovation (de Vries, Tummers, and Bekkers 2018). This is evidenced by the implementation of SPBE to keep pace with changing times, driven by employee innovation. The primary key to innovation within these organizations lies with employees (Susanto 2020).

One strategy to enable employees to navigate the complexities of organizational dynamics is the fostering of strong political skills. The objective here is for employees to effectively influence stakeholders concerning new ideas and foster an environment conducive to innovation.

Various studies have demonstrated that political skills are vital for employees to engage in workplace innovation. Political skills enable employees to subtly influence colleagues, supervisors, and subordinates to achieve desired organizational goals, often through behaviors perceived as sincere and trustworthy (Kolodinsky, Treadway, and Ferris 2007; Treadway et al. 2007; Detienne and Teshima 2007). Informal influence can significantly impact organizational decision-making, making political skills highly valuable for employees in influencing such decisions.

Treadway et al. (2005) and Brouer et al. (2009) argued that political skills are associated with various positive outcomes, including reduced organizational cynicism, increased trust in leadership, and enhanced quality of relationships between diverse groups. These skills are essential in explaining employee performance outcomes and organizational effectiveness. According to Ferris et al. (2002), political skills combine social intelligence with behavioral abilities that foster confidence, sincerity, and authenticity. Subtly influencing others requires exceptional communication skills, necessitating behavioral adaptation to elicit desired responses from others (Kimura 2015; Perrewé et al. 2005).

Job satisfaction also plays a role in either strengthening or weakening the relationship between political skills and innovative work behavior. Job satisfaction creates a sustainable work environment, reduces employee turnover, and enhances employee loyalty (Heimerl et al. 2020). Employees who are satisfied with various workplace factors such as the work environment, working conditions, and communication styles tend to demonstrate high commitment to their work and engage in extra-role behaviors (Sabuhari et al. 2020; Mira, Choong, and Thim 2019). Innovative work behavior encompasses activities such as generating, promoting, and implementing ideas to improve both employee and organizational performance. Susanto (2020) added that innovative work behavior results from creative thinking and the implementation of new ideas that benefit job roles, work groups, and organizations.

This study explores the mediating role of job satisfaction in the relationship between political skills and innovative work behavior in public sector organizations within the Government of Kupang City, Indonesia. It seeks to address the gap in understanding how political skills and job satisfaction influence innovative work behavior. The findings of this study are expected to contribute practical knowledge and provide recommendations for public sector organizations to cultivate a work environment that supports innovation and improves public services.

Literature Review

Political Skill

Organizations function as political arenas in which individuals with conflicting interests use persuasion, manipulation, and negotiation to achieve goals (Kimura 2013; Buchanan et al. 2005). Political skills are vital for success, enabling individuals to understand and influence others to align their behavior with personal and organizational objectives (Ferris et al. 2019). These skills encompass four dimensions: social astuteness, interpersonal influence, networking ability, and apparent sincerity, operating at both the cognitive (intra-psychic) and behavioral (inter-psychic) levels (Summers et al. 2020). They also intersect with emotional intelligence, reflecting the ability to adapt behavior to social contexts (Joseph and Newman 2010). Individuals with strong political skills exhibit self-awareness, strategic interaction, and adaptability, which are essential for navigating complex environments and achieving personal and organizational success.

Job Satisfaction

Job satisfaction – defined by Locke (1976) as a positive emotional state gained from evaluating work experiences and by Hopkins (1998) as the psychological fulfillment of job-related need – results from environmental, psychological, and emotional factors (Frinaldi et al. 2023). Studies show that employees with high job satisfaction perform better and are more productive (Al-Ali et al. 2019; Sabuhari et al. 2020). Organizations should implement effective HR practices to foster satisfaction, including fair rewards, continuous training, and supportive environments (Gurbuz 2009). Regular evaluation ensures these strategies align with organizational goals, boosting motivation and productivity. Job satisfaction is essential for maintaining a motivated workforce and driving organizational success.

Innovative Work Behavior

Innovative work behavior (IWB) involves generating, promoting, and implementing new ideas to improve processes, products, or services (Shih and Susanto 2011; Susanto 2020). It is a multi-stage process requiring creativity and managerial skills to align innovations with organizational goals (Saether 2019). IWB helps employees adapt to changes and enhance performance (Pieterse et al. 2010). In public sector organizations, innovation is essential for delivering efficient services (Roehrich and Caldwell 2012) and advancing sustainable development (Watt and Richardson 2020). Innovation also plays a crucial role in economic transformation, as demonstrated in China's development (Jiang et al. 2020). Fostering IWB improves operational efficiency, benefiting public service users. Supporting factors encouraging IWB among employees is crucial for organizations to adapt to evolving challenges and achieve long-term success.

The Relationship Between Political Skills and Job Satisfaction

Political skills are crucial for performance, especially in roles requiring frequent social interaction (Banister and Meriac 2015). They involve deliberate efforts to influence relationships and achieve work goals (Wang and McChamp 2019). Politically skilled individuals excel at managing ambiguity, facilitating interactions, and reducing job stress. These skills enhance job satisfaction by fostering effective influence and negotiation, and mediate the link between emotional intelligence and job satisfaction (Meisler 2014). Political skills also predict key outcomes such as job satisfaction and performance, while alleviating stress-related challenges (Kimura 2015; Banister and Meriac 2015). However, mismatched political skills between leaders and subordinates can diminish satisfaction and commitment (Wang and McChamp 2019). Therefore, political skills are essential for both leaders and employees to foster collaboration, create a positive work environment, and enhance job satisfaction.

H1: Political skills have a significant influence on employee job satisfaction.

The Relationship Between Job Satisfaction and IWB

Job satisfaction is a critical predictor of employee commitment and performance across sectors (Kuo et al. 2019). It reflects employees' evaluation of their work experiences and significantly influences workplace health and behavior. Job satisfaction enhances intrinsic motivation and IWB, enabling employees to develop creative solutions (Zhang and Bartol 2010). In public sector services, high job satisfaction fosters innovation, improving efficiency. Studies show a positive link between job satisfaction and innovation (Hussain, Talib, and Shah 2014; Tien and Chao 2012). Bysted (2013) highlighted that trust in innovation strengthens the alignment between job satisfaction and IWB, enhancing employees' ability to meet creative demands. Shalley et al. (2000) found that when job satisfaction is high, the impact of innovation trust on IWB increases, aligning employees with job expectations. Therefore, fostering job satisfaction creates a supportive environment for creativity, which is essential for driving innovation and improving organizational performance.

H2: Job satisfaction has a significant influence on IWB .

The Relationship Between Political Skills and IWB

Employees with strong political skills excel at assessing motivations and alliances in interpersonal interactions. These skills comprise four dimensions: social astuteness, interpersonal influence, networking ability, and apparent sincerity (Banister and Meriac 2015). Political skills reflect personality traits, abilities, and knowledge gained through experience (Kimura 2015). Research shows that mastering political skills benefits individuals and organizations as a valuable job resource (Kimura 2015; Banister and Meriac 2015). Social influence theory predicts a positive link between political skills and creative performance (Kalra et al. 2017), while political skills also foster IWB (Janssen 2004). Askaripoor, Pisheh, and Sheikhy (2020) found that political skills mediate the relationship between servant

leadership and innovative behavior. In the public sector, where service effectiveness and efficiency are essential, political skills help employees navigate challenges and conflicts. Developing political skills among employees is vital for enhancing productivity and fostering innovation, contributing to the success and competitiveness of public sector organizations.

H3: Political skills have a significant influence on innovative work behavior.

The Relationship Between Political Skills, Job Satisfaction, and IWB

IWB is crucial in modern public sector organizations to enhance service effectiveness and efficiency. It involves generating, promoting, and implementing ideas beyond standard job responsibilities (Afsar and Umrani 2020). Employees exhibit IWB when they initiate, realize, and commercialize creative solutions (Kustanto et al. 2020). Kalra et al. (2017) suggested that creative performance is positively linked to political skills, as these skills help employees manage relationships and workplace dynamics, fostering IWB. Job satisfaction also plays a vital role in encouraging IWB by shaping perceptions of work and motivating employees (Chen and Aryee 2007). It strengthens the relationship between organizational outcomes and IWB, contributing to a productive work environment (Scott and Bruce 1994). Empirical studies show that job satisfaction mediates links between learning and innovation (Hussain, Talib, and Shah 2014) and between workplace ostracism and IWB (Chung and Kim 2017). This research hypothesizes that job satisfaction mediates the relationship between political skills and IWB. Employees with solid political skills effectively manage conflicts and relationships, leading to higher job satisfaction. This satisfaction, in turn, enhances their engagement in IWB, driving creative solutions and advancing organizational goals. Public sector organizations that foster job satisfaction and political skills will better support innovation and achieve sustainable performance.

H4: There is a significant indirect effect of political skills on IWB through employee job satisfaction.

This research builds a framework that integrates key theories to clarify the phenomenon, linking critical concepts as depicted in Figure 1.

Figure 1. Theoretical models
Source: compiled by the authors

Research Method

This research adopts a quantitative approach to achieve its objectives. The sample consists of 657 government employees from a total population of 5,015 in the Kupang Municipality, Indonesia (BPS 2024). The population represents the generalization of an area comprising individuals with specific characteristics relevant to the study (Stockemer 2019). A purposive random sampling technique was employed, and data were collected using a validated, closed-ended questionnaire. The questionnaire utilized a Likert scale ranging from 1 to 5 to capture responses.

This study investigates the relationships between political skills, job satisfaction, and IWB. Descriptive analysis identifies the respondents' demographic characteristics, while Structural Equation Modeling (SEM) examines the relationships among variables. The Sobel test assesses mediation effects by determining how mediating variables intervene between exogenous and endogenous variables (Sobel 1982).

The SEM procedure follows the steps outlined by Hooper, Coughlan, and Mullen (2008): developing a theoretical model, constructing a path diagram, selecting input data and estimation techniques, addressing model identification issues, and assessing Goodness of Fit indices. Hypothesis testing is integrated with field data to validate relationships. Findings in the field confirm the theoretical relationships, demonstrating how political skills and job satisfaction impact IWB through the mediating role of job satisfaction.

Results

Descriptive Analysis of Respondents' Demographic Characteristics

The initial stage of this research involves a descriptive analysis of the respondents' demographic characteristics. The respondents' characteristics describe their identities based on the sample established at the beginning of the study. The purpose of describing respondents' characteristics is to provide a general overview and information related to the research sample.

The data on respondents' demographic characteristics were obtained through questionnaires distributed to the sample of Kupang City Government employees. The demographic characteristics of the respondents are presented in Table 1.

Table 1. Respondent's demographic characteristics

Respondent of Characteristics		Frequency	Percent
Gender	Male	363	55.30%
	Female	294	44.70%

Respondent of Characteristics		Frequency	Percent
Age	≥17–24 Years	49	7.50%
	25–44 Years	293	44.60%
	45–59 Years	312	47.50%
	≥60 Years	3	0.50%
Level of studies	Junior High School (SMP/MTs)	2	0.30%
	High School Equivalent (SMA/MA/K)	190	28.90%
	Diploma (D-I)	1	0.20%
	Diploma (D-II)	2	0.30%
	Diploma (D-III)	38	5.80%
	Bachelor (S1/D-IV)	385	58.60%
	Master (S2)	36	5.50%
	Doctoral (S3)	3	0.50%
Types of Staffing	Contract/Honorary workers	41	6.20%
	Government Employees with Employment Agreements (PPPK)	135	20.50%
	Government Employees (PNS)	481	73.20%
Position	Non-Structural/General Functional	308	46.90%
	Specific Functional	142	21.60%
	Echelon IV/Supervisor	122	18.60%
	Echelon III/Administrator	78	11.90%
	Echelon II/High-Ranking Leaders	7	1.10%
Work Period	<2 Years	0	0%
	2–5 Years	29	4.40%
	6–10 Years	135	20.50%
	11–15 Years	133	20.20%
	16–20 Years	126	19.20%
	21–25 Years	97	14.80%
	26–30 Years	48	7.30%
	>30 Years	21	3.20%

Source: compiled by the authors

Table 1 contains demographic characteristics categorized by gender, age, education level, employee type, position, and years of service.

First, most respondents are male, accounting for 55.30% of the sample. The difference in the number of male and female respondents is relatively small, indicating a proportional representation. Second, most respondents are between 25 and 59 years old, making up 92.10% of the sample. This age range is considered productive, making these respondents suitable for a study focused on factors that can enhance IWB and positively impact organizational productivity. Third, the respondents' education levels are predominantly at the S1/DIV (Bachelor's/Diploma IV) level, with 58.60% of respondents holding these qualifications. Fourth, 93.70% of the respondents hold positions as PPPK (Government Employee with Work Agreement) or PNS (Civil Servants). Fifth, a significant portion of the respondents are non-structural employees, representing 46.90% of the sample. Sixth, most respondents have 6 to 15 years of work experience, accounting for 40.70% of the sample. This indicates that the respondents have been in the workplace long enough to understand the dynamics of their work environment, making them well-suited to provide the information necessary for this study.

Validity and Reliability Test

Construct validity was assessed in this study using a convergent validity test. An item is considered valid if the value of the Loading Factor or Standardized Loading Estimate exceeds 0.5. Table 2 presents the results of the construct validity test using the convergent validity test.

Table 2. Validity test results

Standardized Regression Weights			Loading Factor Limit	Estimate	Label
Social Astuteness	←	Political Skill	>0.5	0.718	Valid
Interpersonal Influence	←	Political Skill	>0.5	0.797	Valid
Networking Ability	←	Political Skill	>0.5	0.833	Valid
Apparent Sincerity	←	Political Skill	>0.5	0.734	Valid
Promotion	←	Job Satisfaction	>0.5	0.610	Valid
Pay	←	Job Satisfaction	>0.5	0.785	Valid
Co-workers	←	Job Satisfaction	>0.5	0.703	Valid
Supervision	←	Job Satisfaction	>0.5	0.775	Valid
Levels Of Personal Recognition	←	Job Satisfaction	>0.5	0.832	Valid
Work	←	Job Satisfaction	>0.5	0.662	Valid

Standardized Regression Weights			Loading Factor Limit	Estimate	Label
Idea Generation	←	Innovative Work Behavior	>0.5	0.758	Valid
Idea Promotion	←	Innovative Work Behavior	>0.5	0.918	Valid
Idea Realization	←	Innovative Work Behavior	>0.5	0.809	Valid

Source: compiled by the authors

The results of the construct validity test in Table 2 indicate that all of items in the research instrument are deemed valid, as they have a Loading Factor greater than 0.5. The research instrument is considered reliable if its reliability value exceeds 0.7. Table 3 presents the results of the instrument's construct reliability test.

Table 3. Reliability test results

Variable	Cut-Off Value	Construct Reliability	Label
Political Skill	>0.7	0.85456	Reliable
Job Satisfaction	>0.7	0.87252	Reliable
Innovative Work Behavior	>0.7	0.86933	Reliable

Source: compiled by the authors

Table 3 indicates that all instruments are deemed reliable, with construct reliability values exceeding 0.7.

Structural Model Analysis

The structural model analysis was conducted using SEM after confirming the validity and reliability of the instruments for the three variables. The significance tests for causality and model fit were performed on the processed data. The path diagram for the comprehensive model analysis is presented in Figure 2.

Figure 2. Structural Model Indices
Source: compiled by the authors

Based on Figure 2, the model fit test results indicate that the model is acceptable. Using model accuracy criteria, the model fit test shows a "Fit" result, meaning the proposed model is deemed appropriate. Table 4 presents the results of the Goodness of Fit (GOF) test.

Table 4. Model fit indices

The Goodness of Fit Index	Cut-Off Value	Analysis Results	Model
X^2/df	Minimum/<3.00	2.783	Fit
Significant Probability	≥0.05	0.087	Fit
RMSEA	≤0.08	0.071	Fit
GFI	≥0.90	0.915	Fit
AGFI	≥0.90	0.875	Fit
CMIN/DF	≤2.00	1.592	Fit
TLI	≥0.90	0.925	Fit
CFI	≥0.90	0.940	Fit

Source: compiled by the authors

Table 4 indicates that the proposed model has an overall good fit. The model remains appropriate despite one GOF indicator, AGFI, being slightly below the standard, with a

value of 0.875 – less than 0.90. Therefore, further analysis can be conducted for hypothesis testing.

Hypothesis Testing

Hypothesis testing was conducted to examine the relationships or associations between the research variables. The results of hypothesis testing are shown in Table 5.

Table 5. Hypothesis test results

Variable	Direct Effect Coefficients (Standardized)	Indirect Effect	C.R.	Sig<0.05
Political Skill → Job Satisfaction	0.623	-	11.142	0.000 (Sig)
Political Skill → Innovative Work Behavior	0.309	-	5.361	0.000 (Sig)
Job Satisfaction → Innovative Work Behavior	0.224	-	3.936	0.000 (Sig)
Political Skill → Job Satisfaction → Innovative Work Behavior*	-	0.140	3.720	0.000 (Sig)

Sobel Test Partial Mediated
Source: compiled by the authors

Table 5 presents the results of hypothesis testing, which examines the influence of independent variables on the dependent variables. The hypothesis testing yielded the following results:

1. Political skills have a direct positive impact on job satisfaction, with a coefficient of 0.623. This means that the higher the political skills of employees, the more their job satisfaction increases by 62.3%. The CR value is 11.142, more significant than 1.96, and the *p*-value is 0.000, less than 0.05, indicating a significant favorable influence of political skills on job satisfaction.
2. Political skills have a direct positive impact on IWB, with a coefficient of 0.309. This indicates that the higher the political skills of employees, the more their IWB increases by 30.9%. The CR value is 5.361, more significant than 1.96, and the *p*-value is 0.000, less than 0.05, indicating a significant favorable influence of political skills on IWB.
3. Job satisfaction has a direct positive impact on IWB, with a coefficient of 0.224. This means that the higher employees' job satisfaction, the more their IWB increases by 22.4%. The CR value is 3.936, more significant than 1.96, and the *p*-value is 0.000, less than 0.05, indicating a significant favorable influence of job satisfaction on IWB.

4. Political skills indirectly positively impact IWB through job satisfaction, with a co-efficient of 0.140. This suggests that the higher the political skills of employees, the more their job satisfaction increases, which in turn enhances IWB by 14%. The Sobel test results show a value of 3.720, more significant than 1.96, and a p-value of 0.000, less than 0.05, indicating a significant indirect positive influence of political skills on IWB, mediated by job satisfaction.

Discussion

The Influence of Political Skills on Job Satisfaction and IWB

Political skills are essential for performance, especially in roles requiring social interaction (Banister and Meriac 2015). They enable employees to navigate conflict and ambiguity through negotiation, leading to a significant increase in job satisfaction (62.3%) and IWB (30.9%) (Detienne and Teshima 2007). These findings align with previous studies showing that political skills enhance job satisfaction and mitigate stress (Harvey et al. 2007; Meisler 2014). Political skills comprise four dimensions: social astuteness, interpersonal influence, networking ability, and apparent sincerity, integrating personality traits and learned skills (Detienne and Teshima 2007).

In public sector organizations, where efficiency is paramount, political skills are crucial for overcoming challenges and fostering innovation. This study also found that job satisfaction mediates the relationship between political skills and IWB, amplifying IWB by 14% (Bedi and Schat 2013). Employees with solid political skills manage relationships effectively, enhancing job satisfaction and driving greater engagement in IWB. Public organizations must invest in developing these skills to boost productivity and innovation, ensuring the achievement of strategic goals.

The Influence of Employee Job Satisfaction on IWB

Job satisfaction is a crucial predictor of employee commitment and overall performance in the workplace, whether in private organizations or the public sector (Dalkrani and Dimitriadis 2018; Bhatti and Qureshi 2007). Kuo et al. (2019) argued that job satisfaction is a research concept based on employees' overall evaluation of their personal work experiences, and is one of the most critical factors in organizational behavior and workplace health. Bysted (2013) found that job satisfaction and IWB can be aligned in environments characterized by trust in innovation. This suggests that job satisfaction is essential in enhancing IWB. Workplace well-being is reflected through high job satisfaction, which creates an environment that supports the development of creative ideas and innovative solutions needed by the organization.

Conclusion

1. This study examines the role of political skills and job satisfaction in shaping IWB among public sector employees in Kupang City. Innovation is essential for accelerating bureaucratic processes and managing resources efficiently, making it crucial to identify the factors that influence IWB.

2. The findings reveal that political skills significantly enhance job satisfaction (62.3%) and IWB (30.9%). Additionally, job satisfaction acts as a mediator, amplifying the positive impact of political skills on IWB by 14%. This research highlights the critical role of job satisfaction in strengthening the relationship between political skills and IWB. To foster organizational innovation, public sector organizations should develop employees' political skills and improve their job satisfaction. These findings provide valuable insights for formulating human resource strategies to promote IWB, ensuring employees engage in creative solutions that drive organizational effectiveness and innovation.

3. This study is limited to public sector organizations in Kupang Municipality, Indonesia, restricting the generalizability of the findings to other sectors or regions. Future research should expand the sample to better understand IWB among public sector employees. This study focuses only on political skills and job satisfaction; future research should explore other factors, such as organizational culture, leadership style, and employee empowerment, for deeper insights. A longitudinal study is recommended to better assess causal relationships over time. Incorporating mixed methods, such as interviews or focus groups, would provide richer insights into underlying mechanisms. Controlling for potential confounding variables would further enhance internal validity. These improvements will strengthen future research, offering clearer data-driven evidence for the factors influencing IWB in public sector organizations.

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KAIP POLITINIAI ĮGŪDŽIAI FORMUOJA NOVATORIŠKĄ DARBO ELGSENĄ VIETOS VALDŽIOJE: MEDIACIJOS POVEIKIS PASITENKINIMUI DARBU

Anotacija. Šiuo tyrimu siekiama ištirti ryšį tarp politinių įgūdžių ir naujoviško darbo elgesio tarpininkaujant pasitenkinimui darbu. Tyrimas skirtas viešojo sektoriaus organizacijoms, ypač Kupango miesto vyriausybei. Nors daugelyje ankstesnių tyrimų buvo nagrinėjama politinių įgūdžių įtaka novatoriškam darbo elgesiui, keliuose tyrimuose nagrinėtas pasitenkinimas darbu kaip mediacinis veiksnys šiuose santykiuose. Respondentai – 657 Kupango miesto vyriausybės įstaigose dirbantys darbuotojai. Duomenų rinkimas buvo atliktas taikant uždarojo tipo klausimyną, jo patikimumas buvo patvirtintas. Anketoje pasitelkta Likerto skalė nuo 1 iki 5. Duomenų analizės metodai – aprašomoji ir struktūrinių lygčių modeliavimo (SEM) statistinė analizė. Išvados atskleidžia, kad pasitenkinimas darbu yra itin reikšmingas elementas, stiprinantis teigiamą darbuotojų politinių įgūdžių poveikį novatoriškam darbo elgesiui. Šio tyrimo naujovė yra pasitenkinimo darbu kaip tarpininkavimo mechanizmo atskleidimas tiriant politinių įgūdžių ir naujoviško darbo elgesio santykį. Jis nebuvo nuodugniai ištirtas Indonezijos viešojo sektoriaus organizacijose. Viešojo sektoriaus organizacijos turėtų tobulinti darbuotojų politinius įgūdžius ir teikti pirmenybę jų pasitenkinimui darbu, kad skatintų organizacijos naujoves. Šio tyrimo išvados gali praversti formuojant žmogiškųjų išteklių valdymo strategijas, skatinančias novatorišką darbuotojų elgesį.

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AN ANALYSIS OF TRENDS, METHODS, AND CHALLENGES IN PUBLIC ADMINISTRATION RESEARCH: A LITERATURE REVIEW

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Abstract. *Research in the realm of public administration has been carried out across various parts of the world. One of the main forms of this research is scientific articles, which are very diverse in scope due to their abundance. Understanding trends in the methods used in scientific articles is in itself an interesting topic for research. Of course, in the process of this research, challenges often arise, and there are often questions that remain unanswered. Therefore, this paper aims to analyze topic trends, methods, and challenges, and to identify*

open questions that still need to be answered in the context of public administration research from 2018 to 2023. Trend analysis was carried out through the literature review method using Google Scholar and Publish or Perish as data sources. The research results show that the most dominant topic in public administration research is public services, which covers 42.86% of the 33 articles found in total. Meanwhile, the most commonly used research method is qualitative, accounting for 60% of these studies. Not all articles mention the challenges they face, but a common difficulty is in determining research samples, which often have limitations related to each research method.

Keywords: *trends; methods; challenges; literature review.*
Reikšminiai žodžiai: *tendencijos; metodai; iššūkiai; literatūros apžvalga.*

Introduction

Modern advances in science and technology cannot be separated from the influence of ancient Greek philosophy (Karim 2014). In those days, the boundaries between philosophy and science were almost invisible. All ways of thinking are referred to as philosophy, which includes science and philosophical thought (Sidabutar and Situmorang 2022). The philosophy of science cannot be separated from the scientific principles that govern scientific processes (Ginting and Situmorang 2008). The scientific approach produces scientifically valid knowledge, with the scientific method being the main key (Fittria 2022). All thinking activities involve the mind's reflection and the examination of material objects (Purwaningrum 2016).

According to Wahana (2016), scientific activities involve all processes related to the universe and its elements that can be observed either directly or indirectly, often using systems and infrastructure, and can be measured. Viewing administration as a field of science shows that it can be studied and taught (Rahman 2017). This is a subject of study that has been the focus of research and teaching, especially in the social, political, and administrative sciences (Arbinata and Warsono 2021). Differences in understanding the research methods used in public administration studies are a significant phenomenon today (Satibi 2023). Although the majority of researchers prefer to use qualitative research methods in public administration studies, some prefer a quantitative approach (Fitrah 2018).

No research specifically examines trends, methodologies, and emerging problems in public administration research. Therefore, the authors felt the need to address this lack of understanding, forming the primary focus of this study. Various methodological approaches have been used in research discussing the science of public administration. With a large number of studies, each faces various challenges that must be identified for future research. Therefore, a literature review is needed to assess these phenomena.

According to Budgen et al. (2007), the systematic literature review method aims to

identify, evaluate, and analyze research results related to certain research problems to provide answers to previously posed research questions. In the past, this method was often practiced in pharmaceutical and medical research. However, in 2007, Barbara Kitchenham introduced this approach to the field of industrial computing. This approach is considered suitable for analyzing research trends over a certain period. In this paper, the research process aims to answer the following questions: (1) How will research patterns in the field of public administration develop from 2018 to 2023?; (2) What methods were most commonly used in public administration research in the 2018–2023 period?; (3) What were the challenges faced in public administration research in the 2018–2023 period?

Research Methods

To conduct a comprehensive search regarding the analysis of trends, methods, and challenges in public administration research, the researchers utilized the Google Scholar database using the following search terms: qualitative; quantitative; mixed methods; state administration; public administration; and philosophy of science; and supported this with the Publish or Perish application. This search covered the period from 2018 to 2023 and produced 991 articles.

Each database has a different structure for storing relevant content. In this search, dissertations, books, conference abstracts, and reviews were excluded. Efforts were made to eliminate duplicate studies. After that, the titles and abstracts of the collected articles were evaluated separately by three researchers using the inclusion criteria. If a study was not available in full-text form, an attempt was made to obtain it through direct contact with the author. However, if access to the full text was not possible or there was no response from the authors, the study was discarded. The full texts of articles that met the inclusion criteria were then further evaluated.

To select and include only studies relevant to our research topic, we established specific inclusion and criteria as follows.

Inclusion criteria:
- IC1: Journal article
- IC2: Written in Indonesian or English
- IC3: Peer reviewed
- IC4: Not registered in any other database
- IC5: Research conducted in the field of public administration
- IC6: Indexed by accredited national journal databases
- IC7: Full text available

The criteria for this research included publications that discuss trends, methodologies, and issues in public administration research. After defining search terms and inclusion criteria, we conducted a comprehensive search to find relevant articles for the 2018–2023

period. The decision to choose this time period was based on the consideration that at that time, trends, methodologies, and issues in public administration research were hotly debated.

<u>Study quality assessment</u>

Three reviewers (JA, IY, and JY) evaluated possible bias in the included studies and reached an agreement on their assessments. Appropriateness of study design, recruitment methods, response rate, sample representativeness, objectivity/reliability of outcome determination, digital availability, and statistical analysis were assessed using the modified Newcastle–Ottawa scale (Modesti et al. 2016; Pahlevan-Sharif et al. 2019). Discrepancies in scores were resolved by mutual agreement, and each study was given a final rating.

<u>Data extraction</u>

The three reviewers (JA, IY, and JY) independently reviewed the full texts of 991 citations deemed potentially relevant. Important information such as author, year, research methods, research objectives, and general conclusions were extracted. From there, 33 preliminary articles were selected with the help of a research assistant who triangulated the data, coded the articles, and identified recurring patterns among the publications. Relevant information from each article was collected in tables and then classified into appropriate themes. This research adopted a grounded theory methodology, through which a table containing descriptions of the studies reviewed was created.

Table 1. Description of studies reviewed

Author and Year	Method	Topic	Accreditation
Ahluwalia (2020)	Quantitative	Human Resource Management	Sinta 4
Bahri and Arafah (2020)	Qualitative	Human Resource Management	Sinta 4
Nurkholis et al. (2021)	Qualitative	Public Service	Sinta 4
Hidayah (2020)	Qualitative	Public Service	Sinta 4
Yunaningsih et al. (2021)	Qualitative	Public Service	Sinta 3
Salam (2021)	Qualitative	Public Service	Sinta 4
Kusnendar (2018)	Qualitative	Public Service	Sinta 4
Hajar et al. (2021)	Qualitative	Public Service	Sinta 6

Habibie (2019)	Literature Review	Public Service	Sinta 4
Herizal et al. (2020)	Literature Review	Public Service	Sinta 4
Hadi et al. (2020)	Qualitative	Public Service	Sinta 2
Bisri & Asmoro (2019)	Qualitative	Public Service	Sinta 4
Adawiyah (2018)	Qualitative	Public Service	Sinta 4
Deni (2018)	Quantitative	Public Service	Sinta 3
Antoni et al. (2021)	Qualitative	Public Service	Sinta 3
Indah & Hariyanti (2018)	Qualitative	Public Policy	Sinta 2
Andela Anggleni (2018)	Qualitative	Public Policy	Sinta 5
Herdiana et al. (2021)	Qualitative	Public Policy	Sinta 6
Kurniawan and Maani (2019)	Qualitative	Public Policy	Sinta 4
Puspitasari and Nugroho (2021)	Qualitative	Public Policy	Sinta 4
Fauzi (2020)	Qualitative	Public Policy	Sinta 5
Melati and Asmorowati (2023)	Qualitative	Public Policy	Sinta 4
Lestari et al. (2020)	Quantitative	Public Policy	Sinta 4
Nurfurqon (2020)	Qualitative	Public Policy	Sinta 4
Purwanti et al. (2019)	Quantitative	Public Policy	Sinta 4
Jamaluddin et al. (2019)	Qualitative	Community Empowerment	Sinta 3
Iryana (2018)	Qualitative	Community Empowerment	Sinta 3
Mustanir et al. (2019)	Quantitative	Community Empowerment	Sinta 5
Disemadi and Prananingtyas (2020)	Normative Juridical	Community Empowerment	Sinta 2
Handayani and Suryani (2019)	Quantitative	Quality of Service	Sinta 3
Amhas (2018)	Quantitative	Quality of Service	Sinta 5
Panjaitan et al. (2019)	Qualitative	Quality of Service	Sinta 3
Agustian et al. (2019)	Quantitative	Quality of Service	Sinta 5

<u>Data analysis</u>

The grounded theory method explores data collected from the literature to formulate research questions and possible theme findings. We first researched the literature without coding and designed our research questions. The grounded theory approach entails a highly involved, open, and interactive process that includes simultaneous data collection, coding (data analysis), and note-taking (theory building) (Gómez-Leal et al. 2022; Groat and Wang 2004).

We began our research by exploring what we already knew or had observed about trends, methodologies, and issues in public administration research. Literature selection was carried out according to the PRISMA criteria. We conducted a literature review and began theoretical sampling, during which the three researchers independently coded the data and agreed on the literature categories. Using analytical induction, we analyzed the data and identified recurring trends across several studies.

This article does not aim to propose theory, but rather to collect and summarize literature that discusses trends, methodologies, and issues in public administration research. The goal is to gain an understanding of the concepts that arise in this topic from various literature sources. By comparing and contrasting the literature using a qualitative approach, we can identify general patterns that explain these ideas. If this research is expanded by future researchers, it may be possible to develop a more integrated theory.

<u>Search and filtering results</u>

We found a total of 991 references from the Google Scholar database. After removing duplicates, we obtained 66 studies for further analysis. Of these 66 studies, only 33 were selected for further evaluation considering the established inclusion criteria, and ultimately these 33 studies were included in our review. Disagreements between reviewers were resolved by reaching consensus. The search and item selection process was carried out by the guidelines provided by PRISMA and is shown in Figure 1.
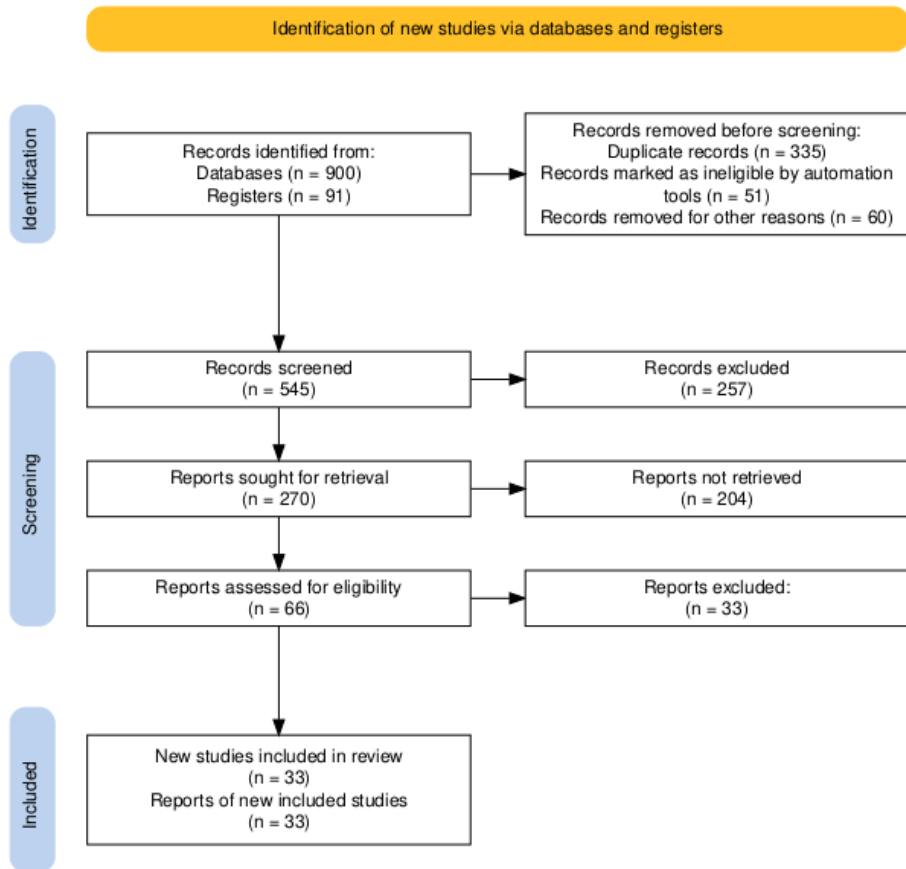
Figure 1. PRISMA 2024 flow diagram
Source: Haddaway et al. (2022)

Analysis and Results

<u>Research trends that occurred in the field of public administration from 2018–2023</u>

In this systematic review, 33 journals examine trends, methodologies, and issues in public administration research. Every year between 2018 and 2023, several journals discussed research trends in public administration. The dominant research trend in public administration during this period was the topic of human resource management, followed by research on public services. Figure 2 also visualizes research trends in the field of public administration from 2018 to 2023.
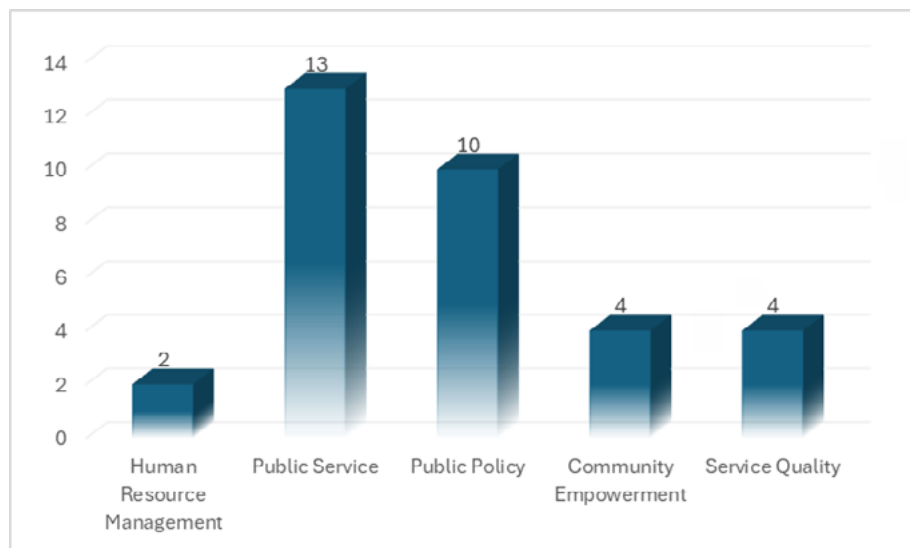
Figure 2. Public administration research trends, 2018–2023

From Figure 2 it can be seen that topics with public service trends dominate compared to other research topics. This is because in the last 5 years, public services have become the government's main focus in providing good services to the community. According to Jamaluddin (2016), public services are provided by a public sector institution to achieve a satisfactory level of service quality for all parties and stakeholders involved. Public services are provided as part of the state's obligation to fulfill the basic needs and civil rights of every citizen regarding the goods, services, and administrative services provided by public service institutions (Azan et al. 2021). Additionally, according to Ibrahim et al. (2022), public service trends in the Indonesian bureaucratic structure more often reflect one of three models: bureau pathology, resembling symptoms of a disease and characterized by a large bureaucracy; an Orwellian system, which is highly regulatory and functions as a state tool to control society; or the Jacksonian model, featuring authoritarian bureaucratic patterns. Public services are related to the principles of good governance in meeting community needs related to welfare (Dewi and Tobing 2021). Quality public services and good management are a representation of the state's obligations, which must be recognized by the community as their rights (Dewi et al. 2021). The problem of unsatisfactory public services, with all the complexity of their procedures, is a problem that is external to society and requires supervision from authorities (Septianingtiyaset al. 2020). A guarantee of high-quality public services is provided to achieve the goals of the welfare state.

Meanwhile, high-quality human resources (HR) will mean nothing if they are not supported by good public services. On the other hand, good public services will be paralyzed

without the support of qualified HR and good community empowerment (Purnama and Romli 2023). According to Arcana et al. (2021), community empowerment is action aimed at increasing the capacity and independence of individuals or groups to meet their own needs. Through this empowerment, people can be more aware of their potential and overcome various problems they face independently, including solving general problems so as to improve service quality. In this way, public satisfaction with government public services can be achieved. Community satisfaction will be achieved if, after they use a product/service, the needs, wants, and expectations of the community are fulfilled or even exceeded (Permana 2013). Therefore, the lack of research trends regarding HR, community empowerment, and service quality is a good opportunity for future researchers to focus on these areas.

Methods used in public administration science research in 2018–2023

According to this systematic review, of the 33 articles analyzed, the dominant research method was qualitative, consisting of 21 articles, followed by 9 articles that used quantitative methods, 3 literary reviews, 1 article using the extreme programming method, and 1 the normative juridical approach. The use of qualitative research methods in public administration science is widespread in various publications. However, the role of quantitative methods is also significant in public administration science because they can function as testers for the concepts put forward through qualitative methods. Meanwhile, the literature review, extreme programming, and normative juridical methods are still rarely used in research in the field of public administration.
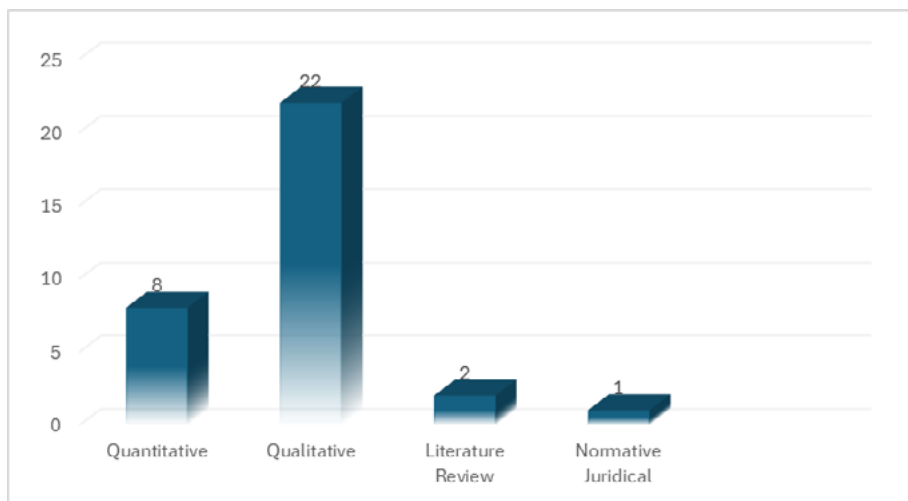

Figure 3. Public administration research methods, 2018–2023

Research methods determine the focus of a study. Based on Figure 3, qualitative research is the most dominant method used by researchers to investigate research trends in public administration science. The number of qualitative studies is greater than that of other types of research, which is in line with several previous studies in which it was reported that researchers prefer qualitative research designs for conducting research in the field of public administration (Goktas et al. 2012; Uzunboylu and Aşıksoy 2014). In addition, quantitative approaches are considered relatively new to public administration research (Sharma 2013). However, the quantitative design trend is gaining ground (Shakouri and Nazari 2014), and has targeted non-social issues, including some related to public administration (Mohajan 2018). Such conditions are closely related to the superiority of a quantitative approach to defining a phenomenon comprehensively and in detail. Therefore, the lack of quantitative research provides a good opportunity for future researchers to use quantitative designs and focus their research on the field of public administration.

<u>Challenges in public administration research in 2018–2023</u>

When studying public administration, researchers are often faced with several diverse challenges while conducting research. One of the main problems faced is the selection of research samples to be investigated. For example, in research that adopts qualitative methods, the use of samples is often limited to around 10 to 15 respondents. On the other hand, in quantitative methods, much larger samples can be used, usually involving no less than 30 respondents. However, each research approach in public administration, as well as in other scientific disciplines, has several advantages and disadvantages that must be considered carefully. Therefore, the literature review, extreme programming, and normative juridical methods proposed by Creswell and Poth (2016) serve as key tools in structuring the research process, enabling a thorough analysis of existing theories, the iterative development of solutions, and the creation of a legal framework to ensure that the study's findings are grounded in both practical applications and legal standards.

Conclusion

1. From the results of the research and discussions carried out, it can be concluded that in the 2018–2023 period, the research topic that most dominated the field of public administration was public services, accounting for 42.86% of all topics discussed. In contrast, the most minimally discussed topic was HR, which accounted for only 5.71% of the total discussion.
2. The most commonly used research method in this area is the qualitative method, which is used in 60% of research, while less frequently used methods such as

extreme programming and the normative juridical approach appear in only a low percentage (2.86%) of studies.

3. From 2018 to 2023, the challenges often faced in public administration research were related to research sample selection. In qualitative research, the number of respondents usually ranged from 10 to 15. This shows the importance of paying attention to the sample selection process so that research results can be representative and reliable.

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VIEŠOJO ADMINISTRAVIMO LAUKO TYRIMŲ TENDENCIJŲ, METODŲ IR IŠŠŪKIŲ ANALIZĖ: LITERATŪROS APŽVALGA

Anotacija. Viešojo administravimo mokslo srities tyrimai buvo plačiai atliekami įvairiose pasaulio vietose. Vienas pagrindinių šio tyrimo rezultatų – mokslinių straipsnių analizė, kurių tematika dėl gausaus šių straipsnių skaičiaus yra labai įvairi. Moksliniuose straipsniuose pasitelkiamų metodų tendencijų supratimas taip pat yra įdomi tema. Žinoma, atliekant šį tyrimą dažnai iškyla iššūkių, dažnai lieka neatsakytų klausimų. Todėl šiuo tyrimu siekiama išanalizuoti temų tendencijas, metodus ir iššūkius bei nustatyti atvirus klausimus, į kuriuos dar reikia atsakyti viešojo administravimo mokslo tyrimuose 2018–2023 m. Tendencijų analizė atlikta literatūros apžvalgos metodu, kaip duomenų šaltinį naudojant „Google Scholar" ir „Publish or Perish". Tyrimo rezultatai rodo, kad viešojo administravimo tyrimuose vyraujanti viešųjų paslaugų tema (42,86 proc. visų rastų 33 straipsnių). O dažniausiai taikomas kokybinis tyrimo metodas (60 proc.). Ne visuose straipsniuose minimi iššūkiai, su kuriais susiduriama, tačiau bendras iššūkis yra nustatyti tyrimo imtis, nes kiekvienas tyrimo metodas dažnai turi apribojimų.

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