



THE 21ST EDITION OF THE INTERNATIONAL CONFERENCE EUROPEAN INTEGRATION REALITIES AND PERSPECTIVES

Digitalization and Strategic Management in Public Institutions in Romania

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Abstract: In the context of accelerated digital transformations, public institutions in Romania are faced with the need for structural and functional adaptation, aimed at increasing efficiency, transparency and citizen orientation. Digitalization, integrated into strategic management, is becoming an essential factor in the modernization of public administration and organizational performance. Main directions are highlighted, such as the development of interoperability of information systems, the use of data in the decision-making process, the automation of administrative procedures and the implementation of digital public services. Strategic management provides the necessary framework for the coherent planning and implementation of digitalization, contributing to the alignment of institutional objectives with the requirements of the digital society. At the same time, limitations of the institutional framework are identified, such as the fragmentation of IT infrastructure, the deficit of digital skills and the rigidity of administrative structures, factors that affect the efficiency of digital transformation. The empirical dimension is supported by a quantitative methodology, based on a questionnaire and analysis in SPSS, highlighting significant relationships between the level of digitalization and the quality of public services, reflected in efficiency, accessibility and citizen satisfaction. Defining strategic directions – developing digital infrastructure, strengthening skills and increasing interoperability – outlines the premises of a modern administration, oriented towards performance, efficiency and sustainability.

Keywords: Public Services; Digital Transformation; Managerial Strategies

JEL Classification: H83, O33, D78

1. Introduction

The digital transformation of public administration represents one of the main directions of institutional modernization in contemporary European states. The development of information and communication technologies has led to significant changes in the organization and functioning of public institutions, influencing administrative efficiency, the accessibility of public services, and the relationship between administration and citizens.

In Romania, the process of digitalizing public administration has intensified in the context of European policies aimed at developing the digital society and improving the efficiency of administrative services.

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The implementation of electronic public services and the development of interoperability between information systems have become essential strategic objectives for modernizing public administration and reducing bureaucracy.

2. Strategic Management and Digital Transformation in Public Institutions

Strategic management represents the process through which organizations establish their long-term objectives and develop the mechanisms required to achieve them. In the public sector, strategic management has the role of guiding institutional activity toward the provision of efficient public services adapted to citizens' needs.

The digitalization of public administration has generated important transformations in the application of strategic management, as institutions are required to integrate digital technologies into administrative processes and decision-making mechanisms. Digital transformation does not refer exclusively to the computerization of administrative procedures, but also to changes in organizational structure and in the way public services are delivered.

The concept of e-government involves the use of information and communication technologies for the development of electronic administrative services and for improving the efficiency of the relationship between administration and citizens. In this context, modern public administration is evolving toward the model of "smart government", based on the use of data and intelligent technologies in the decision-making process.

Strategic management contributes to the implementation of digital transformation by establishing institutional modernization objectives, developing administrative interoperability, and coordinating the resources required for the implementation of digital technologies. At the same time, digitalization requires the development of digital skills among civil servants and the adaptation of organizational culture to new technological requirements.

2.1. The Digitalization of Public Administration in Romania

The process of digitalizing public administration in Romania has developed progressively in recent years, being influenced by European strategies concerning the development of the digital society and the modernization of public services. The implementation of administrative electronic platforms aims to increase institutional efficiency, reduce bureaucracy, and improve citizens' access to public services.

Among the most important digital platforms used in Romanian public administration are Ghiseul.ro, the Virtual Private Space, and the Electronic Public Procurement System. These systems contribute to the development of electronic administrative services and to increasing institutional transparency.

However, the digital transformation process is affected by numerous structural problems, such as the fragmentation of information systems, the lack of administrative interoperability, and the deficit of digital skills. In many cases, public institutions use incompatible platforms, which affects the efficient exchange of data and limits the development of integrated public services.

Furthermore, Romanian public administration faces difficulties related to technological infrastructure and organizational resistance to change. The persistence of traditional bureaucratic procedures and the use of physical documents reduce the efficiency of the digitalization process and limit the accessibility of electronic services.

In this context, digital transformation strategies aim to develop the interoperability of information systems, implement the “digital by default” principle, and develop the governmental cloud. At the same time, cybersecurity and data protection represent essential components of modern digital administration.

3. Empirical Study on the Digitalization of Public Services within the Romanian Police

The Romanian Police represents a public institution undergoing a continuous process of modernization and digitalization, with complex responsibilities regarding the maintenance of public order and the management of a large volume of administrative and operational information.

The digital transformation process aims to increase institutional efficiency, develop the interoperability of information systems, and improve the relationship between the institution and citizens. In this context, information systems and digital services have been implemented for the management of operational data and for the provision of faster and more accessible administrative services.

3.1. Research Methodology

The research conducted is quantitative and correlational in nature and aims to assess citizens’ perceptions regarding the impact of digitalization on the quality of public services provided by the Romanian Police.

The main method used is a sociological survey based on a standardized questionnaire. The collected data were statistically analyzed using SPSS, employing descriptive analysis methods, reliability analysis, and Pearson correlation analysis.

3.2. Research Objectives and Hypotheses

The main objective of the research is to evaluate the impact of digitalization on the quality of public services provided by the Romanian Police, from the citizens’ perspective.

In order to achieve this general objective, the following specific objectives were established:

- O1: Identifying the level of awareness and use of digitalized public services;
- O2: Assessing respondents’ perception of the accessibility and usefulness of digital services;
- O3: Analyzing the relationship between digitalization and the efficiency of public services;
- O4: Determining the influence of digitalization on citizens’ satisfaction;
- O5: Assessing perceptions regarding the reduction of bureaucracy and response time;
- O6: Identifying the factors that influence the use of digital services.

The general hypothesis of the research is the following:

- H1: The digitalization of public services provided by the Romanian Police positively and significantly influences the perceived quality of public services.

The corresponding null hypothesis is:

- H0: The digitalization of public services does not significantly influence the perceived quality of public services.

In order to detail the analyzed relationships, the following specific hypotheses were formulated:

H1.1: There is a positive relationship between the perceived level of digitalization and the efficiency of public services;

H1.2: There is a positive relationship between digitalization and the accessibility of services;

H1.3: Digitalization positively influences citizens' satisfaction;

H1.4: Digitalization contributes to reducing response time;

H1.5: Digitalization contributes to reducing bureaucracy;

H1.6: The level of digital skills influences the use of digitalized services;

H1.7: The frequency of using digital services is correlated with overall satisfaction.

3.3. Analysis and Interpretation of Results

Table 1. Summary of Descriptive Indicators Regarding the Digitalization of Public Services

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Digitalization of services is necessary within the Romanian Police	55	3	5	4,69	0,540
Digital services facilitate interaction between citizens and the institution	55	1	5	4,58	0,712
Online access to services reduces travel to the institution's premises	55	2	5	4,71	0,629
Digitalization contributes to the modernization of public institutions	55	3	5	4,75	0,517
Digitalization increases the transparency of institutional activities	55	3	5	4,64	0,649
The use of technology reduces administrative errors	55	1	5	4,31	0,879
Perceived digitalization index	55	3,17	5	4,61	0,492

The overall mean of the perceived digitalization index is 4.61, on a scale from 1 to 5, which indicates a high level of agreement with the statements regarding the necessity and usefulness of digitalization.

The highest mean scores are recorded for the statements according to which digitalization contributes to the modernization of public institutions — mean 4.75 — and online access to services reduces the need to travel to the institution's premises — mean 4.71. These results show that respondents primarily associate digitalization with the modernization of administration and with reducing the administrative effort borne by citizens.

At the same time, the mean score of 4.69 for the statement regarding the necessity of digitalization within the Romanian Police confirms the existence of high social expectations concerning the expansion of digital services. The relatively low standard deviations, especially for the items referring to modernization and the necessity of digitalization, indicate a high degree of response homogeneity and consistent support for the digital transformation process.

The only indicator with higher variability is the one referring to the reduction of administrative errors through the use of technology, where the standard deviation is 0.879. This aspect suggests that respondents positively assess the effect of digitalization on reducing errors, but their perception is not

as uniform as in the case of institutional modernization or the reduction of travel to the institution's premises.

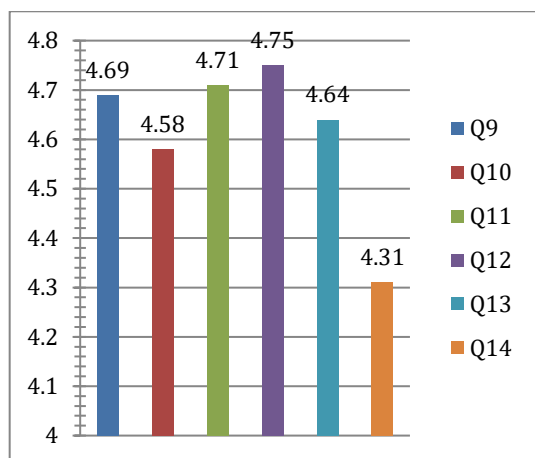


Figure 1. Average responses on perception of digitalisation

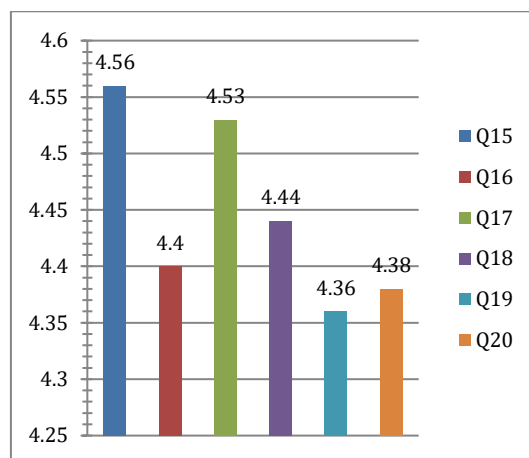


Figure 2. Average responses on the perceived quality of public services

This distribution shows that respondents perceive digitalization as a necessary and useful process, not merely as a technological option. From a managerial perspective, the results support the idea that digitalization should be integrated into the institutional strategy of the Romanian Police, since there is a high level of willingness among beneficiaries to use digital public services.

The high mean values indicate that digitalization is interpreted by respondents as an instrument of administrative optimization. However, the differences between the mean scores suggest that the impact of digitalization is not perceived uniformly across all dimensions of public service quality. In particular, the reduction of response time and the rapid resolution of requests depend not only on the existence of digital platforms, but also on the level of integration of information systems and on the institution's capacity to efficiently process requests received online.

Table 2. Summary of Descriptive Indicators Regarding the Quality of Public Services

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Digitalization contributes to increasing the efficiency of public services	55	3	5	4,56	0,631
Digitalization reduces the institution's response time	55	2	5	4,40	0,852
Digitalization contributes to reducing bureaucracy	55	3	5	4,53	0,716
Digital services are more accessible than traditional ones	55	2	5	4,44	0,739
Digitalization contributes to improving the quality of public services	55	2	5	4,36	0,825
Digitalized services allow for faster resolution of requests	55	1	5	4,38	0,871
Perceived service quality index	55	2,33	5	4,45	0,639

The perceived service quality index has a mean score of 4.45, which indicates a positive assessment of the effects of digitalization on institutional functioning.

The highest mean score is recorded for the statement according to which digitalization contributes to increasing the efficiency of public services, with a value of 4.56. This result shows that administrative efficiency is the main dimension through which respondents assess the impact of digitalization.

Furthermore, the mean score of 4.53 for the reduction of bureaucracy confirms that respondents perceive digital services as an alternative to traditional administrative procedures, which are considered slower and more complicated. Similar values are also observed for the accessibility of digital services — mean 4.44 — and for the reduction of response time — mean 4.40.

The standard deviations are higher than in Table 1, especially for the indicators concerning the rapid resolution of requests and the reduction of response time. This suggests that, although the overall perception is favorable, respondents' concrete experiences with digitalized services may differ. Therefore, digitalization is positively assessed, but its practical effects depend on the quality of implementation and the functionality of the platforms used.

Table 3. Correlations between Digitalization and the Dimensions of Public Service Quality

Analyzed Relationship	Pearson Correlation Coefficient (r)	Statistical Significance (p)	N	Hypothesis
Perceived digitalization index – efficiency of public services	0,667	0,000	55	H1.1
Perceived digitalization index – reduction of response time	0,723	0,000	55	H1.4
Perceived digitalization index – reduction of bureaucracy	0,661	0,000	55	H1.5
Perceived digitalization index – accessibility of digital services	0,449	0,000	55	H1.2
Perceived digitalization index – improvement of public service quality	0,605	0,000	55	H1
Perceived digitalization index – faster resolution of requests	0,705	0,000	55	H1.4

The results presented in Table 3 confirm the existence of positive and statistically significant relationships between the perceived digitalization index and the main dimensions of public service quality. All Pearson correlation coefficient values are positive, and the statistical significance level is $p = 0.000$, which indicates significant relationships between the analyzed variables.

The strongest relationship is identified between perceived digitalization and the reduction of response time, where the Pearson correlation coefficient is $r = 0.723$. This value indicates a strong positive correlation and suggests that respondents directly associate digitalization with the institution's speed of response to citizens' requests.

A strong correlation is also observed between digitalization and the faster resolution of requests, where the coefficient is $r = 0.705$. This result supports the hypothesis that digitalization contributes to the efficiency of administrative workflows and to reducing the processing time of requests.

Furthermore, the relationships between digitalization and the efficiency of public services — $r = 0.667$ — and between digitalization and the reduction of bureaucracy — $r = 0.661$ — indicate an important positive association. These results confirm hypotheses H1.1 and H1.5 and show that digitalization is

perceived as a relevant factor for simplifying administrative procedures and increasing institutional efficiency.

The weakest correlation, although statistically significant, is the one between digitalization and the accessibility of digital services — $r = 0.449$. This value indicates a moderate positive relationship and may suggest that service accessibility does not depend exclusively on digitalization, but also on other factors, such as citizens' digital skills, technological infrastructure, and the ease of use of electronic platforms.

Overall, the correlation results support the general hypothesis of the research, according to which the digitalization of public services provided by the Romanian Police positively influences their perceived quality.

Table 4. Summary of the Linear Regression Model

Indicator	Value
Multiple Correlation Coefficient (R)	0,771
Coefficient of Determination (R^2)	0,595
Adjusted R^2	0,587
Standard Error of the Estimate	0,411

The multiple correlation coefficient has a value of $R = 0.771$, which indicates a strong relationship between the independent variable, namely perceived digitalization, and the dependent variable, namely the perceived quality of public services.

The coefficient of determination $R^2 = 0.595$ shows that perceived digitalization explains approximately 59.5% of the variation in the perceived quality of public services. This value is relevant from both a statistical and managerial perspective, as it indicates that digitalization makes a major contribution to the way citizens evaluate the quality of the services provided by the Romanian Police.

The adjusted R^2 value = 0.587 confirms the stability of the model and indicates that the relationship between digitalization and the quality of public services is not random. The small difference between R^2 and adjusted R^2 suggests that the model has good explanatory power.

The standard error of the estimate, 0.411, indicates an acceptable level of deviation between the observed values and the values estimated by the model. Therefore, the regression model confirms the general hypothesis of the research and supports the conclusion that digitalization is an important predictor of the perceived quality of public services.

Based on the descriptive, correlational, and regression results, it can be observed that digitalization is perceived by respondents as a determining factor in the modernization of the public services provided by the Romanian Police. The high mean values, the positive and statistically significant correlations, as well as the strong explanatory power of the regression model confirm that digitalization contributes to increasing administrative efficiency, reducing bureaucracy, improving accessibility, and enhancing the perceived quality of public services.

These results support the general hypothesis of the research and highlight the need to integrate digitalization into the strategic management of public institutions. Digital transformation should be approached not only as a technological process, but also as a managerial instrument for increasing institutional performance and strengthening the relationship between administration and citizens.

3.4. Discussion on the Relationship between Digitalization and the Quality of Public Services

Table 5. ANOVA for the Regression Model

Model	Sum of Squares	df	Mean Square	F	Statistical Significance (p)
Regression	13,114	1	13,114	77,708	0,000
Residual	8,944	53	0,169		
Total	22,059	54			

The value of the F test = 77.708, associated with a significance level of $p = 0.000$, indicates that the model is statistically significant.

This value shows that the independent variable, namely the perceived digitalization index, contributes significantly to explaining the variation in the dependent variable, namely the perceived quality of public services. Therefore, the null hypothesis, according to which digitalization does not significantly influence the quality of public services, can be rejected.

The sum of squares for the regression is 13.114, while the residual sum of squares is 8.944. This distribution indicates that an important part of the variation in the perceived quality of public services is explained by perceived digitalization, which confirms the relevance of the statistical model used.

From a managerial perspective, the result suggests that digitalization is not merely an auxiliary technological element, but a factor with a significant impact on how citizens evaluate public services. Thus, the development of digital services, the simplification of administrative procedures, and the improvement of online accessibility can directly contribute to enhancing the perceived quality of the services provided by the Romanian Police.

Table 6. Regression Model Coefficients

Model	B	Standard Error	Beta	t	Statistical Significance (p)
Constant	-0,176	0,527		-0,335	
Perceived digitalization index	1,002	0,114	0,771	8,815	0,000

The independent variable, namely the perceived digitalization index, has a coefficient of $B = 1.002$, which shows that, for a one-unit increase in the perception of digitalization, the perceived quality of public services increases, on average, by approximately 1.002 units.

The standardized coefficient $Beta = 0.771$ indicates a strong positive influence of digitalization on the quality of public services. This value confirms that digitalization is an important predictor of perceived quality and supports the general hypothesis of the research.

The value of the t test = 8.815, associated with a significance level of $p = 0.000$, confirms that the influence of digitalization on perceived quality is statistically significant. Therefore, it can be stated that there is a positive and significant relationship between the level of perceived digitalization and the quality of public services provided by the Romanian Police.

The constant of the model has a value of $B = -0.176$; however, it does not have major interpretative relevance in the context of this research, since the main interest lies in the effect of digitalization on the quality of public services. The model equation can be formulated as follows:

$$\text{Perceived quality of public services} = -0.176 + 1.002 \times \text{Perceived digitalization index}$$

This equation confirms that a more favorable perception of digitalization is associated with a higher assessment of the quality of public services. The result supports the conclusion that investments in digital

services, interoperability, accessibility, and digital skills can have positive effects on administrative performance and citizens' satisfaction.

The results obtained through the ANOVA analysis and the estimation of the regression coefficients confirm that perceived digitalization has a positive and significant influence on the perceived quality of public services. The regression model is statistically valid, and the value of the Beta coefficient indicates a strong relationship between the two analysed variables.

Therefore, digitalization can be considered an important explanatory factor of the quality of public services provided by the Romanian Police. This conclusion supports the need to continue the digital transformation process, with an emphasis on developing information infrastructure, integrating digital systems, reducing bureaucracy, and increasing the accessibility of online public services.

4. Conclusion

In addition to the statistical results regarding the relationship between digitalization and the quality of public services, the analysis also aimed to identify the main obstacles that may limit the efficiency of the digital transformation process. This dimension is important because it allows the research to move beyond the mere identification of the positive effects of digitalization toward understanding the conditions required for its effective implementation. Thus, respondents were asked to indicate the main factor which, in their opinion, affects the digitalization of public services, with the results summarized in Table 7.

The identification of these obstacles has both theoretical and practical relevance, as it highlights the fact that the digitalization of public administration does not depend exclusively on the existence of technology, but also on the ability of institutions to develop coherent strategies, reduce bureaucracy, and support the development of citizens' digital skills. Therefore, the data presented below contribute to substantiating the research conclusions and to formulating directions for improving the digitalization process in public institutions.

Table 7. Main Obstacles to the Digitalization of Public Services

Variable	Category	Frequency	Percentage (%)
Main obstacle	Lack of IT infrastructure	4	7,3
	Lack of specialized personnel	5	9,1
	Lack of citizens' digital skills	13	23,6
	Bureaucracy	12	21,8
	Lack of trust in data security	2	3,6
	Lack of a clear strategy	16	29,1
	Other	3	5,5

The results summarized in Table 7 confirm that the main obstacles to the digitalization of public services are strategic, organizational, and educational in nature. The lack of a clear strategy, insufficient digital skills among citizens, and the persistence of bureaucracy represent factors that may limit the efficiency of digital transformation and reduce the positive impact of electronic public services.

Therefore, the digitalization of public administration should not be understood exclusively as a process of computerization, but as a complex institutional reform. For digital services to effectively contribute to improving the quality of public services, it is necessary to correlate technological investments with the development of digital skills, the simplification of procedures, and the consolidation of strategic management at the institutional level.

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