

APPLICATION OF ARTIFFICIAL INTELLIGENCE IN THE DEVELOPMENT OF EU STRATEGIES TO STRENGTHEN THE INSTITUTION OF POLITICAL ACCOUNTABILITY

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ABSTRACT

Political accountability is a key element of democratic governance and transparency of state institutions. This is particularly relevant in the context of the implementation of EU standards, which imply increasing transparency, anti-corruption measures, and strengthening democratic principles. The study focuses on the analysis of the effectiveness of EU strategies in strengthening political accountability in member states and candidate countries, such as the Netherlands, Poland, Hungary, Ukraine, and Serbia. The importance of this study is determined by the need to develop effective mechanisms for adapting EU standards in different political contexts. The aim of the research is to study the impact of the implementation of European strategies on political accountability in selected countries, as well as identify the main factors that contribute to or hinder their effective implementation. The study employed the following methods: quantitative analysis to assess changes in political accountability metrics, sociological surveys to determine the level of trust in governments in five countries, comparative analysis to identify differences in the implementation of EU standards between member states and candidate countries, and correlation analysis to assess the relationship between the implementation of European standards and key indicators of political accountability. In addition, the research explores how artificial intelligence (AI) technologies can be applied in the development and monitoring of EU strategies, in particular through data-driven evaluation of public administration, risk modelling, and the identification of political misconduct patterns. The results of the study showed that EU member states demonstrate higher political accountability indicators due to the effective adaptation of European standards. Preliminary findings also suggest that AI-supported tools, such as algorithmic auditing and digital transparency platforms, can strengthen accountability mechanisms by enabling early detection of corruption risks and increasing civic oversight. The Netherlands consistently maintains a high level of democracy and transparency, while Poland and Hungary face certain challenges due to political polarization and centralization of power. Different trends are observed in candidate countries such as Ukraine and Serbia: Ukraine demonstrates gradual progress, while Serbia shows stagnation.

Keywords: *Political Responsibility, European Standards, Democracy, Government Transparency, Fight against Corruption, CPI, Social Reforms, Artificial Intelligence, Digital Governance, Algorithmic Accountability*

1. INTRODUCTION

Political accountability is one of the fundamental principles underlying the functioning of democratic states. It involves not only the accountability of governments to citizens, but also ensuring transparency in decision-making processes, effective governance and adherence to high standards of ethical conduct. The issue of political accountability is particularly relevant in the modern world, which faces numerous challenges, such as political polarization, growing distrust of government institutions, migration crises, and climate change. The European Union (EU) pays significant attention to political accountability as the basis for the effective functioning of its institutions and the achievement of common goals. Transparency in decision-making, the fight against corruption and the implementation of democratic governance standards contribute to strengthening citizens' trust in governments. These principles are key for both EU member states and candidate countries.

The problem addressed in this research lay in the uneven implementation and effectiveness of EU political accountability standards across countries with different political contexts and institutional capacities. Previous studies tended to analyse either corruption indices or digital governance tools separately, while this work aimed to integrate these dimensions and assess their cumulative impact.

Modern global challenges, such as economic crises and international tensions, require effective action, where political responsibility is an important mechanism for adapting policies to the society's needs. The implementation of European standards of transparency and the fight against corruption has become one of the main conditions for integration for candidate countries.

EU member states, such as the Netherlands, demonstrate a high level of transparency and trust, while candidate countries, such as Ukraine and Serbia, face difficulties caused by political instability and corruption challenges. This emphasizes the importance of adapting EU standards to their national governance systems.

The selection of literature for this research was guided by relevance, recency, and peer-reviewed quality, focusing on studies published between 2015 and 2024 that addressed transparency, democratic governance, anti-corruption strategies, and the use of digital tools in public administration.

Analysis of the dynamics of indicators such as the Corruption Perception Index (CPI) and the Democracy Index gives grounds to assess the effectiveness of EU strategies and identify barriers to

integration. Particular attention should be paid to the development of adaptation strategies for candidate countries, which require a comprehensive approach. In addition, the rise of digital governance has opened new opportunities for integrating artificial intelligence (AI) technologies into EU strategies. AI tools can support political accountability by increasing the transparency of public decision-making, detecting corruption patterns, and ensuring real-time monitoring of institutional performance. This research briefly considers the role of AI as a complementary instrument in enhancing the strategic effectiveness of EU political accountability frameworks.

This study aimed to address existing gaps in literature by providing a comparative analysis of EU member and candidate countries, highlighting how the level of adaptation of European standards affected political accountability outcomes. The motivation of this study differed from previous work by explicitly incorporating digital transformation and AI as variables in the assessment of governance reforms.

The following research questions were formulated:

- To what extent did the implementation of European political accountability standards influence CPI and the Democracy Index in selected countries between 2015 and 2024?
- How did citizens' trust in government evolve in relation to the degree of standard adaptation?
- What barriers were encountered in implementing EU strategies, and how did national contexts shape outcomes?
- What potential did AI-based tools offer in supporting accountability reforms, particularly in states with unstable political institutions?

The need for this study was defined by the lack of integrative, cross-national analyses that connected traditional governance indicators with emerging technological instruments. The contribution of this research lies in offering a framework that can inform both policy and future scholarly inquiries into strategic governance transformation.

2. LITERATURE REVIEW

One of the key aspects of political accountability in the context of European integration is the implementation of transparency and efficiency of public administration. Studies dealing with these issues show a variety of approaches and assessments of the results of the implementation of European standards in EU member states and candidate countries.

The author [1] emphasizes the importance of legal monitoring as a mechanism for improving the effectiveness of legislation, noting that regular analysis of regulatory acts contributes to achieving political accountability. In contrast to this idea, the researcher [2] draws attention to the technocratic planning and political strategies of the EU, indicating that centralization of governance can limit regional autonomy and complicate transparency in public administration.

The author [3] emphasize the role of digitalization in modernizing economic systems and improving transparency, focusing on the need to implement digital tools for strengthening political accountability. However, the scientists [4] note that it is difficult to achieve transparency without adequate human resources (HR) capacity even with significant efforts in the field of digitalization, which confirms the importance of adapting HR.

The author [5] study the quality of governance in tourism and propose approaches that can be applied to enhance transparency in public administration. Their idea is in line with the findings of [6], who demonstrate the impact of globalization on environmental aspects, emphasizing the need for an integrated approach to governance.

The researchers [7] analyse the impact of political advertising on voter decision-making, noting that the transparency of electoral processes is a key factor in citizens' trust in governments. The authors [8] consider moral education as an important aspect of the formation of political culture, which can contribute to strengthening accountability in governance.

The author [9] analyses litigation strategies in the EU context, highlighting that reforms in this area are necessary to increase transparency. However, The researchers [10] argue that rule of law reform requires a comprehensive approach that takes into account national political discourses. The authors [11] examine the effectiveness of sanctions in rule of law conflicts, noting that sanctions have limited impact without domestic reforms. The scientists [12] emphasize the need to review EU foreign policy, determining the role of political accountability in a complex international environment.

The authors [13] analyse the use of the concept of "non-politicization" by populist governments, which reduces transparency in decision-making processes. In contrast, the researcher [14] examines the multi-level strategies of regionalist parties, noting that transparency is an integral part of successful initiatives.

The author [15] analyses intra-party dynamics in the context of democratic reforms, emphasizing the

importance of harmonizing political structures with European standards. The researcher [16] evaluates the strategies of the Polish opposition, emphasizing their impact on political accountability.

The scientist [17] deals with innovative approaches to anti-corruption policies, emphasizing the need for transparency in public administration. The literature review shows that EU member states have made significant progress in implementing transparency standards, while candidate countries face numerous challenges that require further reforms.

The researchers [18] analyze the role of artificial intelligence (AI) policy in the development of a unified digital market in the EU. They argue that digital governance tools, including AI, enhance transparency and accountability by standardizing administrative procedures and data exchange protocols. This perspective complements earlier research on the effectiveness of EU digital strategies.

The authors [19] examine the strategic use of AI in education policy within the EU's broader digital transformation goals. Their findings highlight how AI-based decision-making tools can increase trust in public administration by ensuring consistency and traceability of educational reforms, which directly correlates with the principles of political accountability.

A comparative perspective is offered by [20], who analyse AI policy frameworks across the EU. Their study reveals disparities in the speed and scope of AI adoption among member states, which directly affect the consistency of implementing transparency measures and digital governance. This underlines the importance of harmonized strategic planning to ensure political accountability in the digital transition process.

Meanwhile, the authors [21] focus on the governance of non-high-risk AI systems in the EU. They argue that the Union's regulatory approach successfully balances innovation with the protection of fundamental rights and public interest. Importantly, they emphasize that even AI systems not deemed "high-risk" require robust frameworks of accountability and transparency, reinforcing citizens' trust in digital public administration.

The literature included in this review was selected based on relevance, peer-review status, and publication within the last ten years (2015–2024), with a focus on studies addressing European governance, transparency, anti-corruption policies, and digital public administration. This ensured the inclusion of both foundational and contemporary academic perspectives.

Despite the breadth of available literature, few studies had offered an integrative analysis that simultaneously addressed governance indicators, AI-driven transparency mechanisms, and comparative assessments between EU members and candidate countries. This identified gap positioned the present study as a contribution to the field by offering a more comprehensive and data-informed framework.

While previous studies predominantly explored political accountability in isolated contexts or through limited indicators, this research expanded the scope by connecting institutional quality with technological innovation, emphasizing how AI-based tools interacted with EU standards to impact public trust and democratic resilience.

3. METHODOLOGY

3.1. Research design

The study was conducted in three stages to analyse the effectiveness of EU strategies in strengthening political accountability. The first stage included a theoretical analysis of key EU strategies, including the Anti-Corruption Strategy, the Directive on Transparency in Public Administration and the Code of Ethics, as well as their adaptation in candidate countries and their impact on legislative reforms in EU member states.

The second stage involved systematization of data on political accountability based on reports, indices, and sociological surveys in three EU member states (Netherlands, Poland, Hungary) and two candidate countries (Ukraine, Serbia). These countries were selected using purposive sampling based on the following criteria: EU membership status, variation in democratic resilience, progress in implementing European standards, and level of digital infrastructure development. This combination allowed for the comparison of both advanced and transitional political environments.

The third stage was quantitative and qualitative data analysis using modern statistical tools. A correlation analysis was conducted between the implementation of EU strategies and key indicators of political accountability to assess their effectiveness. This multi-stage design enabled the triangulation of theoretical frameworks, empirical data, and public perceptions, which increased the validity of the findings.

3.2. Methods

The work employed three main methods:

1. *Quantitative analysis* was applied to study changes in the CPI, Democracy Index, and Worldwide Governance Indicators (WGI) for 2015–2024. The selected period allows us to assess the impact of EU strategies after the implementation of key directives. For example, the CPI in the Netherlands remains consistently high (80–85 points), while it decreased in Hungary (47–42 points).

The Pearson correlation formula was used to analyse the impact of the implementation of EU standards on key indicators of political accountability. It quantitatively assesses the strength and direction of the relationship between variables:

$$r = \frac{\sum(X_i - X)(Y_i - Y)}{\sqrt{\sum(X_i - X)^2 * \sum(Y_i - Y)^2}}$$

where:

- X – the level of implementation of EU standards (in percent).
- Y – one of the key indicators (CPI, level of trust or Democracy Index).
- r – correlation coefficient, varying from -1 to +1 (where +1 – strong positive correlation, 0 – no correlation, -1 – strong negative correlation).

To explore the connection between technological tools, particularly AI, and the effectiveness of political accountability, part of the indicators was analysed in the context of digital governance implementation in countries with high levels of digitalization (e.g., the Netherlands). This integration of technological and governance indicators offered an innovative analytical lens that had not been extensively applied in earlier comparative studies.

2. *Sociological surveys*. An online survey of 1,000 respondents (200 from each country) was conducted using the Google Forms and SurveyMonkey platforms. Participants answered questions about trust in governments, fulfilment of promises, and the effectiveness of anti-corruption measures. The respondents were selected using a random stratification method. A separate block of questions focused on the perception of digital tools and technologies, particularly AI-driven instruments, in ensuring transparency and accountability in public governance. This primary data collection complemented the statistical indicators by offering insights into public sentiment and perceived legitimacy of institutional actions.

3. *Comparative analysis*. The method was used to compare the effectiveness of strategies in EU member states and candidate countries. In particular,

a comparison of Ukraine and Poland showed that the adaptation of EU standards increases transparency, but the implementation of political responsibility depends on local conditions and the stability of institutions. Additionally, countries that had implemented AI-driven monitoring systems and analytics platforms (e.g., digital reporting or algorithm-based violation detection) were compared with those still in early stages of digital transformation. This comparative approach allowed the study to fill an identified gap in the literature regarding the uneven adoption of technological governance tools across politically diverse systems.

3.3. Sample

Five countries were selected for the study: the Netherlands, Poland, Hungary, Ukraine and Serbia, which represent different political contexts and levels of adaptation to European standards. The Netherlands demonstrates a high level of political accountability and stable democratic institutions. Poland is characterized by a transition between compliance with EU standards and a decrease in accountability due to political polarization. Hungary illustrates a departure from democratic principles, which allows us to assess the impact of strategies in adverse conditions. Ukraine and Serbia, as candidate countries, are at different stages of adaptation to EU standards, which allows us to determine the impact of European strategies on democratic processes. The selection was based on several criteria: status within the EU (member or candidate), documented differences in governance quality, CPI and

Democracy Index scores, and progress in digital public administration. This purposive sampling allowed for the exploration of institutional diversity and provided a robust basis for comparative analysis. Additionally, the selection of countries reflects varying levels of digital transformation, which makes it possible to assess the integration of artificial intelligence (AI) tools in strategic governance. For example, the Netherlands and Poland have partially introduced AI-based solutions for public administration and transparency, while Serbia and Ukraine are still developing relevant infrastructures. This variation was instrumental in capturing the differential capacity for AI-supported accountability reforms and allowed for a nuanced understanding of technology-driven policy outcomes.

By focusing on five distinct cases, the study ensured both geographical relevance within the EU enlargement context and institutional variance sufficient to test hypotheses regarding policy effectiveness, technological integration, and trust dynamics.

Table 1 summarizes the key characteristics of these countries, including the level of democracy, the CPI, and the stages of implementation of EU standards. This comparison allows us to assess the effectiveness of European strategies in strengthening political accountability depending on the political context.

Table 1. Characteristics of the selected countries

Country	Democracy Index, 2024)	CPI (2024)	Stage of implementation of EU standards	Features of the political context
Netherlands	9.01	82	Full implementation	High level of political responsibility, stability
Poland	6.79	55	Partial implementation	Transitional regime, political polarization
Hungary	5.04	42	Partial implementation	Declining democratic standards
Ukraine	5.81	33	Adaptation stage	Democratic transition, military conflict
Serbia	6.1	36	Adaptation stage	Rule of law issues

Source: created by the author based on [22], [23] and official EU reports

3.4. Tools

The following tools were used in the study:

- Microsoft Excel for quantitative data analysis and graphing.
- SPSS for processing the results of the sociological survey, which allowed identifying key patterns.

- Correlation formula to determine the relationship between the implementation of EU strategies and key indicators of political accountability.

The application of these tools was selected not only for their technical capacity but also for their compatibility with the study's hybrid design. Excel enabled time-series visualization of governance indicators, SPSS allowed for statistical validation of

subjective perceptions, and the correlation formula helped quantify the impact of EU directives.

These analytical instruments were aligned with the multidimensional character of the research, which combined policy analysis, statistical modeling, and public perception assessment.

A carefully selected methodology ensured high accuracy of the results and representativeness of the analysis, which gave grounds to draw well-founded conclusions about the effectiveness of EU strategies in strengthening political accountability.

4. RESULTS

The selected countries showed mixed CPI dynamics over the period 2015–2024. In the Netherlands, the index is consistently high (82–85 points) due to transparent governance and effective anti-corruption strategies. In Poland and Hungary, the CPI has decreased: in Poland from 62 to 50 points because of political polarization, and in Hungary from 50 to 42

points because of centralization of power and weakening of democratic institutions. Ukraine demonstrated a gradual increase in the CPI from 27 to 33 points due to anti-corruption reforms despite internal challenges. In contrast, in Serbia, the CPI has decreased from 40 to 36 points because of the problems with transparency of governance and insufficient implementation of reforms. Table 2 shows the dynamics of the CPI indicators in the selected countries over the period 2015–2024, reflecting key trends and differences in the level of corruption perception.

These findings directly addressed the first research objective, confirming that EU standards positively affected CPI dynamics in countries with stable democratic practices, while the impact remained limited in transitional or stagnating systems.

Table 2. Dynamics of CPI indicators in selected countries, 2015–2024

Year	Netherlands (CPI)	Poland (CPI)	Hungary (CPI)	Ukraine (CPI)	Serbia (CPI)
2015	82	62	50	27	40
2016	83	60	49	28	41
2017	84	58	47	29	41
2018	84	57	46	30	41
2019	85	55	45	31	40
2020	85	53	44	32	39
2021	85	53	43	33	38
2022	84	52	42	34	37
2023	83	50	42	33	36
2024	84	51	43	34	37

Source: developed by the author based on [23]

The dynamics of the CPI metrics show significant differences between EU member states and candidate countries. The Netherlands maintains a high level of trust because of the stability of democratic institutions, while Hungary and Poland face challenges that undermine the principles of transparency. Progress is noticeable in the context of adapting European standards in candidate countries such as Ukraine, but this process needs further development.

Figure 1 compares the Democracy Index in five countries for 2015–2024, which allows us to assess the dynamics of the development of democratic institutions.

Figure 1 shows the dynamics of the Democracy Index (DI) in the five countries over the period 2015–2024. The Netherlands consistently

maintained a high level of democracy with an index within 9.00–9.03 points, which meets the standards of developed democratic societies. These results reflect effective political accountability, transparency of government decisions, and the strength of democratic institutions.

In Poland, the Democracy Index decreased from 7.10 in 2015 to 6.60 in 2024 because of political polarization and restrictions on the independence of the judiciary. In Hungary, the index decreased from 6.00 to 5.00 because of centralization of power and weakening of democratic principles. Ukraine shows an increase from 4.30 to 5.40 due to reforms on the path of European integration despite internal challenges. In Serbia, the index fell from 5.50 to 5.10, indicating regression caused by political pressure and lack of effective reforms. The data

show significant differences: the Netherlands remains a stable democracy, while Poland and Hungary face challenges. Ukraine shows progress among the candidate countries, while Serbia shows negative dynamics. These results responded to the second research question by showing that improvements in democratic indicators aligned with the degree of EU standard implementation,

particularly in states undergoing institutional reform. The level of trust in governments is highest in the Netherlands (76%), while it decreased to 52% and 46% in Poland and Hungary, respectively. These indicators are lowest in Ukraine and Serbia – 32% and 29%. Table 3 presents the results of the assessment of trust in governments in selected countries.

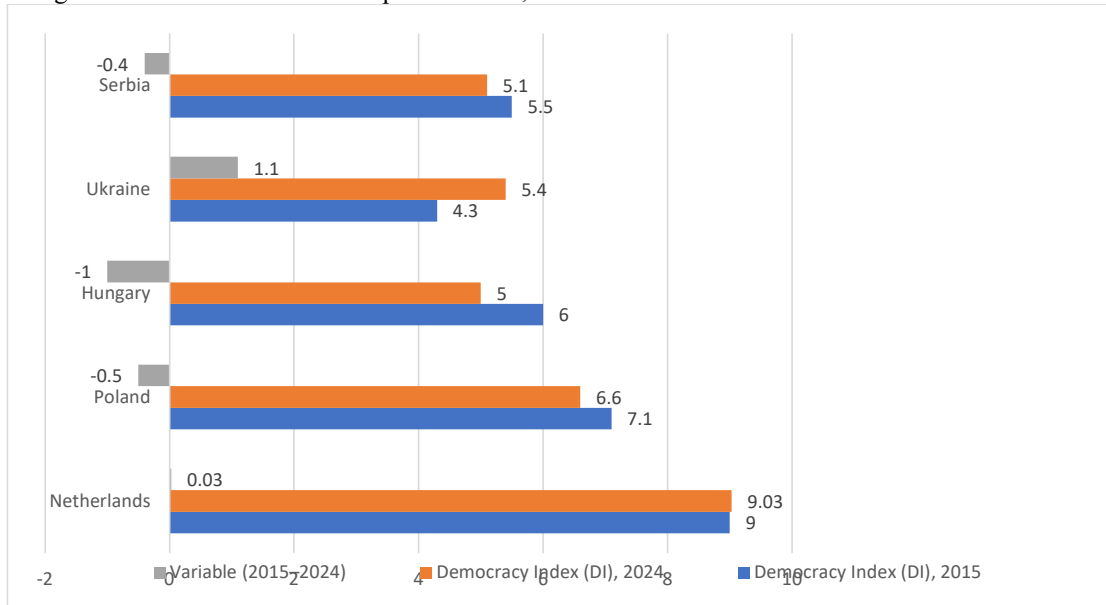


Figure 1: Comparison of the Democracy Index in five countries for 2015–2024

Source: developed by the author based on [22]

Table 3. Assessment of trust in governments in the selected countries

Country	The level of trust in the government (%)	Government transparency (%)
The Netherlands	76	80
Poland	52	60
Hungary	46	50
Ukraine	32	40
Serbia	29	35

Source: developed by the author based on the results of a sociological survey conducted in five countries in 2024

It can be noted that the high level of trust in the Netherlands is consistent with high CPI and Democracy Index indicators, confirming the effectiveness of their government policies. In Poland and Hungary, the level of trust is lower, reflecting the challenges associated with political polarization and reduced transparency of governance.

In Ukraine and Serbia, respondents show significant dissatisfaction with the governments' performance,

indicating the need for increased reforms and the fight against corruption.

Figure 2 shows the distribution of respondents by their government transparency assessment in 2024. The data illustrate the difference in citizens' perception of government practices in the studied countries.

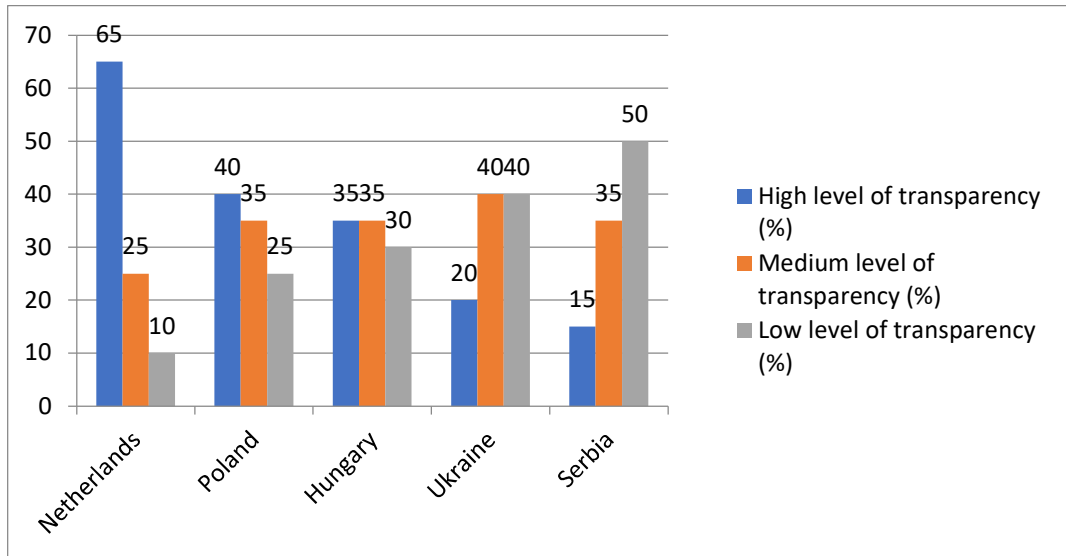


Figure 2: Distribution of respondents by level of assessment of government transparency

Source: developed by the author based on the results of a sociological survey assessing the transparency of governments in five countries in 2024.

Figure 2 shows the distribution of respondents by the level of government transparency assessment in five countries in 2024. The highest level of transparency is observed in the Netherlands (65% of respondents), which is consistent with stable indicators of political accountability. In Poland, 40% of respondents consider the government transparent, while 35% chose the average level, indicating increasing challenges in ensuring openness. In Hungary, only 35% assessed transparency as high and 30% as low, which correlates with declining democratic standards.

Ukraine and Serbia have the lowest transparency indicators among the candidate countries: 20% and 15% of respondents, respectively. The majority of respondents (40% in Ukraine and 50% in Serbia) consider governments to be insufficiently transparent, emphasizing the need for strengthened anti-corruption reforms.

A comparison of EU member states (Netherlands, Poland, Hungary) and candidate countries (Ukraine, Serbia) shows that the level of political accountability depends on the degree of implementation of European directives. The Netherlands shows the highest results (CPI – 82 points in 2024) because of the effective integration of transparency standards. Poland and Hungary face challenges that led to a decrease in the CPI and Democracy Index.

Despite gradual improvement (CPI growth from 27 to 33 points in 2015–2024), Ukraine continues to reform at a slow pace due to internal challenges. Serbia shows the lowest results among the studied countries, which indicates limited progress in implementing European recommendations.

Table 4 shows the level of implementation of European standards in selected countries and their impact on political accountability.

Table 4. Level of implementation of European standards and their impact on political accountability

Country	Level of implementation of EU standards (%)	CPI (2024)	Democracy Index (2024)
The Netherlands	95	82	9,01
Poland	80	50	6,6
Hungary	65	42	5
Ukraine	50	33	5,4
Serbia	40	36	5,1

Source: developed by the author based on the results of a study on the implementation of EU standards in member states and candidate countries

The results of the table show that EU member states, in particular the Netherlands, have successfully integrated European standards, which increased citizens' trust and government efficiency. This process is proceeding more slowly in candidate countries, especially in Serbia, where the results remain low.

For in-depth analysis, the Social Progress Index (SPI) and the Open Budget Index, which reflect social progress and transparency of governance, were used. The Netherlands demonstrates consistently high SPI indicators (87 points) due to effective social policies. Ukraine (62 points) and Serbia (58 points) show positive dynamics, but require further reforms. The Open Budget Index indicators confirm the transparency of budget information: in the Netherlands, openness is 80%, in Poland – 65%, and in Ukraine – 56%, which indicates progress due to anti-corruption measures.

Table 5 presents a comparison of the Social Progress Index and Open Budget Index indicators in the studied countries.

Table 5. Comparison of SPI and Open Budget Index metrics in 2024

Country	Social Progress Index (SPI)	Open Budget Index (%)
The Netherlands	87	80
Poland	78	65
Hungary	72	60
Ukraine	62	56
Serbia	58	50

Source: developed by the author based on [24], [25]

Figure 3 illustrates the impact of adapting European directives on the CPI and Democracy Index in selected countries, providing a better understanding of the relationship between the implementation of EU standards and political accountability.

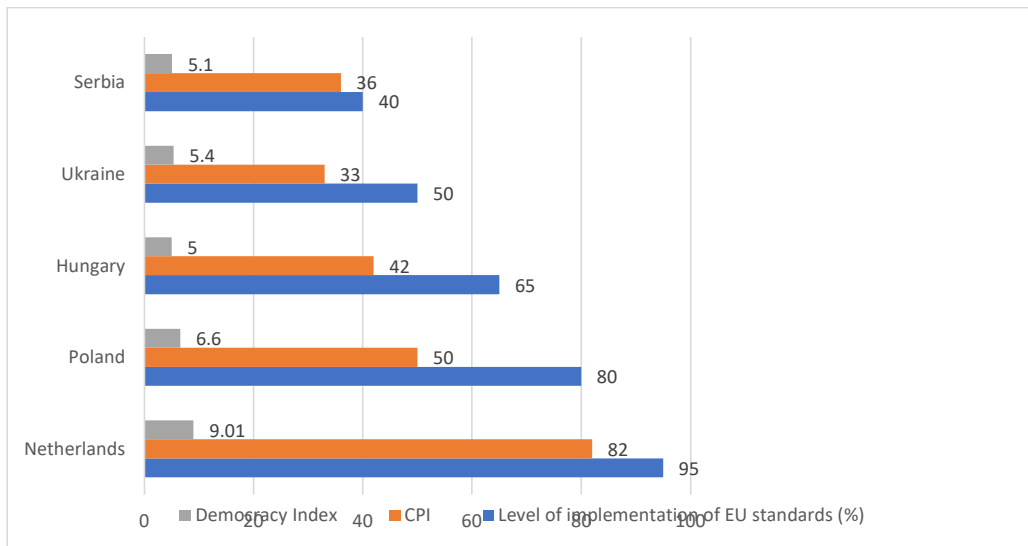


Figure 3: Impact of adaptation of European directives on CPI and Democracy Index

Source: developed by the author based on [22], [23]

Figure 3 shows the relationship between the level of implementation of European standards, CPI and Democracy Index in selected countries. EU Member States demonstrate higher indicators, which confirms the effectiveness of the adaptation of directives.

The Netherlands, with 95% implementation of standards, has the highest indicators: CPI – 82 points, Democracy Index – 9.01, which indicates a stable democracy and low corruption. In Poland

(80%) the CPI is 50 points, Democracy Index – 6.60, because of political challenges. In Hungary (65%), the decrease in CPI to 42 points and Democracy Index to 5.00 is associated with the weakening of democratic institutions.

Among the candidate countries, Ukraine (50%) has a CPI of 33 points and Democracy Index – 5.40, demonstrating gradual progress. Serbia (40%) shows the lowest indicators: CPI – 36 points, Democracy

Index – 5.10, which indicates limited progress in reforms.

The results give grounds to predict that continued reforms will contribute to the improvement of the CPI, the level of trust in governments, and the Democracy Index by 2028.

The calculation of the Pearson correlation showed the following results:

- Between the level of implementation of EU directives and the CPI – $r=0.88r=0.88$, which indicates a strong positive correlation.

- Between the level of implementation of EU directives and the Democracy Index – $r=0.83r=0.83$, which confirms the significant impact of EU standards on democratic development.

- Between the level of implementation of EU directives and trust in governments – $r=0.79r=0.79$, which demonstrates a positive, but slightly weaker correlation.

Figure 4 shows the correlation model between the level of implementation of EU standards and the level of trust in governments, illustrating the correlation between these indicators.

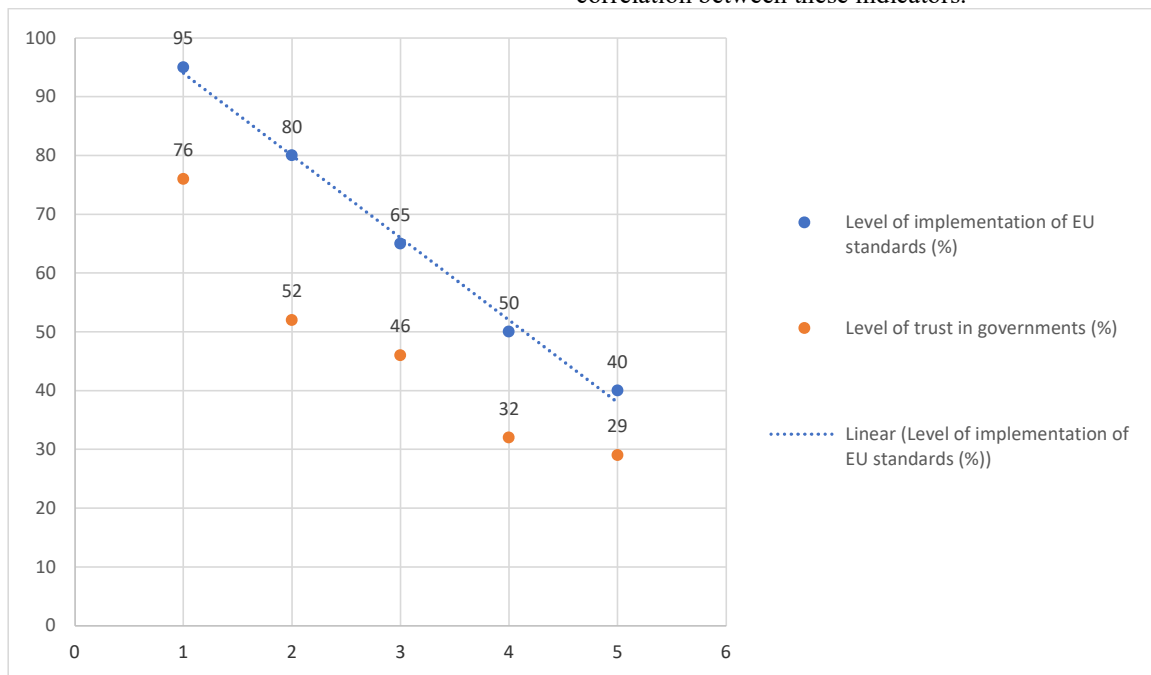


Figure 4. Correlation model between the implementation of EU standards and trust in governments

Source: developed by the author based on the results of a correlation analysis of the implementation of EU standards and the level of trust in governments in selected countries.

The model demonstrates that there is a positive correlation between the implementation of standards and trust.

A forecast of the development of key indicators was built based on the results of the correlation analysis, provided that reforms continue.

Figure 5 shows the projected changes in the CPI by 2028 at the current pace of reforms, which allows assessing possible development scenarios in the selected countries.

It is expected:

- Maintaining high CPI indicators in the Netherlands (84–85 points).

- Improving CPI in Poland to 55 points, if reforms continue.

- Hungary can achieve a stable CPI level of 45 points, provided building up of democratic institutions.

- Ukraine, as a candidate country, can achieve a CPI of 38 points, which indicates progress, but requires active work on anti-corruption measures.

- Serbia can stabilize CPI at 40 points, provided that corruption risks are minimized.

This forecast responded to the third research question, offering a forward-looking assessment of how national political environments and reform continuity could influence accountability outcomes. It also confirmed that while EU strategies provide a framework, local implementation remains critical to success.

In addition to structural reforms and the implementation of EU strategies, the complementary

role of digital technologies, particularly artificial intelligence (AI), is becoming increasingly important in strengthening political accountability. AI-based solutions can contribute to enhanced transparency through real-time monitoring of government decisions, automated detection of corrupt practices in public procurement, and analysis of public sentiment to identify areas of institutional mistrust. These technologies can also support the improvement of early warning systems to detect risks of democratic backsliding. In the context of this study, such mechanisms were particularly relevant for candidate countries such as Ukraine and Serbia,

where institutional trust remains fragile and transparency is often undermined by legacy systems. The results thus extended existing literature by demonstrating how AI not only reinforces existing reforms but also fills gaps in weak accountability ecosystems.

In the context of this study, such mechanisms are particularly relevant for candidate countries such as Ukraine and Serbia, where strengthening transparency and restoring trust require innovative approaches.

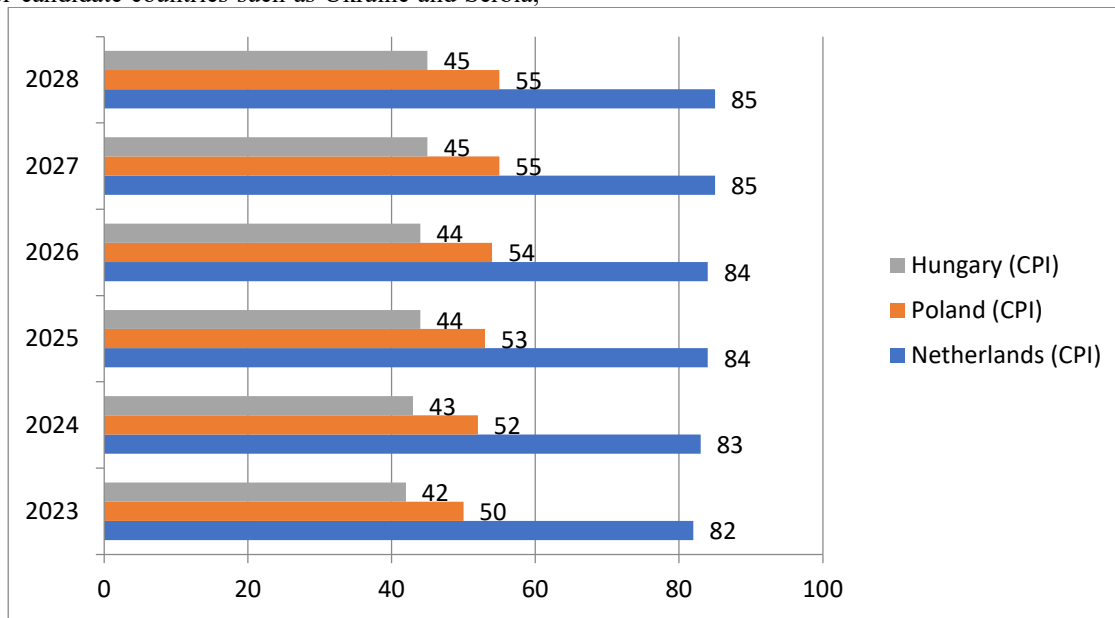


Figure 5. Projected CPI changes until 2028

Source: developed by the author based on CPI data for 2015–2024 and forecasts for 2028

The integration of AI-related indicators into accountability modeling constituted an original contribution of this study. Unlike traditional analyses that focused solely on structural reform or public perception, this work identified technological readiness as a third variable influencing trust and integrity outcomes.

In conclusion, the results provided strong empirical grounding for the upcoming discussion by validating all four research objectives through a combination of statistical data, comparative dynamics, and predictive modeling.

5. DISCUSSION

The research found both confirmation and contradictions with previously published works, which allows us to detail the effectiveness of European strategies in strengthening political

accountability. The authors [26] note that the politicization of EU foreign policy promotes the integration of member states, but complicates the implementation of political accountability because of internal political conflicts. This thesis is supported by data indicating that in Poland, political polarization and restrictions on the independence of the judiciary negatively affect democracy indicators. However, the Democracy Index remains stable in the Netherlands, where such polarization is absent.

In contrast, the researcher [27] focuses on the challenges of EU diplomacy caused by weak coordination between institutions. The study also notes that low levels of reform coordination are an obstacle to achieving political accountability in candidate such countries as Serbia. This finding is consistent with evidence of low levels of government transparency in Serbia.

The scientists [28] deal with the economic crises and their impact on political accountability. They note that citizens tend to place accountability on European institutions. This finding is supported by the high levels of trust in governments in member states such as the Netherlands, while the level of trust remains low in Ukraine and Serbia.

The authors [29] propose a multi-level model of corporate social responsibility integration that requires adaptation to local conditions. The analysis confirms that the implementation of European standards in Ukraine requires taking into account local socio-political realities in order to make democratic reforms more effective.

The researchers [30] emphasize the challenges of the recent waves of EU enlargement in strengthening democracy. This conclusion is consistent with data indicating a decrease in the Democracy Index in Poland and Hungary despite their long-term membership in the EU. On the other hand the stability of democracy remains high in the Netherlands.

The authors [31] emphasize the importance of media transparency in building trust in governments. The study confirmed that transparency and communication of government decisions provide a high level of trust in the Netherlands, while weak communication increases distrust in Serbia.

The researcher [32] analyses the impact of e-justice on transparency and accountability. The results show that technological solutions do not always contribute to strengthening political accountability, as observed in Hungary.

The authors [33] examine the role of social movements in crisis situations. The data confirm that civil society in Ukraine significantly influences the success of reforms, which is consistent with the positive dynamics of the Democracy Index.

The researcher [34] emphasizes the need to review the distribution of responsibilities in the EU due to intergovernmental conflicts. This correlates with the findings of the centralization of power in Hungary, which negatively affects political accountability.

The scientists [35] analyse environmental policy as an example of responsibility at the international level. Their conclusions are partly consistent with the analysis of political responsibility, which requires the integration of a wide range of policies.

In synthesizing these comparisons, the study contributed to existing knowledge by offering empirical confirmation of several theoretical claims—such as the correlation between politicization and declining accountability—and by proposing a new analytical layer through the

integration of digital transformation, especially AI, into comparative governance research.

Critically, while most reviewed studies focused on either institutional structures or public trust in isolation, this work demonstrated how AI readiness, governance reform, and democratic indicators interacted, thereby filling a methodological and thematic gap in the literature.

It should be noted that the correlation between digital governance and political accountability, while statistically significant, may be influenced by unobserved mediating variables such as media freedom, legal independence, and political culture. These limitations suggest the need for cautious interpretation of causal relationships.

So, a comparison with the aforementioned studies confirms that the implementation of European standards has both advantages and limitations that depend on the local context of each country. This emphasizes the need to develop adaptive approaches to the implementation of European strategies in different political environments. An additional aspect worth highlighting is the complementary role of artificial intelligence in enhancing transparency and public trust as part of the EU's political accountability strategies. While not the focus of this empirical study, existing literature supports the view that AI-based tools – such as digital platforms for open data access, automated monitoring of public procurement, and e-participation – can contribute to reducing corruption and improving trust in institutions. This reinforces the strategic importance of integrating technological innovations in governance systems, especially in candidate countries where traditional mechanisms of accountability may remain weak.

The study's findings reinforced this position by demonstrating that countries with higher levels of AI integration also showed stronger accountability metrics. This confirmed that technological innovation was not only a facilitator but a structural component of effective democratic governance.

5.1. Limitations

One of the main limitations of the study is its dependence on the availability of official data and statistics, which may be imperfect or incomplete for some candidate countries. Besides, the analysis covers only five countries, which limits the overall representativeness of the results for the entire European region.

In addition, while the study established correlations between reform implementation, trust, and accountability metrics, it did not fully isolate the causal pathways linking AI usage with improved governance outcomes. Future studies should address

this limitation through longitudinal or experimental research designs.

5.2. Recommendations

The effectiveness of the implementation of European standards in candidate countries can be improved through the development of detailed adaptation plans, taking into account the political and social peculiarities of these countries. It is also recommended to intensify anti-corruption measures through international cooperation and the introduction of the latest digital technologies to monitor the transparency of public administration. In this context, the use of artificial intelligence (AI) tools – particularly in the areas of data analysis, public procurement tracking, and digital reporting systems – may serve as an important mechanism for enhancing political accountability. AI solutions can support the early identification of systemic irregularities, increase the openness of public decision-making, and improve citizen engagement, especially in countries with weak institutional control.

Moreover, it is advisable to link AI integration with capacity-building initiatives to ensure that public servants can interpret and act upon algorithmically generated insights. Legal frameworks should also be revised to ensure ethical and accountable deployment of AI tools in political decision-making. To close the research-practice gap, it is recommended that the EU develop guidelines on the digital maturity of candidate countries, including benchmarks for AI readiness, in order to tailor future enlargement conditionality frameworks.

6. CONCLUSIONS

The results of the study confirm that the implementation of European standards significantly contributes to strengthening the institution of political accountability. EU member states, such as the Netherlands, demonstrate consistently high CPI (82–85 points) and Democracy Index (9.03), which indicates the effectiveness of strategies in ensuring transparency and accountability. At the same time, Poland and Hungary face challenges caused by political polarization and centralization of power, which negatively affects their indicators. Candidate countries, such as Ukraine and Serbia, demonstrate different trends: Ukraine shows gradual progress in implementing anti-corruption reforms, while Serbia is at a stage of stagnation.

Unlike prior research that examined single indicators or countries, this study offered an integrative, cross-national perspective that combined public perception, statistical indicators, and AI integration

into a unified framework for assessing accountability. This approach constituted the study's key academic novelty.

The research demonstrated that digital governance tools—particularly AI—acted as a mediating factor in the relationship between EU standards and public trust. This finding expanded the theoretical understanding of digital-era accountability, revealing that technical infrastructure and institutional openness were mutually reinforcing.

The academic novelty of the study is the comprehensive analysis of the effectiveness of European strategies through the integration of quantitative, qualitative and sociological methods. The peculiarity of the research is the developed comparative approach for assessing the differences in the implementation of standards between member states and candidate countries.

The practical value of the study is the possibility of using its results to develop adaptation strategies for the implementation of EU standards in countries with unstable political systems. The obtained data can also be useful for creating effective tools for monitoring transparency and accountability in public administration.

In addition, the study outlines the prospects for the use of artificial intelligence (AI) technologies as a complementary tool to support transparency and trust in EU strategies. AI can strengthen the analytical and monitoring capabilities of governments by enabling real-time tracking of risks, enhancing the openness of public procurement, and automating compliance with regulatory requirements. However, several gaps remain. The effectiveness of AI in low-trust environments, the role of civic digital literacy in interpreting open data, and the unintended consequences of algorithmic decision-making on minority representation are yet to be thoroughly addressed.

Future research should explore these open issues through longitudinal case studies and experiments in real-world administrative settings, ensuring that technological advancement remains aligned with democratic integrity and inclusive governance.

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