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DOCTORAL THESIS ABSTRACT

Evaluation of the performance in local public administration based on citizens' opinions as beneficiaries of public services

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Introduction

Public administration is those activities carried out by the president, the government, central and local administrative authorities and their subordinate structures through which public services are provided. Public administration involves following instructions and performing activities, while public management involves achieving results from the activities carried out and involving the personal responsibility of the manager for achieving them. Thus, public administration is an activity through which citizens are served. Civil servants are in charge of implementing procedures, transposing public policies and managing day-to-day activities. Public administration managers do not just follow instructions, but focus on delivering results and taking responsibility for the activities they manage.

The poor quality of services provided by local public administrations has led to dissatisfaction among beneficiaries - citizens. Other factors have also contributed to promoting change in the public sector and have acted independently, such as changes in economic theory, the impact of changes in the private sector, largely due to globalisation, and technological changes.

The process of improving the situation started by developing, first at the theoretical level, a management framework for public services. The current international trend in the evolution of the way public administration works is to eliminate bureaucracy, a concept that has long underpinned the organisation of the public system. Organising public administrations on a scientific basis and continually improving work and organisational structures, as well as making effective use of available resources, can lead to efficient work, which, according to the definition of efficiency, means maximising effects/results while minimising effort/expenditure. In research on local public administration, the focus on efficiency has been seen as a means of ensuring a relationship between citizens and politics, as the work of government is linked to the performance of public services.

The implementation of the new public management has resulted in an accelerated evolution of management techniques and methods as a way of adapting to the new requirements of the participants. At the same time as the functions of general management are evolving, new functions are also emerging in public management, such as urban marketing, social management and quality assurance. These have been taken over from the management of private organisations and adapted to the public system.

Reducing bureaucracy and simplifying procedures for interaction with citizens and business representatives are some of the measures adopted in practice to increase efficiency, in terms of reducing costs and response times, and increasing transparency and integrity in the delivery of public services. This can have the effect of increasing the satisfaction of the citizen as the final beneficiary of the activities carried out by the public administration and improving the perception of the public administration. The analysis of the current situation shows that, at international level, efforts so far have been mainly directed towards improving relations with the business community. As regards relations with citizens and the inter- and intra-institutional level, the state of reform is identifying problems with a view to finding solutions to simplify interactions between administration and beneficiaries.

Performance evaluation work in the public sector is recognised by most specialists as being particularly difficult to carry out, given the multiplicity and diversity of stakeholders in public sector activities: customers, voting citizens, elected representatives, non-profit organisations, professional groups, trade unions, public managers, the state, etc., as well as the differences in values and perceptions of performance held by these stakeholders. The process is also hampered by the nature and diversity of public services.

In order to be in line with the existing trends in the European Union, the structures of the public administration in Romania are starting to support the consolidation of public services by developing coordination and collaboration mechanisms within the institutions. Indirect effects occur at the societal level, as a result of improving the capacity of the public administration to deliver quality services and to treat citizens who benefit from public services

as partners rather than taxpayers, and to find appropriate solutions to problems in the public system, whatever their nature. The traditional approach, oriented towards the institutions providing the services, is gradually being replaced, at least at the declarative level, by an orientation towards the needs of the beneficiaries, represented mainly by citizens and business representatives.

In the first chapter of this PhD thesis, an overview of the concepts of public administration, public services and public management, an incursion into their evolution and crystallization has been made. Also in this chapter, the theoretical framework of public management has been defined, a concept which, when translated into practice, has led to the orientation of public administration activity towards the needs of citizens, and moreover, has opened the door to a new approach to the evaluation of performance in public administration.

The second chapter of the doctoral research deals with the adaptation of the management practiced in public administration in Romania to the evolution of the theoretical framework and the practice in public management in European public administrations, the way to the development of government strategies aligned with the new trends. The aim of the research is to identify the shortcomings in the implementation of the new public management in Romania, to include the research approach in the current practice and policy of national public administration, and to foreshadow the prospects of the practical usefulness of doctoral research at national level.

Chapter three was devoted to the study of innovative elements in the assessment of management in public administration, induced by the evolution of the public system on the approach to performance in the public system. Public management is presented as supporting the changes that public institutions need to make in order to adapt to the constantly evolving requirements generated by changes in the economic and social environment, which have become increasingly dynamic and complex. Together they form an integrative system which is influenced by the political factor. This is one of the most complex systems identified in national economies, whose performance has proved difficult to assess. The general trend in assessing the performance of public institutions is to increase the role of the involvement of the beneficiaries of public services, who are at the same time contributors and supporters of public administration through the taxes they pay. Performance evaluation in public management through a citizen-centred approach is used as part of several evaluation methods to support accountability to external stakeholders, including in measuring the effectiveness of public institutions.

The research aims to examine the extent to which citizens are involved in assessing the performance of public administration. Involving the beneficiaries of public services in assessing the performance of the provider of these services can lead to changes in the way public administration operates that contribute to increased citizen satisfaction, based mainly on political and cultural factors. In addition, the contribution of political and cultural factors to understanding the responsiveness of public administration is assessed. This will provide a comprehensive perspective on the question of what is important to citizens when they contact public institutions. To get to this level, the match between what public service beneficiaries want and what governments deliver through the public system they administer needs to be identified and assessed.

Chapter four is devoted to the development of the model for assessing the performance of public institutions by the beneficiaries of public services, i.e. it deals with the establishment of the research directions, the formulation of the methodological framework, followed by the formulation of the seven hypotheses, which were then tested in chapter five. How public administrations respond to the expectations and needs of citizens, as the main beneficiaries of their work, is treated as a synthesis of business considerations, public policies and human, cultural determinants that describe the complexity of public administrations. Public policy and cultural aspects best describe the antecedents that influence how public needs are met through the services provided. In this research, policy and administrative culture are analysed interrelated, given the complexity of public administration work and its determinants. The model tested is based on the model promoted by Vigoda, which has been updated and adapted to the specifics of public administration in

Romania.

The collection of information for the case study was done online, using a questionnaire developed entirely as part of this PhD research. The collection of information through the application of the questionnaire was carried out from 15.06.2021 to 03.07.2021. The services of a specialized data collection company were used for the collection and verification of information. The questionnaire was structured in two parts: the first part contains the demographic characteristics and the verification questions, and the second part is dedicated to the variables that are tested in the case study.

Chapter Five of this thesis details the research methodology, this chapter being reserved for the experimental application of Machine-Learning XGBoost and Linear Regression algorithms for the four selected cities, Cluj-Napoca, Galați, Iași and Oradea, in order to validate the hypotheses and classify the four identified factors.

Working scenarios were established for the dependent variables **VD1 -** *citizens' satisfaction with the interaction with the local public administration*, **VD2 -** *local public administration's reaction to citizens' demands*, **VD3 -** *citizens' satisfaction with the public services provided by the local public administration in different areas,* in relation to the 12 independent variables structured in four factors.

The seven hypotheses, which have been tested and verified, are:
✧   ***Hypothesis H1:*** Public *policies* and organisational culture in local government influence citizens' beliefs about their satisfaction with their interaction with local government;
✧   ***Hypothesis H2:*** Public policies and organisational culture in local government influence citizens' beliefs about the responsiveness of local government to their demands;
✧   ***Hypothesis H3:*** Public policies and organisational culture in local government influence citizens' beliefs about satisfaction with public services provided by local government in different areas;
✧   ***Hypothesis H4:*** The social orientation or commercial approach of local government influences citizens' perception of the responsiveness of local government to collective (social) needs;
✧   ***Hypothesis H5:*** Entrepreneurship and the initiation of change in local public administration influence citizens' perceptions of the responsiveness of local administration to collective (social) needs;
✧   ***Hypothesis H6:*** Organisational culture among local government officials influences citizens' perceptions of local government responsiveness to collective (social) needs;
✧   ***Hypothesis H7:*** The quality of management and leadership in local public administration influences citizens' perceptions of the responsiveness of local government to collective (social) needs

For all four cities analysed, it emerged that the ***determining factors***, in the opinion of the questionnaire respondents, were ***Factor 4_Quality* of management and leadership VI4** and **Factor 2_ Entrepreneurship VI2.** Factor *4_Quality* of management and leadership stood out unequivocally as the first choice of respondents regardless of the region of development, city, inhabited area, etc., highlighting the need for strategic interventions that influence the long-term activity of the organisation, leading to improved performance. In the final part of the case study, the Kruskal-Wallis statistical test was applied to the independent variables identified as predominant in the responses of the respondents, belonging to the factors identified above, in order to demonstrate the existence or absence of significant differences between different demographic characteristics (gender, inhabited area, monthly income, income per family member).

From a theoretical point of view, i.e. the latest trends in public administration research, the case study results confirm the alignment with the elements that give it the specificity of the new public management, identified in the first part of the research**.**

From the point of view of local public administration practice, the study results can be interpreted as a reaction of citizens to the reform of local public administrations in Romania, to the identification of the stage Romania is at on the road to be taken to achieve the objectives successively assumed by the Romanian Governments, through strategies dedicated to the development of public administration.

Chapter 1. Concepts and developments of the theoretical framework of public management

1.1. Public administration, public services and public management

Public administration, public services and public management are complex concepts, to the definition of which both theorists and practitioners have contributed. The public administration is described in the applicable documents as "the set of activities of the President, the Government, the central autonomous administrative authorities, the local autonomous administrative authorities and their subordinate structures, through which, in the regime of public power, the laws are carried out or, in within the limits of the law, public services are provided". The local public administration is presented as "a category of public authority, which, according to the Constitution and laws, is called to execute the law, or, within the limits of the law, to provide public services, using, for this purpose, the specific prerogatives of public power" [2]. From the analysis of the two definitions, it emerges that the public administration, seen as a system, includes two components, which have the same functions. It is about the central public administration and the local public administration. The difference lies in the fact that, while the central public administration acts at the level of the entire country, the local public administration serves local communities. Both administrative systems are characterized by complementarity and independence from each other. In terms of their functionality, they influence each other.

Based on the institutional framework, administration is divided into public administration and private administration. Public administration refers to administration that operates in a governmental setting, while private administration refers to administration that operates in a non-governmental setting, i.e. in the business environment. Public administration is central and local and aims to develop and implement government policies and programs, while business administration aims to ensure that every economic enterprise or company can function in the most optimal or efficient way possible, for which it develops and implements own policies. public services [4].

Governments are elected to serve the citizens and many of them are not re-elected due to the fact that they do not meet the expectations of the citizens [5]. Public services are intended to satisfy the needs of citizens, as end users, but, as Negulescu (1986) observes, this should not be taken to the extreme, i.e. to the point where citizens treat the administration as if they had a right debt towards public services; they can take advantage of the public service within the limits allowed by the legal framework [6]. Nasir [7] states that the way public administration is organized at the level of a locality is a reflection of political development and is found in the quality of services offered to the community.

The quality of the services provided by the public administration led to dissatisfaction of the beneficiaries. As a way to improve the situation, the development of a managerial framework for public services was started.

1.2. The New Public Management: Concepts and Evolution

Changes in the public sector occurred in response to a number of factors that acted independently, respectively:
- ✧ citizens' dissatisfaction, as beneficiaries of public services, with the activity of the public sector;
- ✧ the changes that have taken place in economic theory;
- ✧ the impact of changes in the private environment, largely due to globalization;
- ✧ technological changes.

In the period leading up to public administration reform, attention was focused on reducing the role of governments, but all four factors had their own influence in generating the need for change. Over time, during the implementation of the reform, the concerns towards the public administration have changed [9].

The current trend, at the international level, in the evolution of the way in which activities are carried out in the public administration, is to eliminate bureaucracy, a concept that has been the basis of the organization of the public system for a long time. The organization on scientific bases and the continuous improvement of the activity and organizational structures in the public administration, as well as the efficient use of available resources, can lead to the achievement of an efficient activity, which means, according to the definition of efficiency, the maximization of effects/results while minimizing efforts/expenses [20].

The traditional public administration and the concepts on which it was founded, were discredited theoretically as well as practically. The adoption of new forms in public management represents the moment of the emergence of a new paradigm in the public sector, which was developed as a general description of how to reorganize public sector structures, in order to bring public management closer to management in commercial enterprises [9]. In the given situation, the transition to the new public management, beyond criticism, constitutes an irreversible transformation, which will mark a new period of development of management in the public system, simultaneously with its reformation at the world level [9].

The size of government, centralized bureaucracies, inadequate accountability mechanisms and inefficient use of resources are problems that the new public administration sought to address. These aspects are summarized in the following figure:

Problems that were the basis of the public administration reform
Source: processing after Hughes [9]

Plumb and Androniceanu [23] present public institutions as providers of public products and services, with the objective of satisfying the social needs of individuals and legal entities under conditions of economic efficiency. The common features of modern public administration, summarized, are: permanent innovation, responsibility, permanent satisfaction of beneficiaries, increased transparency. By developing these features, the growing demands of citizens, professionals and politicians are responded to with maximum efficiency, as stated by Boston [24], Hood [21] and Khademian [25].

The implementation of the new public management resulted in the evolution of management techniques and methods at an accelerated pace, in order to adapt to the new requirements of the actors in the field. Simultaneously with the evolution of general management functions, new functions also appear in public management, which were taken over from the management of private organizations (general management) and adapted to the new conditions, specific to the public environment.

The evolution of applied management in public organizations led to the acceptance of new guidelines in public administration management, which were synthesized at a theoretical level by Plumb and Androniceanu [23], and whose application component is treated in the intelligent and transparent model developed for public administration local from Romania in the relationship with the citizens [19]. Of these, I mention:
  ✧ the introduction of modern management techniques, which include total quality management, participatory management, project management, public marketing, etc.;

- ✦ evaluating efficiency and effectiveness by combining the quality of public services with social and economic efficiency;
- ✦ focus on the satisfaction of the end user of public services;
- ✦ introduction of performance indicators to measure the degree of achievement of objectives;
- ✦ increasing the importance of using management in the public sector;
- ✦ increasing the importance of using management in the public sector;
- ✦ removing public services from political influence;
- ✦ elimination of centralization and bureaucracy;
- ✦ promoting institutional development [23, 19].

The determination of the concrete measures that must be implemented by public institutions to ensure a high-performance management can be done after refining the theoretical framework of public management, an action that will be validated by the results obtained as a result of the practical application of the new concepts, norms, principles and methods. In Romania, part of these guidelines appear in the Internal / Managerial Control Code of Public Entities [26], a document that regulates internal and managerial control standards for public institutions.

1.3. Total quality management in public administration

In Europe, the quality of public services is a major objective of the reforms promoted by the new public management. The Citizens' Charter initiative, launched in 1991 by the United Kingdom of Great Britain, represents a good example of promoting reforms in public administration for European countries (General Secretariat of the Government, 2015) [26]. Although the introduction of the concept of quality in the public system is accepted internationally, studies highlight the existence of differences in the way the concept is approached in public institutions, in different countries.

As stated by Christ et al. [28], it is necessary to "formulate a logical and clear conceptual framework for the introduction of quality management, with a primary role in increasing and improving the quality of public services". From a process perspective, high quality means that a process must provide satisfaction, which is the variable that leads to maximum output in any process. Even if total quality management is a new concept applied to the management system for public services, this does not imply that public administration has not been oriented towards quality until now. According to researchers [29],. The importance of quality assessment in public administration is fully accepted. The aim of the approach is to increase the quality of services, as perceived by citizens, as final beneficiaries. According to the bodies of the European Union, the implementation of total quality management in public administration has an important role in increasing efficiency and effectiveness, leading to the well-being of society, in the current context that is characterized by increasing requirements, simultaneously with diminishing resources.

In Romania, the introduction of total quality management in public administration has become a priority, being seen as a way to modernize the administrative capacity of public institutions. This is mentioned as a priority in Romania's Partnership Agreement, concluded with the European Commission for the period 2014-2020. At the national level, it is considered that the most useful measure for the implementation and use of quality management is the creation of a public strategy and policy for the implementation of quality management, to be promoted from the government level.

1.4. Orientation of public administration activity towards citizens' needs

The transition to the democratic regime required the redefinition of the role of the state in relation to the citizens. The values promoted in public administration create the philosophy of public institutions and provide information about how public management is perceived, how citizens and their needs are perceived by public officials and how they relate to citizens, as well as the attitude of public officials towards of work and the values underlying the processes through which the services are made available to the beneficiaries [35]. The

new public management recommends that, when applying the value system promoted by public administration, to combine in a balanced way the values and aspirations common to public institutions with the specific values considered important by public sector managers in the relationship with citizens, as beneficiaries /consumers of public services [35]. Plumb and Androniceanu [23] highlight the tendency of public administration to be oriented towards the final beneficiaries of public services, which has become a long-term priority of the European Union, as it appears in the strategies developed over time, updated through Strategy 2020: Empowered Citizens, an Accountable Europe [36]. The reform promoted in the public administration in Romania aimed to adapt the public system to the changes that take place permanently in the world economy, as well as to the requirements imposed for the country's integration into the European Union. The traditional approach, oriented towards the institutions providing services, is gradually being replaced by the orientation towards the needs of the beneficiaries, represented mainly by citizens and representatives of the business environment [39, 40].

The reduction of bureaucracy and the simplification of procedures intended for interaction with citizens and representatives of the business environment, are part of the measures adopted in order to increase efficiency in the activity of the public administration, which can have the effect of increasing the level of satisfaction of citizens, as the final beneficiaries of the activities carried out by the public administration and improving the perception of the public administration. The analysis of the current situation highlights the fact that, until now, efforts have been mainly directed towards improving the relationship with the business environment. Regarding the relationship with the citizens and the inter- and intra-institutional level, the stage of the reform is to identify the problems in order to substantiate the solutions to simplify the interactions between the administration and the beneficiaries.

1.5. Performance measurement in public administration

Initially, it was based on the premise that the concept of performance cannot be introduced in the public sector. The main objective of public management is related to increasing the degree of satisfaction of the public interest. It is determined by general and specific social needs and eliminates the possibility of using the concept of performance. Thus, it was considered that the mission of a public institution goes beyond aspects related to performance, aiming at the application of the normative acts in force and in this way the solution of social problems is ensured, regardless of the costs. In many developing countries, this approach is in place.

In the specialized literature, an increase in interest can be identified regarding the role of organizational capacity in public administration in achieving performance, which is often expressed in the reiteration of the formula "management matters" [41]. Schachter [42] states that, in research dedicated to local public administration, the focus on efficiency is a means of ensuring a relationship between citizens and politics, since the activity of governors is linked to the performance of public services.

For corporations, it is quite simple to evaluate their performance because the only criterion is well defined and easy to measure. This is profit maximization. In contrast, performance measurement in organizations whose purpose is other than profit, as is the case with public administration, is still a subject open to debate [43]. Although inputs often take monetary form, outputs are not easily converted into monetary terms and, moreover, are based on complex values [44].

As concluded by Plumb and Androniceanu [23], the performance evaluation activity in the public sector is recognized by most specialists as being particularly difficult to achieve. The reasons identified by the two authors are [23]:

✧ „the multitude and diversity of stakeholders of a public institution: current and potential customers, citizens with the right to vote, elected representatives, non-profit organizations, professional groups, trade unions, public managers, the state, etc.;
✧ the differences in values and perceptions of performance that different stakeholders have;

✧ the non-existence of a competitive environment in which some services are offered precisely because of the monopoly position for certain services held by some public institutions or administrative authorities;

✧ the nature of the public service provided;

✧ the complexity of the socio-political environment that generates a series of risks with a direct influence on achieving performance;

✧ the influence of political values, the bargaining power of the level of performance and the coordinates of democracy which are key success factors for achieving performance in the public sector."

The duties of managers in the public system are established by legal regulations. Mainly, they refer to the way of using public resources to achieve public interest objectives. One of the major changes in public management was the imposition of the concept of performance. It has been shown that the fundamental objective seeks to facilitate the reorientation of the values promoted in the public system, so as to achieve increased performance. These ideas were taken up and developed. As a result, some of the public institutions have developed and implemented performance indicator systems designed to measure the level of satisfaction of public interests, by using a value scale and by identifying the expenses made for this purpose. This mode of evaluation is of the effect-to-effort type.

The implementation in the public sector of the efficiency/effectiveness approaches introduced in public management requires the development and implementation of a performance monitoring system. Such systems have been developed in most public institutions in developed countries as part of the process of achieving better performance. Romania tends to align with them, as a trend in public administration, supported by the pre-accession process and continued by the transformations that took place after joining the European Union.

Chapter 2. Adaptation of practice and management in Romanian administration to the evolution of the theoretical framework and practice in public management

2.1. Public management in Romania

The response of the public system to the evolution of the socio-economic environment, constantly faced with new requirements, is given by the acceptance and progressive introduction of the notion of public management in the practice of public institutions in Romania. Currently, public institutions are involved in activities of an economic nature, which has generated an increased interest in the formalization of the way of management, given that some activities can become more efficient as a result of the used management. The situation can be interpreted as an opening towards the professionalization of management in public institutions, based on the recognition of the benefits it can bring, in terms of efficiency and the transmission of the effect to the final beneficiaries of public services, i.e. the citizens [43].

2.2. Pre-accession period: reforms in public administration in Romania

Since 1989, the public administration in Romania has undergone major transformations, including as a result of the accession to the European Union, which allowed the connection to the European governance mechanisms, as well as the correlation with other administrations of the member countries of the European Union.

As Profiroiu [47] points out, the preparation process for Romania's accession to the European Union, which took place on January 1, 2007, required the improvement of public administration by implementing reforms through which the public sector would adapt to the requirements generated by the changes taking place in the economic and social

environment, in the context in which, at the international level, public administration is considered to be an important factor that contributes to the achievement of a country's competitive advantage, and the activity of the public administration in Romania is a subject of criticism for citizens, as well as for international partners. Public administration reform covers all aspects of the organization of the public sector, including the general architecture of ministries and agencies, organizations and institutions at the local level, systems, structures, processes, as well as the way to periodically adapt the system to changes in the socio-economic environment. In conclusion, the public administration reform must respond to the needs and demands expressed by the citizens and, at the same time, ensure the alignment of the Romanian public administration with the European administration.

The pre-accession period brought many changes and improvements in public administration in Romania. It can be stated that, starting from 2001, the Government of Romania, through the Government Strategy regarding the acceleration of reform in public administration, foreshadows, through the importance given to social groups, putting the citizen at the center of the evaluation of public services, seen as results/effects, measured by introducing efficiency and effectiveness. It is noteworthy that the researchers who approached the field of performance evaluation in public administrations took over the trend foreshadowed, namely the evaluation of public administration performance by introducing some concepts taken from the business environment. This includes efficiency and effectiveness. Moreover, the results of the public administration activity take the form of effects - a specific concept of efficiency, and at the center of the evaluation are social groups, represented by citizens, along with other beneficiaries of public services. Efficiency and effectiveness, used as methods of measurement, increase with increasing involvement of civil servants, when responsibilities are transferred to lower levels of administration, as a way of delegating authority, with the establishment of the system of responsibilities at each level.

2.3. The post-accession period – trends in public administration in Romania

In the period preceding the accession to the European Union, the Government of Romania adopted and promoted two successive strategies aimed at reforming the public administration, strategies that were the basis of the reform of some key areas of public policies, the decentralization of the public function. These are the Strategy regarding the acceleration of public administration reform 2001 – 2003 and the updated Strategy of the Government of Romania regarding the acceleration of public administration reform 2004 – 2006. Starting from 2007, some of the central public administration institutions took the initiative to continue the process of modernizing the public system, in the context in which a new integrative strategy for the public administration has not yet been developed in Romania. Considering the experience gained by the Government and the administrative entities involved, as well as the problems that arose during the implementation of the reform in the public administration, the need to update the previous strategies arose, which led to the development of the Strategy for the consolidation of the public administration 2014 - 2020 [37]. The last strategy aims to design the general reform framework for public administration for the time frame 2014-2020.

Although significant progress has been registered in the analyzed period, in the public administration in Romania there are still a number of deficiencies, mainly in terms of efficiency, effectiveness and image, which are mainly due to the maintenance of a conservative organizational culture, focused on the formal side of activity in the public domain. Although the 2007 strategy promotes the evaluation of efficiency by measuring the impact of the effects/results obtained as a result of the activity carried out on the beneficiaries - social groups, there is still a superficial collaboration with partners from the academic environment, business environment, civil society, recognized as partners relevant social. This fact generates a certain degree of mistrust between civil servants and citizens, on the one hand, and between civil servants and political decision-makers, on the other hand.

The Government's vision for public administration in Romania includes gaining the trust of citizens and other beneficiaries, by providing prompt services, while ensuring

continuity for the quality of the services provided. The authorities and institutions in the public system aim to stimulate citizens' involvement in identifying problems and finding solutions that will then be tested and validated. As a finality, a framework will be created for the provision of services appropriate to the needs of citizens, under conditions of economic efficiency. In designing and providing services, as in making other types of decisions, the public administration will rely on the participation of citizens, the involvement of experts and key actors in society, through consultation mechanisms. Public authorities and institutions aim to respond to society's needs, directly supporting initiatives and involvement.

To achieve this vision, speeding up the implementation of management standards in public administration appears as a necessity in shortening the path to increasing the performance of public institutions, controlling the way resources are used, preventing fraud and detecting dysfunctions and irregularities [37].

2.4. Establishing the legislative framework necessary for the fulfillment of pre-accession reforms and alignment with European Union legislation

Regarding the legislative framework necessary for the fulfillment of the pre-accession reforms in the public administration in Romania and the alignment with the legislation of the European Union, the debut was made by the adoption of GD no. 951/2001, which created the legal framework for the establishment of the government council for monitoring the public administration reform and the central unit for public administration reform, structures whose main objective is to monitor the implementation of the provisions stipulated in the reform strategies and programs for the public administration based on Government program [49].

In the actions taken by the Romanian Government to continue the reform in the local public administration, attention was directed to the decentralization process. The implementation of decentralization began through actions to deconcentrate the decision and through the transfer of administrative action, both to the central administration and to the specialized directions of the administrative-territorial units. Through the newly created legal framework, the increase in the degree of involvement of local communities in the management of issues related to public administration, at the regional and local level, was constantly pursued. In order to bring the public administration closer to the beneficiaries, an objective found in the 2001 Governance Program, the directions of action were outlined, which include decentralization and deconcentration of services, increasing decision-making autonomy and debureaucratization and access to information of public interest. In order to support implementation, the legislative framework was created.

The process of reforming the public administration is long-lasting and must be carried out in the context of the conditions imposed by a dynamic and complex environment. From the analysis of the trends manifested in the evolution of public administration, it is found that, at the international level, it has been accepted that the modernization of practiced management plays an important role. Currently, the general trend in the evolution of the way activities are carried out in the public administration is to eliminate bureaucracy, a concept that has long been the basis of the organization of the public system. The evolution of management applied in public organizations, as reflected in the strategies adopted in order to modernize central and local public administration, converges towards the acceptance, promotion and implementation in public administration of the following guidelines: the introduction of modern management techniques, such as participatory management, total quality management , public marketing, project management, etc.; evaluation of efficiency and effectiveness – a term that, in public management, is defined by combining the quality of public services, social efficiency and economic effectiveness; focusing on the satisfaction of the end user of public services – the citizen, as a representative of the community; the introduction of performance indicators to measure the degree of achievement of objectives.

Chapter 3. Innovative guidelines in management evaluation in public administration

3.1. The impact of the evolution of the public system on the performance approach in public administration

Public administration is an institution with many dimensions, to which, over time, citizens have delegated the prerogatives of an authority structure, performing multiple functions, with direct addressability to citizens, to their needs and interests [53]. Public management addresses aspects such as the management system in public institutions, human resources, efficiency, by analyzing the way management functions are exercised, in the specific context of public administration.

The specialized literature dedicated to public administration highlights the fact that practice and theory have contributed to the crystallization of some models of public administration, together with the attempts to reform the public sector in advanced industrialized countries. The public administration models developed in developing countries are mostly based on the experience of advanced countries. The analysis of different approaches to the reforms made in the public administration and in the public sector in advanced industrialized countries were the subject of study.

Most studies focus on the transition from old public administration, also known as traditional administration, to the implementation of new public management, which took place between the 1980s and 1990s. Since 2000, there has been a clear trend towards a new model, which became known under different names: the new public service, the new public governance or the post-new management public [58, 59, 60]. Each of these approaches to public administration is associated with a distinct philosophy and conceptual framework. Many of the developing countries have followed a trajectory of public sector approaches and reforms similar to that of advanced countries, including decentralization, wage reforms, integrity and anti-corruption, bottom-up reforms. The aim was to improve the effectiveness of government agencies [63]. The elements that characterize each of the main stages through which the public sector has passed to its current form, have been synthesized by McCourt [64] and are presented in the following table.

Elements specific to the stages the public sector went through

Approach	The main period of action
Weberian public administration and strengthening administrative capacity	after gaining independence/depending on the state
Decentralization	1970 to present
Wage and employment reform	1980 and 1990
The new public management	1990 to present
Integrity and anti-corruption reforms	1990 to present
Bottom-up reforms	from the late 1990s to the present

Source: Adapted from McCourt [64]

The tension manifested between traditional public administration and new public management is presented as a reflection of the fundamental tension between responsibility and efficiency, which has always characterized public administration.
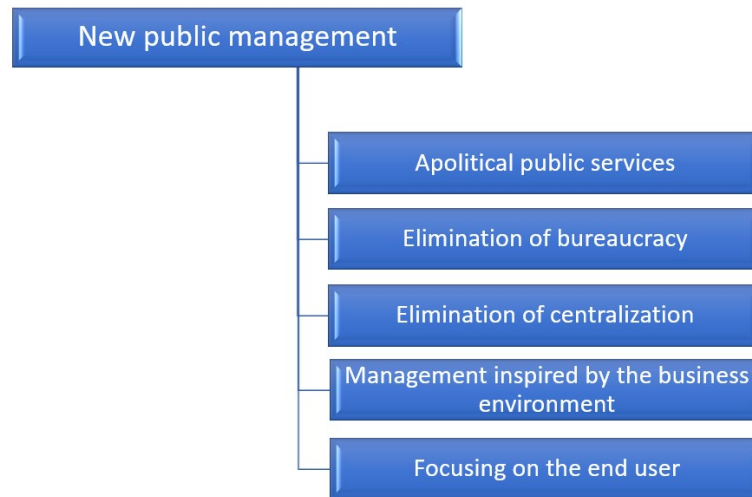
The comparison between traditional public administration, new public management and new public service made by Denhardt and Denhardt [66], which parallels specific elements of each of the main currents in contemporary public administration, is presented in the following table.

Comparison between traditional public administration, new public management and new public service

	Traditional public administration	The new public management	The new public service
Theoretical foundations	Political theory, Social science	Economic theory, Social science	The theory of democracy
Rationality and patterns of human behavior	Administrative rationality, public interest	Technical and economic rationality, self-interest	Strategic rationality, the interest of the citizen
The concept of public interest	Political, enshrined in legislation	Aggregation of individual interests	Dialogue about common values
To whom are civil servants subordinate?	Customers and superiors	Customers	People
The role of government	Objectives influenced by the political environment	Leadership - catalyst for market demand	Serving and balancing interests among citizens
Mechanisms for achieving political objectives	Administration of programs through government agencies	Creating mechanisms through private companies and NGOs	Creating collaborative relationships between government agencies, private companies and NGOs
Responsibility	Hierarchical – managers who report to elected leaders	The market response	Civil servants who respect the law, values, professional norms and the interests of citizens
Freedom of administrative action	Limited freedom of action for civil servants	Great freedom of action to achieve entrepreneurial goals	Freedom of action necessary, with the assumption of responsibilities
Organisational structure	Bureaucracy with top-down authority; Control made by customers	Decentralization with agency control	Collaborative structures with shared leadership
Motivation of civil servants	Salary and benefits Protection of civil servants	Entrepreneurial spirit, interest in reducing the size and functions of government	Service to society, the desire to contribute to the public good

Source: Adapted from Denhardt and Denhardt [66]

The promoters of the new public management make a series of proposals about how to act to correct the negative aspects that have created dissatisfaction with the activity in the public system. It is worth noting that the need to maintain public services outside the political influence is supported. All other measures are clearly opposed to those promoted by traditional management. Public management is presented as the support for the changes that public institutions must make in order to adapt to the constantly evolving requirements, generated by the changes in the economic and social environment, which have become increasingly dynamic and complex [67]. The characteristics that define management in modern public administration are summarized in the figure below.

```
New public management
        ├── Apolitical public services
        ├── Elimination of bureaucracy
        ├── Elimination of centralization
        ├── Management inspired by the business environment
        └── Focusing on the end user
```

Characteristics of management in modern public administration
Source: processing after Plumb and Androniceanu [23]; MITEAPL [67]

Modern public administration has as its common denominator permanent innovation, responsibility, permanent satisfaction of the beneficiaries of public services, improvement of transparency, so as to respond as best as possible to the growing demands of citizens, professionals and politicians, in conditions of maximum efficiency [21, 24 , 25]. On the other hand, there are also limitations. Although public services are intended to satisfy the interests of citizens, as end users, "*the citizen can take advantage of the public service to the extent permitted by law*" [6].

Obviously, practice and theory promote a new approach, aimed at changing the traditional approach, oriented on the outputs (results) from the service-providing institutions, oriented towards the needs of the beneficiaries - citizens and the business environment. Also, the new public management recommends, in approaching the content of the mission of the public institution, the merging of the values and aspirations common to all public institutions, as well as the specific ones, seen by the representatives of the public management as essential in the relationship with the beneficiaries of products and services [23]. Public administration focused on the needs of the beneficiaries of public services is a long-term priority of the European Union, established through strategies developed over time, updated through Strategy 2020: Empowered Citizens, an Accountable Europe [69]. The Romanian government mentions this priority starting with the "Strategy of 2001 regarding the acceleration of the reform in the public administration". The orientation is taken over and updated in the Strategy for the consolidation of public administration 2014–2020 [37]. The reform promoted in the public administration aims to adapt to the transformations that have taken place in the world economy and to the requirements imposed by Romania's integration into the European Union. The need to find solutions for the reinvention of public administration, by replacing bureaucracy with collaboration with the external environment and their beneficiaries, were the basis for the introduction of eGovernment [38].

3.2. Trends in performance appraisal systems in public administration

Currently, the correct evaluation of performance has become a necessity in public administration. Moreover, it must be done following a given pattern, with a well-determined evaluation system, for several reasons:

◇ for the correct evaluation of the way in which the public administration works;
◇ for controlling the way public administration employees work;
◇ for motivating public administration employees;
◇ to facilitate the way of budget allocation for the public administration;
◇ for how they can promote themselves in the community;
◇ to determine what works and what does not work in public administration;

◇ to improve performance in public institutions [38].

Evaluations commissioned or conducted by government agencies are most often focused on the following issues:

◇ the degree of managerial and political responsibility;
◇ the level of efficiency of the activities;
◇ the level of cost-efficiency, or the level of savings made;
◇ the level of public expenditures, by reporting in absolute and relative sizes to the national GDP;
◇ the quality and quantity of public services [72].

Performance measurement in corporations is done by analyzing a system of financial indicators that includes productivity, profitability or profit, indicators that are not found when evaluating the activity of public institutions. As it can be seen, this system is related to profit, being designed for the private segment, with the objective of reducing costs, mainly by increasing the efficiency of the workforce. When measuring performance in the budget system and in particular for the activity of public institutions, the adoption of as many non-financial measures as possible that are not related to profit, but are related to the assumed objectives, which must lead to the improvement of performance, must be analyzed. The measurement of performance in public organizations is done starting from the way in which human, material, informational and financial resources are used in order to achieve the assumed objectives at the level of the expectations of the beneficiaries of the services offered.

Public management has made progress over time under pressure from the business and social environment. Specialists have highlighted the fact that, in the public system, the fundamental objective assumed by the public system must contribute to the reorientation of the value system for performance assessment. Over time, the initial ideas were developed and performance indicator systems were developed and implemented in many public institutions, which measure to what level public interests have been satisfied and what expenses have been committed in this regard. As long as there is no competition in the public sector, a system will be perpetuated in which there are negative repercussions on the quality of services offered by public institutions, mainly due to the high costs necessary to support them. For the analysis of the performance of public institutions, a link must be established between results, means and objectives, so that there is also an approach from the point of view of effectiveness, efficiency and costs [73].

3.3. Increasing the involvement of the beneficiaries of public services in the evaluation of the performance of the public administration

It is accepted that the performance evaluation process in the public sector is a very difficult one and often, the results do not contribute to the formulation of measures whose application leads to the improvement of the activity. Failure in how to approach implementation issues is one of the reasons that further lead to the failure of organizational strategy.

The general trend manifested at the international level in the evaluation of the performance of public institutions is to increase the role of the point of view of the beneficiaries of public services, who at the same time are also contributors and supporters of the public administration, indirectly, through the fees and taxes they pay. Performance evaluation in public management through a citizen-centered approach is used as part of several evaluation methods, in order to support accountability to external stakeholders [76], including in measuring the efficiency of public institutions.

Against the background of the changes introduced by the acceptance in practice of the concepts promoted by the new public management, in parallel with the introduction in public management of some concepts taken from the corporate management, the point of treating the beneficiaries of public services as clients of the public administration has been reached.

Internal performance measurement, namely information about practiced management and internal procedures, is not yet accessible to ordinary citizens, but is the most debated in

the specialized literature, while fewer studies are focused on external indicators, which aim to increase the trust of the parties interested – to the actors in the system (users of the services and the central administration). External indicators provide stakeholders with information about the consistency of public sector activity so that they can make pertinent judgments about the performance of organizations. As in the private sector, the improvement of results quantified by external indicators (for example the responsiveness of public authorities to citizens' demands) will have a major impact on the control of internal functioning mechanisms, which will make managers and civil servants become much more attentive to their duties and dedicated to serving the citizens [84]. The research highlights the link between the responsiveness of the public administration to public needs and aspects related to public policies and of a cultural nature, respectively the influence of the latter on the performance measuring variable.

In continuation of these efforts, a way of evaluating the performance of public institutions is proposed, starting from the elements that the beneficiaries of the services evaluate as customers, a model that is included in the line of definition of the systems for evaluating the performance of public institutions as "an attempt of a communion between the evaluation of public institutions and the new public management" [77]. The research aims to develop a theoretical framework and an empirical examination of the relationship between the demands and needs of citizens and the extent to which the public administration responds to them, as a way of evaluating the performance of the public sector from the point of view of end users.

Chapter 4. Model for evaluating the performance of public institutions by the beneficiaries of public services: Methodology and working hypotheses

4.1. The influence of politics on the performance of public administration

The evaluation of public administration performance is an aspect that has given rise to many controversies. During the life cycle of a public policy, the evaluation system used has various functions, for each of the stakeholders. Constant efforts are made to identify the most relevant performance indicators. The performance indicators used to evaluate the activity in the public administration, as [85] states, can lead to the destruction of the current political or managerial status quo. Thus, in political competition, performance indicators can be as important as prices in the competition in the market for goods and services, because the way governments present their achievements, quantified by indicators, keeps or does not retain your electorate.

The doctoral research aims to examine the extent to which citizens are involved in evaluating the performance of public administration, which, through its institutions, represents the government they have elected. The involvement of the beneficiaries of public services in the evaluation of the performance of the provider, can generate changes in the way of operation of the public administration leading to the increase of citizens' satisfaction, influenced mainly by political and cultural factors. In addition, efforts are made to estimate the contribution of political and cultural factors in order to understand the responsiveness of the public administration. This will provide a comprehensive insight into the question of what is important to citizens when contacting public institutions. To reach this level, the match between what the beneficiaries of public services want and what governments offer them through the public system they administer must be identified and assessed.

The involvement of citizens in the functioning of public administration is recognized as a necessity and has an important role in any democratic society. When, as a result of a democratic process, citizens elect a government, they relinquish their power to political leaders, assuming that it will be used to satisfy some of their needs [5]. Thus, citizens' needs, such as personal security, social order, well-being and prosperity, must be ensured through

the services provided by the public administration. Following this line of reasoning, it is important that citizens, as well as civil servants, work for the good of society and its members..

Evaluation is a tool that bureaucratic organizations conventionally use to evaluate the operation and effectiveness of programs in order to adjust established practices or obtain new ideas. The involvement of the political factor in the activity of the public administration restricts flexibility and the ability to adequately respond to citizens' requests. In support of this statement comes the research done by Palfrey et al. [80], who noted that "better knowledge of consumer opinions gives governments the opportunity to increase their chances of re-election and potential members, to be elected". The entity that designs the assessment designs the questions and in turn shapes the answers provided. In the same vein, Winkler [79] criticized the superficiality of consumerism in the public sector, comparing it to a public relations exercise, which heavily involves politics and politicians who see consumerism as a good vote-getter. When consumerism and consumers become a tool in the political game, the credibility of the results of public polls conducted for political purposes is affected.

Given the aspects presented, it can be stated that measuring the performance of the public administration by the way it responds to the needs of citizens is a complex activity. While private organizations must always be aware of customer satisfaction to adapt to evolving demands, public organizations are less concerned with the needs and expectations of citizens because they have no real alternative to obtain services related to security, transportation , ecology, health, education, etc. If there are alternatives, they turn out to be partial, more expensive and beyond the paying capacity of ordinary citizens.

## 4.2. Public policies and administrative culture in the new public management

The analysis of public policies involves the deepening of the way in which government policies are made and implemented, as well as the application of available knowledge from the sphere of government policies, in order to improve them.

The new public management, through the concepts it promotes, takes a holistic approach to the objectives of public institutions in modern democracies, integrating ideas from several disciplines in relation to the functioning of large bureaucracies that are influenced by political pressures, using general knowledge of management, as well as concepts borrowed from business administration to implement innovative policies and ideologies in the public interest.

Public administrations have been criticized for placing too much emphasis on financial control, as well as for the fact that financial indicators are found in too high a proportion among the indicators that make up the performance analysis systems. As possible solutions for performance measurement, recommendations were made that proposed the introduction of strategic, multidimensional and goal-directed models. These models were developed in the private sector, but there are initiatives to use these models in the public sector as well. With the evolution of the new public management, public administrations are forced to become more active and take initiatives to measure their own performance.

The new public management claims that citizens/consumers represent a new actor and one of the most important in the performance evaluation game, for which reason the importance of the citizen must be reconsidered. Thus, the way in which public administrations respond to the expectations and needs of citizens, as the main beneficiaries of their activity, is a synthesis of business considerations, public policies and determining human factors of a cultural nature, which describe the complexity of public administrations. Public policy and cultural aspects best describe the antecedents that influence how public needs are met through service delivery. In this research, politics and administrative culture are interrelatedly analyzed, given the complexity of public administration activity and the factors that determine it.

The plausible relationship between all these constructs is shown graphically in the figure below.
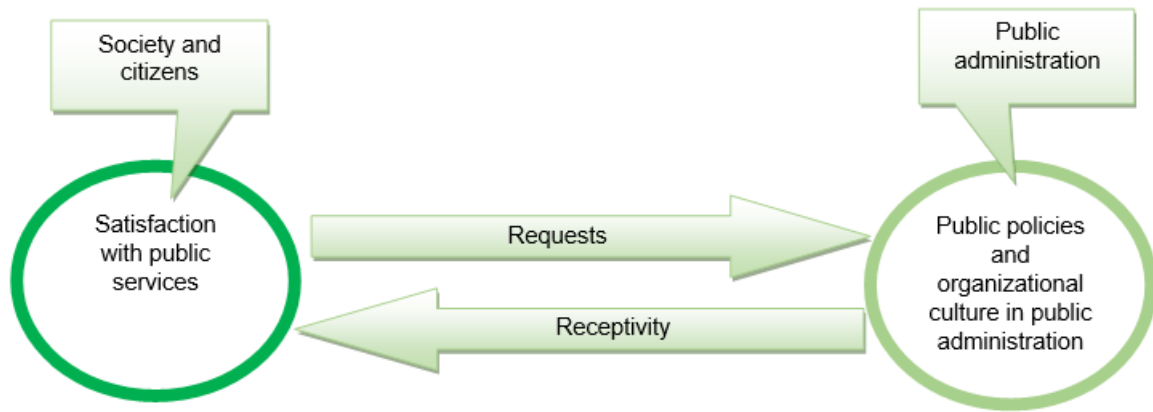
Model for public administration response to citizens' requests
Source: processing after Vigoda [90]

The permanent changes caused by the evolution of public administration required the establishment of new operating standards in public services in Western societies [92]. It has become more and more obvious that a responsive, effective and efficient public policy must be based on a balanced strategy that takes into account economic and budgetary factors, as well as social aspects and care for the citizen. While currently, at the international level, it is still being debated how the two factors can be balanced, it is widely accepted that citizens, as beneficiaries, have a lot to say in terms of structuring public policies. It is believed that because government policy directly affects society, citizens have the right to be consulted and thus can influence government policy, democratically. Politics is therefore assumed to influence citizens' perceptions of the responsiveness of public administration to their needs. When policy is consistent with citizens' needs, which are translated into demands on public administration, and implicitly on those who ensure governance, they are more willing to accept administrative actions as responding to their needs and show more support throughout the process democratic. Thus, it can be hypothesized that public policies affect citizens' perception of the degree to which public authorities are responsive to their needs. It must be emphasized that the development of public policies that work and attract, at the same time, the support of citizens, is a complex mission for any government. The prioritization, planning and substantiation of public policies must be integrated into the culture and decision-making practice of the public administration. Going beyond policy setting and implementation, the relationship between policy and other organizational factors must also be analyzed. Public policies are interrelated with administrative culture, ethics, norms and behaviors of civil servants, bringing to the fore concerns for ethical standards, integrity and the fair and equal treatment of customers [90].

The present research has as its starting point the model developed by Vigoda [90], which, during the research, respectively in the stages of design, testing and validation, was customized for the specifics of local public administrations in Romania. The general objective consists in demonstrating the fact that public policies and organizational culture in local public administration affect citizens' beliefs regarding the responsiveness of public institutions to collective (social) needs, as a way of evaluating the performance of local public administration.

Consequently, as a result of the analysis presented, four factors considered relevant for the way they influence public policies and organizational culture in local public administration were selected. These, shown graphically in the following figure, are:
- ✧ the social orientation or the commercial approach of the local public administration;
- ✧ entrepreneurship and change initiation;
- ✧ organizational culture among local public administration officials;
- ✧ quality of management and leadership.

Factors influencing public policies and organizational culture in local public administration
Source: processing after Vigoda [90]

The factors listed above refer to the political perceptions, orientations and organizational culture of public institutions. They translate into stated objectives and actions that public authorities choose to undertake, support or, alternatively, withhold.

4.3. Model for evaluating the performance of public institutions by the beneficiaries of public services

4.3.1 Dependent variable: Citizens' perception of the responsiveness of local administration to collective (social) needs

The attitude of the citizens towards the responsiveness of the public administration to their needs, as a way of evaluating the performance of the local public administration, was examined by means of three variables, variables which were selected following the review of the specialized literature and the dedicated empirical studies evaluation of public administration through the lens of citizens, as the main beneficiaries of public services. The variables considered by Vigoda [90] for the construction of the model developed to evaluate citizens' perception of the responsiveness of local administration to collective (social) needs are: (1) citizens' satisfaction with the services provided to them by public officials and (2)) citizens' satisfaction with the functioning of the public administration in the areas addressed by the services provided by the local public administration (education, culture, transport, welfare, etc.) [90]. The third variable was taken from the model promoted by Thomas and Palfrey [81], which adds to the first two, the general reaction capacity. The variable directly relates to (3) the accuracy and speed of the public sector's response to citizens' requests [80].

To finalize the formulation of the hypotheses that were tested and validated through this research, in order to increase the degree of adaptability of the research results to the specifics of the public administration in Romania, and, implicitly, to increase the impact of the use of the research results by actors interested in adapting Romania to Western administrative models , several empirical studies carried out in our country were reviewed, research that was financed by the European Union, through programs dedicated to the modernization of public administration.

Following the analysis based on the aspects presented previously, through this research, the responsiveness of public institutions to collective (social) needs, which

represents the transposition of the attitude and beliefs of citizens towards the capacity of the public administration to react to their needs and the way in which it does so, was examined through three variables, considered representative:

1. citizens' satisfaction regarding the interaction with the local public administration (VD1);
2. the reaction of the local public administration to the citizens' demands (VD2);
3. citizens' satisfaction with the public services offered by the local public administration in different fields (VD3).

Tested hypotheses:
- ✧ *H1:* Public policies and organizational culture in local public administration influence citizens' beliefs about their satisfaction with interacting with local public administration;
- ✧ *H2:* Public policies and organizational culture in local public administration influence citizens' beliefs about the response of local public administration to their demands;
- ✧ *H3:* Public policies and organizational culture in local public administration influence citizens' beliefs about satisfaction with public services offered by local public administration in different areas.

Citizens' satisfaction with the interaction with the local public administration (VD1)
This variable was measured by four items, which aimed to evaluate the speed and accuracy of public services provided to citizens by local authorities. The respondents were asked to evaluate the following aspects, based on the direct experience they had through the interaction with the local public administration (City Hall):

1. Communication with the local public administration (City Hall), in its entirety (website, phone, direct communication with city hall officials, etc.) (A1_1);
2. The manner in which civil servants respond to requests (A1_2);
3. Request resolution time (A1_3);
4. The conditions in the waiting rooms of the local public administration (Town Hall) (A1_4).

The reaction of local public administration to citizens' demands (VD2)
Through this variable, information was collected on the level of satisfaction of citizens with the way in which public services were made available to them. The variable refers to the behavior of decision-makers and public officials and to the ways of solving citizens' requests. Respondents were asked to think about how the local public administration (City Hall) responds to their needs and to rate how satisfied they were with the treatment they received, either when they called in person, through direct physical presence at city hall services, either when they contacted civil servants by phone or online (website or email):

1. The local public administration (City Hall) makes efforts to help citizens who have problems (A2_1);
2. The local public administration (City Hall) reacts quickly and efficiently to the needs and requests of citizens (A2_2);
3. The local public administration (City Hall) responds to criticisms and suggestions for improving activities and services (A2_3).

Citizens' satisfaction with the public services offered by the local public administration in different fields (VD3)
This variable refers to a wide range of responsibilities of local public administration and how policies related to urban planning services are developed and implemented. Respondents were asked to answer how satisfied they are with the way the municipality operates, in the main areas in which it operates, as follows (**PG1**):

- ✧ road infrastructure (roads) and parking lots;
- ✧ educational and cultural services;
- ✧ cleanliness of the city;
- ✧ degree of pollution;
- ✧ urban modernization;

♦ safety and public order.

4.3.2. The independent variable: Policies and organizational culture in local public administration

At the declarative level, all the factors involved in the process of reforming the public administration in Romania adhered to the principles of the new management, considered the foundation of the modernization of the public administration. For the most part, traditional models are still strongly anchored in the mentality of local decision-makers, which means that many times the practices in the administration prove ineffective and, moreover, the citizens are dissatisfied. The present research is part of the trends of international practice and research, as it results from the analysis made and, moreover, it comes to complement aspects treated superficially in the case studies made in public administrations in Romania, respectively it tests the influence of the macro level of politics and of the organizational culture in the local public administration on the citizens' perception of the responsiveness of the local administration to collective (social) needs, through the variable Policies and organizational culture in the local public administration. The variable was defined as a combination of the following four factors.

Factor 1: **Social orientation or commercial approach of local public administration (Town Hall)** (VI1)

The public administration is mainly concerned with the provision of public services; practice demonstrates that ensuring social equity in the service delivery process plays an essential role for decision-makers in the administration and affects the political future of governments. The importance of social equity was promoted by the new public administration, as a reaction against the principles of public administration promoted by Weber [97]. The philosophical foundations of the concept of social equity lead to the identification of beneficiaries' expectations, which include: fairness, justice and equity, distribution, access, quality, and appropriate results of public administration practices in the process of providing public services.

Rezultatele studiilor comparative relevă acordarea unei importanțe mai mari caracteristicilor culturii de piață în organizațiile private decât în cele publice, în timp ce caracteristicile culturii ierarhice primează în organizațiile publice, față de cele private [103, 104, 105, 106]. În ceea ce privește trăsăturile culturii de piață, mediul de afaceri se distinge în mod evident de sistemul public. În timp, valorile provenite din sectorul privat au câștigat teren în administrația locală prin reforma noului management public. Potrivit lui Martin și Kloot [107], noul management public are ca scop să facă modul de funcționare al administrațiilor publice cât mai asemănător cu al afacerilor și să determine instituțiile publice să fie mai orientate spre piață, prin adoptarea tehnicilor și instrumentelor de management ale organizațiilor din sectorul privat [108]. În conformitate cu teoria abordării bazate pe piață/ mediu de afaceri, noul management public consideră că orientarea spre piață îmbunătățește performanța serviciului public.

Factor 2: **Entrepreneurial spirit and initiating changes in local public administration (City Hall) (VI2)**

In the current context, there is an ongoing debate about the transfer of the entrepreneurial approach to public administration, as a way to reduce bureaucracy and increase efficiency. The public administration, par excellence, must balance the interests of the interested parties in order to solve, in a fairly transparent manner, social, political, environmental and economic problems, given that public institutions have limited autonomy and flexibility in the decision-making process, in while private companies have a limited number of objectives, which are relatively stable, i.e. increase in turnover, profitability or market share [110].

Factor 3: **Organizational culture among local public administration officials (City Hall) (VI3)**

Organizational culture is a social creation, being maintained by a group that forms an organization. The lack of an organizational culture in public institutions can become a barrier in the practical implementation of the mission of any organization, including those in the public sector. The internal factors that determine organizational culture are not only the vision, mission, strategy, size and structure of the organization, but especially the people who create this culture with their values and attitudes, their needs, education, life and work experience, emotional bonds and relationships among them. Within the internal aspects of the culture of a public organization, based on the indicated values, the ethos of civil servants becomes important. Their ethics, focused on professionalism, predictability and continuity, accumulate values such as honesty, punctuality, ethics, equality and loyalty [115, 116, 117].

Factor 4: **The quality of management and leadership in local public administration (Mayorse) (VI4).**

While the development of public administration theory over the last twenty years has contributed significantly to the understanding of factors affecting performance within the public system, empirical research on the relationship between leadership and performance is still in its infancy [118]. Thus, it is necessary to investigate on a large scale the effects of different management behaviors on the performance of public institutions.

Tested hypotheses:
- *H4:* The social orientation or the commercial approach of the local public administration influences the citizens' perception of the responsiveness of the local administration to collective (social) needs);
- *H5:* The entrepreneurial spirit and the initiation of changes in the local public administration influence the citizens' perception of the responsiveness of the local administration to collective (social) needs);
- *H6:* The organizational culture among local public administration officials influences citizens' perception of the local administration's responsiveness to collective (social) needs);
- *H7:* The quality of management and leadership in local public administration influences citizens' perception of the responsiveness of local administration to collective (social) needs).

Social orientation or commercial approach of local public administration (VI1)

This variable represents the attitude of citizens towards the policy priorities of the local public administration. The variable evaluates how successful the policy is in terms of the balance between financial considerations and social duties, i.e. social services provided by local public administrations (town halls). The variable was defined as a combination of the following factors:
1. The local public administration (city hall) is more interested in promoting its image than in achieving concrete things for citizens (A3_1);
2. Is economic efficiency the most important objective of local public administration (city hall), although citizens, as taxpayers, are the ones who contribute financially (A3_2);
3. The local public administration (city hall) invests primarily in the poor areas of the city (A3_3).

Entrepreneurship and change initiation (VI2)

This variable represents the degree to which the public policy practiced at the local public administration level is flexible, taking into account the initiatives taken and the availability to adopt new ideas, which contribute to the improvement of the activity in the local public administration. The variable was defined as a combination of the following factors:
1. The modernization works carried out by the local public administration (city hall) improve the standard of living of the citizens (A3_4);
2. New projects carried out by the local public administration (city hall) are useful for

citizens (A3_5);
3. The local public administration (city hall) has an innovative approach and solutions for city administration (A3_6).

Organizational culture among civil servants in local public administration (VI3)

This variable was measured using items from the short version of the organizational politics perception scale, which was originally developed by Kacmar and Ferris [123] and reexamined by Kacmar and Carlson [124]. Very few studies are designed and applied to obtain customer/citizen opinion on internal policy within public institutions. The items from the previous studies were modified to be adapted to the Romanian public administration environment. The variable was defined as a combination of the following factors:
1. Decisions taken by the local public administration (town hall) are influenced by interest groups (A3_7);
2. The local public administration (city hall) serves political interests to the detriment of citizens' interests (A3_8);
3. The staff of the local public administration (city hall) is employed on the principle of competence and meritocracy (promotion based on performance at work) (A3_9).

Quality of management and leadership (VI4)

Through this variable, citizens' perception of the management group of the local public administration (city hall), managers and high-ranking civil servants was examined. The variable was defined as a combination of the following factors:
1. Employees with management positions in the local public administration (city hall) are well trained professionally (A3_10);
2. The city is well managed (A3_11);
3. The leadership of the local public administration (city hall) has a long-term vision and a clear goal in terms of city administration (A3_12)

4.4 Information collection and statistical processing

The study continues with the verification of the hypotheses formulated in the first part of the research by applying the questionnaire technique. The information collection process used to conduct the case study is detailed below.

Information collection methodology

The collection of the necessary information for the case study started on 15.06.2021 and ended on 03.07.2021. The collection and verification of information was done by MKOR Consulting. As a market research agency, the firm made available the research methodology used in the project it called internally: Evaluation of the performances of town halls (local public administration). The study was conducted online. An online study reaches the same target audience as studies that have a telephone approach, having the advantage of being more accessible and faster in delivery, especially among the urban population, where the Internet penetration rate covers practically the entire population [125].

The stages followed throughout the process of applying the questionnaire and gathering information were:
Stage 1: Integration of the questionnaire on the Survey Monkey platform, testing by the MKOR Consulting team and approval by the beneficiary – the PhD student and the supervising PhD professor;
Stage 2: Creation of the survey invitation email, which included the link to the questionnaire and a letter describing the purpose and objectives of the research and informing potential respondents that responses would be confidential and anonymous in accordance with the GDPR;
Stage 3: Sending the survey invitation email to the segments of panel members who fit the established profile, to complete the population structure by quotas;

Stage 4: Sending the reminder email to the participants who did not access the link to the survey;

Stage 5: Daily monitoring of the number of responses received.

Structure of the questionnaire:

The questionnaire was structured in two parts: the first part contains the demographic characteristics and the verification questions, and the second part is dedicated to the two variables that are tested in the case study.

Part I of the questionnaire contains demographic information related to: age, gender, city of residence, area of residence, training (last completed form of education), occupation, activity environment, individual net monthly income, cumulative net monthly income of household members, status civil and dependents.

Part II of the questionnaire: contains a series of items that reflect the elements through which the constructions of the case study are operationalized. All statements were measured on a seven-point Likert scale, from strongly disagree, marked 1, to strongly agree, marked 7. In the second part of the questionnaire, respondents were asked to provide information on their attitude towards of public policy and organizational culture, towards civil servants in different departments of the town hall in which they live, as well as regarding the responsiveness of the town hall and their satisfaction with the services provided.

Sample construction:

A number of 1,600 respondents, citizens of Romania, residing in county seat cities, from four counties of the country, located in three different development regions, answered the questionnaire that was designed as an integral part of the doctoral research. The sample consisted of 400 respondents from each of the four cities selected for the case study.

Selection of local public administrations:

The sample was made up of respondents from the following Romanian cities: Iași, Galați, Cluj-Napoca and Oradea. When selecting the cities, several aspects were taken into account, namely the representativeness for Romania, the creation of premises for comparability between the elected local administrations, as well as highlighting the differences in the way citizens appreciate the activity of local public administrations and the correlation with the socio-demographic characteristics of the cities and urban development. Thus, for local public administrations, first of all there was an orientation towards cities - municipalities, county seat.

The characteristics of the municipalities included in the case study are summarized in the following table:

Characteristics of the municipalities of Iași, Galați, Cluj-Napoca and Oradea

City - municipality	Municipality rank	County	Development region	Growth pole
Cluj-Napoca	Rank I	Cluj	Northwest	National growth pole
Galați	Rank I	Galați	South East	Pole of urban development
Iași	Rank I	Iași	North East	National growth pole
Oradea	Rank I	Bihor	northwest	Pole of urban development

Source: Personal contribution, based on information from the 2015 World Bank Report

According to the ranking of municipalities by ranks, all four cities included in the case study are municipalities of rank I, which means that they are municipalities of national importance, having a potential influence at the European level.

Sizing the sample:

Sampling was based on the age and gender demographic structure of the population of the four selected cities, demographic characteristics that had a total weight in the sample proportional to their total population.

Number and structure of respondents by age – study sample

Age	18-33 years		34-49 years		50-65 a years ni		Total
City	Number of respondents	Proportion respondents	Number of respondents	Proportion respondents	Number of respondents	Proportion respondents	
Cluj-Napoca	106	26,50%	165	41,25%	129	32,25%	**400**
Galați	106	26,50%	160	40,00%	134	33,50%	**400**
Iași	114	28,50%	172	43,00%	114	28,50%	**400**
Oradea	106	26,50%	161	40,25%	133	33,25%	**400**
Total	**432**	**-**	**658**	**-**	**510**	**-**	**1.600**

Source: Personal input, based on information collected from respondents

Number and structure of respondents by gender – sample case study

City	Man		Woman		Total
	Number of respondents	Proportion respondents	Number of respondents	Proportion respondents	
Cluj-Napoca	189	47,25%	211	52,75%	**400**
Galați	196	49,00%	204	51,00%	**400**
Iași	195	48,75%	205	51,25%	**400**
Oradea	191	47,75%	209	52,25%	**400**
Total	**771**	**-**	**829**	**-**	**1.600**

Source: Personal input, based on information collected from respondents

The study was carried out according to a validated structure in which pre-filtering questions were included based on age and gender criteria, for the population of the cities of Iași, Galați, Cluj-Napoca and Oradea. The structure of the population by age and gender participating in the research respects the demographic structure according to the INS at the time of the study.

A general analysis of the structuring of the sample shows that, in terms of the proportion of respondents by age group and gender, the sample is representative. Regarding the characteristics taken into account for the classification of the citizens in the sample and which were taken into account as a potential generator of differences in the opinions expressed by the citizens of the four cities, differences appear whose amplitude varies and which, often, can be correlated with the wealth/poverty level of the city.

Chapter 5. Research on performance evaluation in local public administration by involving citizens as beneficiaries of public services

5.1. Introduction

This doctoral research aims to create an evaluation framework that provides a perspective on the performance of the public administration in Romania and contributes to increasing the impact of the use of research results by actors interested in adapting Romania to Western administrative models. The analysis was carried out on the basis of the variables that were selected following the review of specialized literature and empirical studies dedicated to the evaluation of public administration from the perspective of citizens, as the main beneficiaries of public services, developed in previous chapters.

The evaluation framework includes:

▪ Experimental application of Machine-Learning (ML) algorithms to demonstrate Hypotheses no. 1, 2, 3, 4, 5, 6, 7 regarding the dependent variables VD1, VD2, VD3 and the 12 related subvariables, in order to classify and rank the most important factors with a determining role in the evaluation of the citizens' perception of the responsiveness of the

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Evaluation of the performance in local public administration based on citizens' opinions as beneficiaries of public services

local administration to the needs them. To forecast the indices, taking into account the specific parameters, the predictive analysis models XGBoost (eXtreme Gradient Boosting) and Linear Regression were applied.

▪ The Kruskal-Wallis statistical test was applied to compare the revealed parameters resulting from the testing, in order to use the Kruskal-Wallis one-way analysis of variance to compare the samples of 12 groups, which represent the 12 identified subvariables, as quantitative dependencies. This test was applied to demographic characteristics (Age, Gender, Area, Income, etc.), qualitative independent variables.

5.2. Case study – Factors identified with influence on the public administration's responsiveness to collective (social) needs)

The research considered the predictive analysis of three dependent variables VD1, VD2, VD3, in order to determine the influence of the identified factors on the responsiveness of the public administration to collective (social) needs, namely, the transposition of the attitude and beliefs of citizens towards the ability of the public administration to react to their needs and how they do it.

Case study – Machine-Learning (ML) algorithms were experimentally applied for the prediction of dependent variables VD1 - citizens' satisfaction regarding the interaction with the local public administration, VD2 - the reaction of the local public administration to citizens' demands, VD3 - citizens' satisfaction with the public services offered by the local public administration in different fields and their subvariables, through the XGBoost and Linear Regression models

Machine Learning (ML) is the method by which the artificial intelligence system analyzes the data, by developing an analytical model generally predicting the output values based on the input information. The two main processes of machine learning algorithms are classification and regression. The first case study followed the predictive analysis of the dependent variable VD1 - citizens' satisfaction regarding the interaction with the local public administration, VD2 - the reaction of the local public administration to the citizens' demands, VD3 - citizens' satisfaction with the public services offered by the local public administration in different fields , as being a direct and significant relationship between the three variables and the degree of citizens' satisfaction with the services offered by the local public administration, using the XGBoost (eXtreme Gradient Boosting) model and Linear Regression, ensemble algorithms, in order to validate seven hypotheses of work:

✧ *Hypothesis H1*: *Public policies and organizational culture in local public administration influence citizens' beliefs about satisfaction with interaction with local public administration*;

✧ *Hypothesis H2*: *Public policies and organizational culture in local public administration influence citizens' beliefs about the response of local public administration to their demands*;

✧ *Hypothesis H3*: *Public policies and organizational culture in local public administration influence citizens' beliefs about satisfaction with public services offered by local public administration in different areas*;

✧ *Hypothesis H4*: The social orientation or the commercial approach of the local public administration influences the citizens' perception of the responsiveness of the local administration to collective (social) needs);

✧ *Hypothesis H5:* The entrepreneurial spirit and the initiation of changes in the local public administration influence the citizens' perception of the responsiveness of the local administration to collective (social) needs);

✧ *Hypothesis H6*: The organizational culture among local public administration officials influences citizens' perception of the local administration's responsiveness to collective (social) needs);

✧ *Hypothesis H7*: The quality of management and leadership in local public administration influences citizens' perception of the responsiveness of local administration to collective (social) needs).

The questionnaire that was administered to the respondents tracked the responses to the three dependent variables viz:

✧ citizens' satisfaction regarding the interaction with the local public administration (VD1);

  ◇ the reaction of the local public administration to the citizens' demands (VD2);
  ◇ citizens' satisfaction with the public services offered by the local public administration in different fields (VD3).

5.2.1. The XGBoost model

5.2.1.2. Results obtained through the XGBoost Model

To verify Hypothesis no. 1: Public policies and organizational culture in local public administration influence citizens' beliefs about satisfaction with interaction with local public administration, data were prepared and information was centralized following the application of the questionnaire. Public policies and organizational culture in the local public administration influence citizens' beliefs regarding their satisfaction with the interaction with the local public administration, were analyzed through the dependent variable: citizens' satisfaction with the interaction with the local public administration (VD1), based on four dependent subvariables namely:

1. Communication with the local public administration (City Hall), in its entirety (website, telephone, direct communication with city hall officials, etc.) (A1_1);

2. How civil servants respond to requests (A1_2);

3. Request resolution time (A1_3);

4. Conditions in the waiting rooms of the local public administration (Town Hall) (A1_4). each being tested by means of 4 factors composed of 12 parameters - independent variables, as shown in the table below.

The data are presented in tabular form, with 12 columns and 1,600 rows, and are based on respondents' answers to the questionnaire formulated for parameters A3_1, A3_2, A3_3, A3_4, A3_5, A3_6, A3_7, A3_8, A3_9, A3_10, A3_11, A3_12, as follows:

Independent variables - XGBoost model

1. Social orientation or commercial approach (A3)
The local town hall is more interested in promoting the image than in achieving concrete things (A3_1)
Economic efficiency is the most important objective of the City Hall, although the citizens, as taxpayers, are the ones who contribute financially? (A3_2)
The local municipality invests as a priority in the poor areas of the city. (A3_3)
2. Entrepreneurship (A3)
The modernization works carried out by the City Hall improve the standard of living of the citizens (A3_4)
The new projects carried out by the City Hall are useful for citizens (A3_5)
The City Hall has an innovative approach and solutions for city administration (A3_6)
3. Organizational culture (A3)
The decisions taken by the City Hall are influenced by interest groups (A3_7)
The city hall serves political interests at the expense of citizens' interests (A3_8)
City Hall staff is employed on the principle of competence and meritocracy (promotion based on performance at work) (A3_9)
4. Quality of management and leadership (A3)
Employees with management positions in the City Hall are well professionally trained (A3_10)
The city is well managed (A3_11)
The leadership of the City Hall has a long-term vision and a clear goal regarding the administration of the city (A3_12)

Source: personal contribution, based on literature references

In order to measure the impact of the 12 independent variables on the dependent variable VD_1 the respondents in each city were asked to select the statements regarding their satisfaction with the interaction with the local public administration. The statements used can be exemplified as follows: The local City Hall is more interested in promoting the image than in achieving concrete things, The new projects carried out by the City Hall are useful for the citizens, The City Hall serves political interests at the expense of the interests of the citizens and Employees with management positions in the City Hall they are well trained professionally. A 7-point Likert scale was used for these items, where 1 represents: to a small extent and 7 represents: to a large extent.

1. Communication with the local public administration (City Hall), in its entirety (website, telephone, direct communication with city hall officials, etc.) (A1_1)

For the predictive analysis of the subvariable A1_1 Communication with the local public administration (Town Hall), in its entirety (website, telephone, direct communication with the town hall officials, etc.), using the Exploratory Public IT application, Analytics, the XGBoost model, the total of the dependent subvariable is tracked according to the total number of independent variables used A3_1, A3_2, A3_3, A3_4, A3_5, A3_6, A3_7, A3_8, A3_9, A3_10, A3_11, A3_12.

The total of this dependent subvariable A1_1 was calculated by summing the values of the 12 independent variables, these parameters were used as predictors of the model and determined the prediction of the dependent subvariable "Communication with the local public administration (City Hall), in its entirety (website, telephone, direct communication with city hall officials, etc)".

By using the XGBoost model, after running the data, for each individual city, a value was returned for the R-Squared root mean square and the root mean square error (RMSE), value involved in the regression thus, of:

◇ Cluj-Napoca, R^2 = 0,7172, RMSE = 1,3173
◇ Galați, R^2 = 0,7634, RMSE = 1,1122
◇ Iași, R^2 = 0,7770, RMSE = 1,1291
◇ Oradea, R^2 = 0,7435, RMSE = 1,3437

In this case, the values of R^2 > 0.7 indicate a high degree of accuracy of the model, which means that over 70%, for each city tested, of the variation of the dependent subvariable: Communication with the local public administration (City Hall), in its entirety (website, phone, direct communication with city hall officials, etc.), is explained by the variation of the 12 mentioned parameters. From the Importance section of the XGBoost model, a ranking of the importance of the independent variables needed to make the prediction and implicitly of the factors that influence the dependent subvariable A1_1 and the contribution of each parameter to the dependent variable was obtained, a fact that can be seen in the screenshot from the Exploratory application Public (next figure).
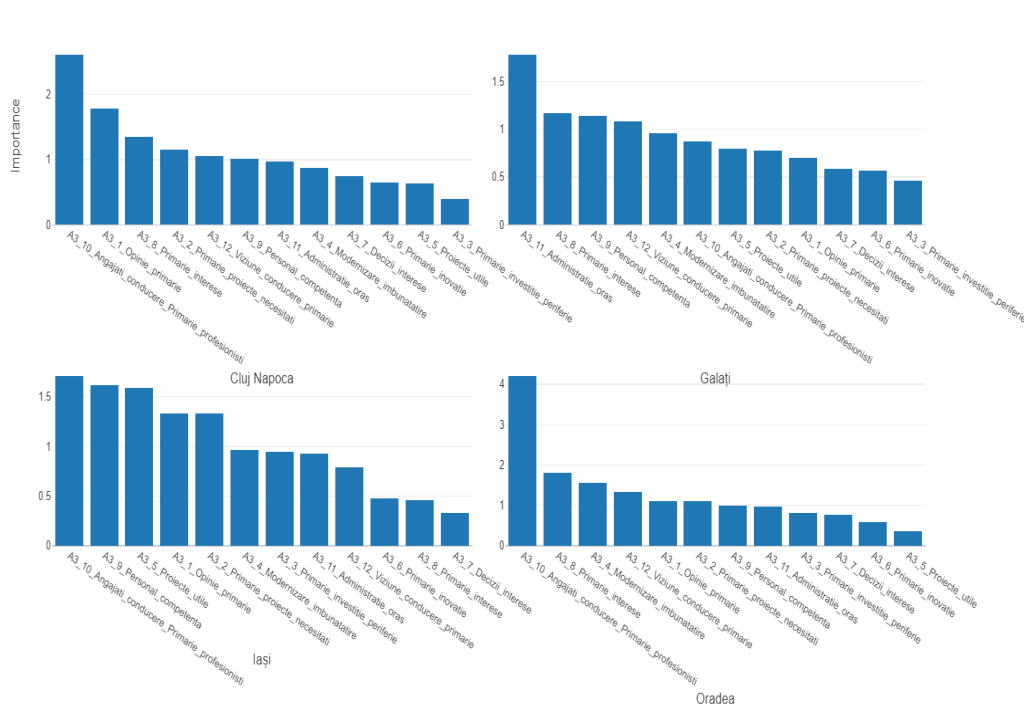
Hierarchy of parameter importance for subvariable A1_1 - XGBoost model
Source: Exploratory Public App

In the first position in the cities of Cluj-Napoca, Oradea and Iași, there was the same parameter A3_10: Employees with management positions in the City Hall are well professionally trained, in Galati the respondents opted for A3_11: The city is well administered. In the order of preferences, the predictors are found in the last position: for Cluj-Napoca – A3_3: The local City Hall invests as a priority in the poor areas of the city, Oradea – A3_5: The new projects carried out by the City Hall are useful for the citizens, Iași – A3_7: The decisions taken by the City Hall are influenced by interest groups and Galati – A3_3: The local municipality invests as a priority in the poor areas of the city.

In the cities of Cluj-Napoca, Oradea and Iași, the same parameter A3_10: Employees with management positions in the City Hall are well professionally trained, is an independent variable that highlights the **Quality of management and leadership factor (A3) as a determining factor in** : Communication with the local public administration (City Hall), in its entirety (website, phone, direct communication with city hall officials, etc.). Thus, the level of training and leadership of local public administration personnel influences citizens' opinion regarding communication as a whole.

In the city of Galati, the parameter A3_11: The city is well managed is an independent variable that highlights the same factor **Quality of management and leadership (A3) as a factor determined in:** Communication with the local public administration (City Hall), in its entirety (website, phone, direct communication with city hall officials, etc.). In this sense, the higher level administration of the city, the increase in the quality of communication and its improvement at the local level influence the opinion of the citizens regarding the communication as a whole.

Since the R-Squared is greater than 0.7 at the level of each city, for the subvariable A1_1: Communication with the local public administration (City Hall), in its entirety (website, telephone, direct communication with city hall officials, etc.), the first two parameters are important , to determine the whole value of the dependent variable. Thus, for:

Influence of the dependent subvariable A1_1

City	Independent variable	Factor
Cluj-Napoca	A3_10	Quality of management and leadership
	A3_1	The local town hall is more interested in promoting the image than in achieving concrete things
Galați	A3_11	The city is well managed
	A3_8	The city hall serves political interests at the expense of citizens' interests
Iași	A3_10	Quality of management and leadership
	A3_9	City Hall staff is employed on the principle of competence and meritocracy (promotion based on performance at work)
Oradea	A3_10	Quality of management and leadership
	A3_8	The city hall serves political interests at the expense of citizens' interests

Source: personal contribution, based on processed data

2. How civil servants respond to requests (A1_2)

On the first position in the cities of Cluj-Napoca, Oradea and Iași, as in the case of the dependent subvariable A1_1, there is the same parameter A3_10: Employees with management positions in the City Hall are well professionally trained, in Galati the respondents opting for A3_11: The city is well administered.
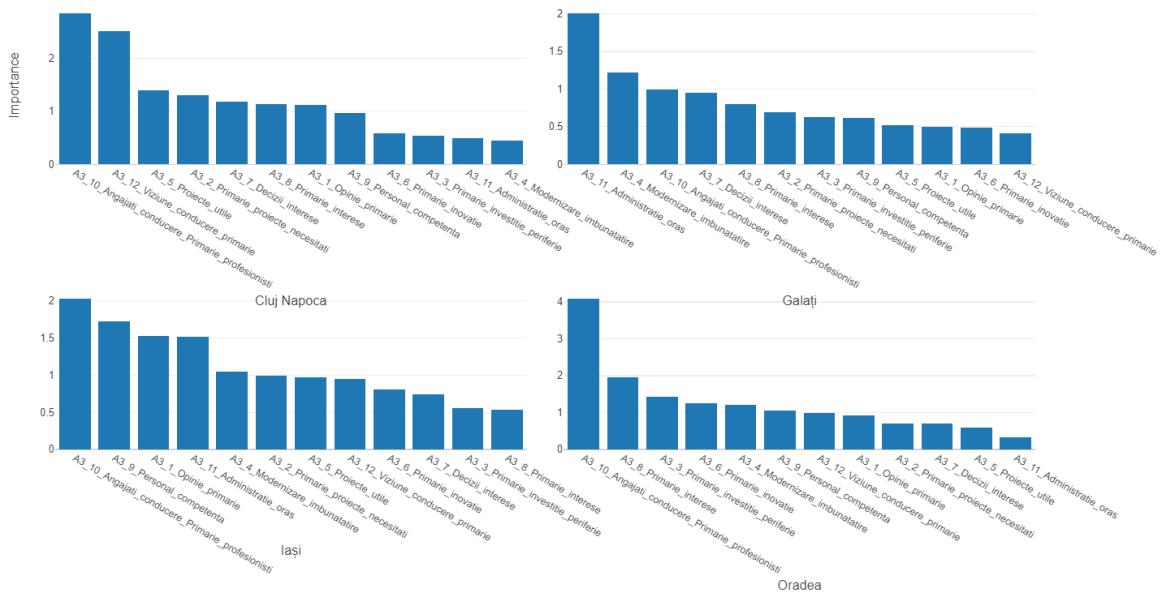
Hierarchy of parameter importance for subvariable A1_2 - XGBoost model
Source: Exploratory Public App

In the cities of Cluj-Napoca, Oradea and Iasi, the same parameter A3_10: Employees with management positions in the City Hall are well professionally trained is an independent variable that highlights the Quality of management and leadership factor (A3) as a determining factor in : How civil servants respond to requests. Thus, the level of training and leadership of local public administration staff influences citizens' opinion on how to respond to officials' requests.

In the city of Galati, the parameter A3_11: The city is well administered is an independent variable that highlights the same factor Quality of management and leadership (A3) as a determining factor in the way public officials respond to requests. In this sense, the higher level administration of the city, the increase in the quality of communication and its improvement at the local level influence the opinion of the citizens regarding the way in which the officials in the local public administration respond to requests.

Because the R-Squared returned is greater than 0.7, at the level of each city, for the subvariable A1_2: The way civil servants respond to requests, the first two parameters to determine the total value of the dependent variable are important. Thus, for:

Influence of the dependent subvariable A1_2

City	Independent variable	Factor
Cluj-Napoca	A3_10	Quality of management and leadership
	A3_12	The leadership of the City Hall has a long-term vision and a clear goal regarding the administration of the city
Galați	A3_11	The city is well managed
	A3_4	The modernization works carried out by the City Hall improve the standard of living of the citizens
Iași	A3_10	Quality of management and leadership
	A3_9	City Hall staff is employed on the principle of competence and meritocracy (promotion based on performance at work)
Oradea	A3_10	Quality of management and leadership
	A3_8	The city hall serves political interests at the expense of citizens' interests

Source: personal contribution, based on processed data
Source: Exploratory Public App

3. Request resolution time (A1_3)

After running the data, using the XGBoost model, for each individual city, a value was returned for R-Squared and the square root of the root mean square error (RMSE), value involved in the regression thus, of:

◇ Cluj-Napoca, R^2 = 0,7091, RMSE = 1,3458;
◇ Galați, R^2 = 0,7349, RMSE = 1,1393;
◇ Iași, R^2 = 0,7584, RMSE = 1,1887;
◇ Oradea, R^2 = 0,7113, RMSE = 1,4094.

And in this case, the values of R2 > 0.7 are higher than in the case of subvariables A1_1 and A1_2, which means that more than 70%, for each city tested, of the variation of the dependent subvariable: Request resolution time, is explained by the variation of the 12 mentioned parameters and indicates a high degree of accuracy of the model.

In the cities of Cluj-Napoca and Oradea, the respondents ranked first, as in the case of the first two dependent subvariables A1_1 and A1_2, the same parameter A3_10: Employees with management positions in the City Hall are well professionally trained, in Iași and Galati the respondents opted for A3_11: The city is well managed.

The cities of Cluj-Napoca and Oradea opted for the same parameter A3_10: Employees with management positions in the City Hall are well professionally trained, as an independent variable that highlights the Quality of management and leadership factor (A3) as a determining factor and in: Request resolution time. The level of training and management of local public administration staff influences citizens' opinion on the time it takes to resolve requests by officials.

In the cities of Iași and Galați, the parameter A3_11: The city is well managed is an independent variable that highlights the same factor Quality of management and leadership (A3) as a factor determined in: Time to resolve requests. In this sense, the higher level administration of the city, the improvement of communication at the local level influences the opinion of the citizens regarding the times in which the officials in the local public administration solve the respective requests.

A returned R-Squared greater than 0.7, at the level of each city, for the subvariable A1_3: Request resolution time, the first two parameters to determine the entire value of the dependent variable are important, thus:

The influence of the dependent subvariable A1_3

City	Independent variable	Factor
Cluj-Napoca	A3_10	Quality of management and leadership
	A3_12	The leadership of the City Hall has a long-term vision and a clear goal regarding the administration of the city
Galați	A3_11	The city is well managed
	A3_10	Quality of management and leadership
Iași	A3_11	The city is well managed
	A3_10	Quality of management and leadership
Oradea	A3_10	Quality of management and leadership
	A3_8	The city hall serves political interests at the expense of citizens' interests

Sursa: contribuție personală, pe baza datelor prelucrate

It can be seen that the answers of the respondents from the cities of Galați and Iași are identical, which leads to the idea that local public administration officials from the East and North East of Romania develop similar behaviors.

4. The conditions in the waiting rooms of the local public administration (Town Hall) (A1_4)

For an R-Squared obtained greater than 0.6599 and 0.7, at the level of each city, for the subvariable A1_4 "Conditions in the waiting rooms of the local public administration (City Hall)", the first two parameters are important to determine the value of the whole of the dependent variable, thus:

Influence of the dependent subvariable A1_4

City	Independent variable	Factor
Cluj-Napoca	A3_10	Quality of management and leadership
	A3_12	The leadership of the City Hall has a long-term vision and a clear goal regarding the administration of the city
Galați	A3_12	The leadership of the City Hall has a long-term vision and a clear goal regarding the administration of the city
	A3_4	The city hall serves political interests at the expense of citizens' interests
Iași	A3_10	Quality of management and leadership
	A3_1	The local town hall is more interested in promoting the image than in achieving concrete things
Oradea	A3_10	Quality of management and leadership
	A3_4	The city hall serves political interests at the expense of citizens' interests

Source: personal contribution, based on processed data

Following the analysis and testing, Hypothesis no. 1, Public policies and organizational culture in the local public administration influence citizens' beliefs regarding their satisfaction with the interaction with the local public administration, through the dependent variable "citizen satisfaction with the interaction with the local public administration" (VD1), based on the four dependent subvariables namely:

1. Communication with the local public administration (City Hall), in its entirety (website, telephone, direct communication with city hall officials, etc.) (A1_1);
2. How civil servants respond to requests (A1_2);
3. Request resolution time (A1_3);
4. The conditions in the waiting rooms of the local public administration (Town Hall) (A1_4).

Centralization of information that demonstrates the validation of assumptions no. 1 and 7 is shown in the following table.

Validation Hypothesis no. 1 - dependent/independent variables - XGBoost model

City	Dependent variable VD1				Determining factor VI
	A1_1	**A1_2**	**A1_3**	**A1_4**	
Cluj-Napoca	A3_10	A3_10	A3_10	A3_10	Factor 4. VI4_Quality of management and leadership
Galați	A3_11	A3_11	A3_11	A3_12	Factor 4. VI4_Quality of management and leadership
Iași	A3_10	A3_10	A3_11	A3_10	Factor 4. VI4_Quality of

City	Dependent variable VD1				Determining factor VI
	A1_1	**A1_2**	**A1_3**	**A1_4**	
					management and leadership
Oradea	A3_10	A3_10	A3_10	A3_10	Factor 4. VI4_Calitatea managementului și leadership-ului

Source: personal contribution, based on processed data

It turned out that the determining factor, according to the respondents to the questionnaire, is Factor 4_Quality of management and leadership VI4, which demonstrates that leaders are considered key performance factors within public institutions, who by engaging in behaviors contribute to achieving the objectives of within the organizations they belong to. At the same time, when employees trust their leaders, there is a significant increase in performance within their institutions.

In conclusion, in the case of the dependent variable VD1 "citizen satisfaction regarding the interaction with the local public administration", the XGBoost predictive analysis model also validates Hypothesis no. 7, according to which: The quality of management and leadership influences from the local public administration the citizens' perception of the responsiveness of the local administration to collective (social) needs)

After analysis and testing, Hypothesis no. 2. Public policies and organizational culture in local public administration influence citizens' beliefs regarding the reaction of local public administration to their demands, through the dependent variable "reaction of local public administration to citizens' demands" (VD2), based on the three dependent subvariables, namely:
1. The local public administration (City Hall) makes efforts to help citizens who have problems (A2_1);
2. The local public administration (City Hall) reacts quickly and efficiently to the needs and requests of citizens (A2_2);
3. The local public administration (City Hall) responds to criticisms and suggestions for improving activities and services (A2_3).

Centralization of information that demonstrates the validation of assumptions no. 2 and 7 is presented in the following table.

Validation Hypothesis no. 2 - dependent/independent variables - XGBoost model

City	Variabilă dependentă VD2			Determining factor VI
	A2_1	**A2_2**	**A2_3**	
Cluj-Napoca	A3_12	A3_12	A3_12	Factor 4. VI4_Quality of management and leadership
Galați	A3_11	A3_11	A3_11	Factor 4. VI4_Quality of management and leadership
Iași	A3_12	A3_11	A3_11	Factor 4. VI4_Quality of management and leadership
Oradea	A3_11	A3_10	A3_10	Factor 4. VI4_Quality of management and leadership

Source: personal contribution, based on processed data

The analysis showed that the determining factor, according to the respondents to the questionnaire, is Factor 4_Quality of management and leadership VI4, which demonstrates that the local public administration reacts to the demands of citizens, leaders being considered key performance factors within public institutions, and the behavior decision-makers and civil servants affect the ways of solving citizens' requests.

In conclusion, in the case of the dependent variable VD2 "citizen satisfaction regarding the interaction with the local public administration", the XGBoost predictive analysis model also validates Hypothesis no. 7, according to which: *The quality of management and leadership influences from the local public administration the citizens' perception of the responsiveness of the local administration to collective (social) needs*.

After the analysis and testing of the dependent variable VD3, Hypothesis no. 3 is validated, public policies and organizational culture in the local public administration influence citizens' beliefs regarding satisfaction with the public services offered by the local public administration in different areas, through the dependent variable: Citizen satisfaction towards the public services offered by the local public administration in different fields (VD3), based on the six dependent subvariables, namely:

✧ road infrastructure (roads) and parking lots (PG1_1);
✧ educational and cultural services (PG1_2);
✧ cleanliness of the city (PG1_3);
✧ degree of pollution (PG1_4);
✧ urban modernization (PG1_5);
✧ safety and public order (PG1_6).

Centralization of information that demonstrates the validation of assumptions no. 3, 2 and 7 is shown in the following table.

Validation Hypothesis no. 3 - dependent/independent variables - XGBoost model

City	Dependent variable VD2						Determining factor VI
	PG1_1	PG1_2	PG1_3	PG1_4	PG1_5	PG1_6	
Cluj-Napoca	A3_5	A3_11	A3_11	A3_9	A3_11	A3_5	Factor 4. VI4_Quality of management and leadership
							Factor 2. VI2_Entrepreneurship
							Factor 3. VI3 Organizational culture
Galați	A3_11	A3_11	A3_11	A3_6	A3_11	A3_6	Factor 4. VI4_Quality of management and leadership
							Factor 2. VI2_Entrepreneurship
Iași	A3_11	A3_11	A3_11	A3_12	A3_10	A3_11	Factor 4. VI4_Quality of management and leadership
Oradea	A3_6	A3_6	A3_11	A3_10	A3_6	A3_11	Factor 4. VI4_Quality of management and leadership
							Factor 2. VI2_Entrepreneurship

Source: personal contribution, based on processed data

For all four cities that were the subject of the analysis, it turned out that the determining factor, according to the respondents to the questionnaire, is Factor 4_Quality of management and leadership VI4.

The manager can give instructions and solutions, can make decisions, by virtue of the position he holds, having a certain amount of formal authority. Managers must find means to influence subordinates' behavior and rely less on their formal authority. When speed in decision-making is required and information and expertise are held by a single person,

authoritarian leadership can be both appropriate and acceptable. In other conditions, a democratic style may prove more effective. It is important that the leadership style adopted is effective.

The leader is the definition of informal leadership and thus the leader of an informal group emerges, spontaneously and naturally, from the dynamics of the group, not being appointed but chosen. Since managers are formal, appointed leaders of the organization, the informal part of management was neglected, but, nevertheless, the necessity of training the manager as an informal leader was imposed. The strategic focus in the definition of the leader has shifted from management to leadership, the "leader" being considered the leader of an organization who not only knows what and how to do, but is also able to determine how to do others: for the leader, people are important. Impersonal operations with material or financial resources are transformed into the coordination of human resources, with all the consequences resulting from the personalization of the relationship between managers and subordinates.

Factor 2_ Entrepreneurship VI2, is in the second position in the responses of the respondents from the cities of Cluj-Napoca, Galați and Oradea and reflects the transfer of the entrepreneurial approach in the public administration, as a way to reduce bureaucracy and increase efficiency. The public administration, par excellence, must balance the interests of the interested parties in order to engage and solve in a fairly transparent manner, social, political, environmental and economic problems, given that public institutions have limited autonomy and flexibility in the decision-making process, while private companies have a limited number of objectives, which are relatively stable, i.e. increase in turnover, profitability or market share

This fact demonstrates that the local public administration reacts to citizens' demands, leaders being considered key performance factors within public institutions, in which case the behavior of decision-makers and civil servants affects the ways of solving citizens' demands.

Factor 3_ Organizational culture VI3 stood out among the responses of the surveyed population from the city of Cluj-Napoca, as a set of values, norms, rules established in the organization following the resolution of problems with internal integration and external adaptation, which are indicated as an appropriate way of thinking and which act in social processes.

The lack of an organizational culture in public institutions can become a barrier in the practical implementation of the mission of any organization, including those in the public sector. Among the internal factors that determine organizational culture are not only the vision, mission, strategy, size and structure of the organization, but especially the people who create this culture with their values and attitudes, their needs, education, life and work experience, emotional bonds and the relationships between them. Within the internal aspects of the culture of a public organization, based on the indicated values, the ethos of civil servants becomes important. Their ethics, focused on professionalism, predictability and continuity, accumulate values such as honesty, punctuality, ethics, equality and loyalty.

In the case of the dependent variable VD3: *Citizens' satisfaction with the public services offered by the local public administration in different areas, the XGBoost predictive analysis model validates Hypothesis no. 3, Hypothesis no. 5,* according to which: The entrepreneurial spirit and the initiation of changes in the local public administration influence the citizens' perception of the responsiveness of the local administration to collective (social) needs, as well as Hypothesis no. 7, described above.

Centralization of information that demonstrates the validation of assumptions no. 1, 2, 3, 5 and 7 is shown in the following table.

Centralization dependent variables – determinants

City	Dependent variable		Determining factor VI
	VD1	VD2	VD3
Cluj-Napoca	Factor 4. VI4_Quality of management and leadership	Factor 4. VI4_Quality of management and leadership	Factor 4. VI4_Quality of management and leadership
			Factor 2.VI2_Entrepreneurship

City	Dependent variable		Determining factor VI
	VD1	VD2	VD3
			Factor 3. VI3 Organizational culture
Galați	Factor 4. VI4_Quality of management and leadership	Factor 4. VI4_Quality of management and leadership	Factor 4. VI4_Quality of management and leadership
			Factor 2. VI2_Entrepreneurship
Iași	Factor 4. VI4_Quality of management and leadership	Factor 4. VI4_Quality of management and leadership	Factor 4. VI4_Quality of management and leadership
Oradea	Factor 4. VI4_Quality of management and leadership	Factor 4. VI4_Quality of management and leadership	Factor 4. VI4_Quality of management and leadership
			Factor 2. VI2_Entrepreneurship

Source: personal contribution, based on processed data

In conclusion, the XGBoost predictive analysis model, for the dependent variables VD1, VD2, VD3, validates the hypotheses:

◇ **H1:** *Public **policies** and organizational culture in local public administration influence citizens' beliefs about their satisfaction with interacting with local public administration;;*

◇ **H2:** *Public **policies** and organizational culture in local public administration influence citizens' beliefs about the response of local public administration to their demands;*

◇ **H3:** *Public **policies** and organizational culture in local public administration influence citizens' beliefs about satisfaction with public services offered by local public administration in different areas;*

◇ **H5:** The entrepreneurial spirit and the initiation of changes in the local public administration influence the citizens' perception of the responsiveness of the local administration to collective (social) needs);

◇ **H7:** The quality of management and leadership in local public administration influences citizens' perception of the responsiveness of local administration to collective (social) needs).

5.2.2. Linear regression (Linear Regression Model - MLR)

In order to verify the relationship between citizens' satisfaction regarding the interaction with the local public administration and the policies and organizational culture in the public administration, it is important to analyze the power of association between the result, i.e. "the reaction of the local public administration to the citizens' demands" (VD2) and the predictors - variables independent A3_1, A3_2, A3_3, A3_4, A3_5, A3_6, A3_7, A3_8, A3_9, A3_10, A3_11, A3_12. With their help, the important risk factors that affect the dependent variable VD2 can be estimated, for each individual city and using the linear regression model, it will be analyzed how changing the independent variables by a "unit" affects the dependent variable.

Using the Exploratory Public, Analytics computer application, the Linear Regression model, the independent variables "x": A3_1, A3_2, A3_3, A3_4, A3_5, A3_6, A3_7, A3_8, A3_9, A3_10, A3_11, A3_12 and the values of "Y" were established , for each of the subvariables: The local public administration (City hall) makes efforts to help citizens who have problems (A2_1), The local public administration (City hall) reacts quickly and efficiently to the needs and requests of citizens (A2_2), The local public administration (City hall) responds to criticism and suggestions for improving activities and services (A2_3), components of the dependent variable VD2.

The 12 parameters were used as predictors of the model and thus implied the hypothesis that there is a linear relationship between the dependent subvariable Y and the 12 independent variables.

The dependent subvariable A2_1 - The local public administration (City Hall) reacts quickly and efficiently to the needs and requests of citizens

The Linear Regression model, after running the data, returned a value for the coefficient of determination for each city for which the test was applied, thus:
- Cluj-Napoca - R2 de 0,4548;
- Galați - R2 de 0,4446;
- Iași - R2 de 0,4301;
- Oradea - R2 de 0,4048

so that, minimum 40.48% for the city of Oradea and maximum 45.48% for the city of Cluj-Napoca, of the total variation of the dependent subvariable Y, can be explained by the variation of the independent variables.

In our case, the coefficient of determination R2 follows the median line, being between 0.4048 and 0.4548, i.e. between, 0< R2 <1, which proves that there is an average linear relationship between x and y, i.e. only about 42 % variation in y is explained by variation in x.

Adjusted R-Squared being the modified version of R2 takes into account predictors that are not significant in a regression model and in our case it is between the value 0.3864 and 0.4379, that is maximum 43.79% shows if the addition of additional predictors improve or not the regression model.
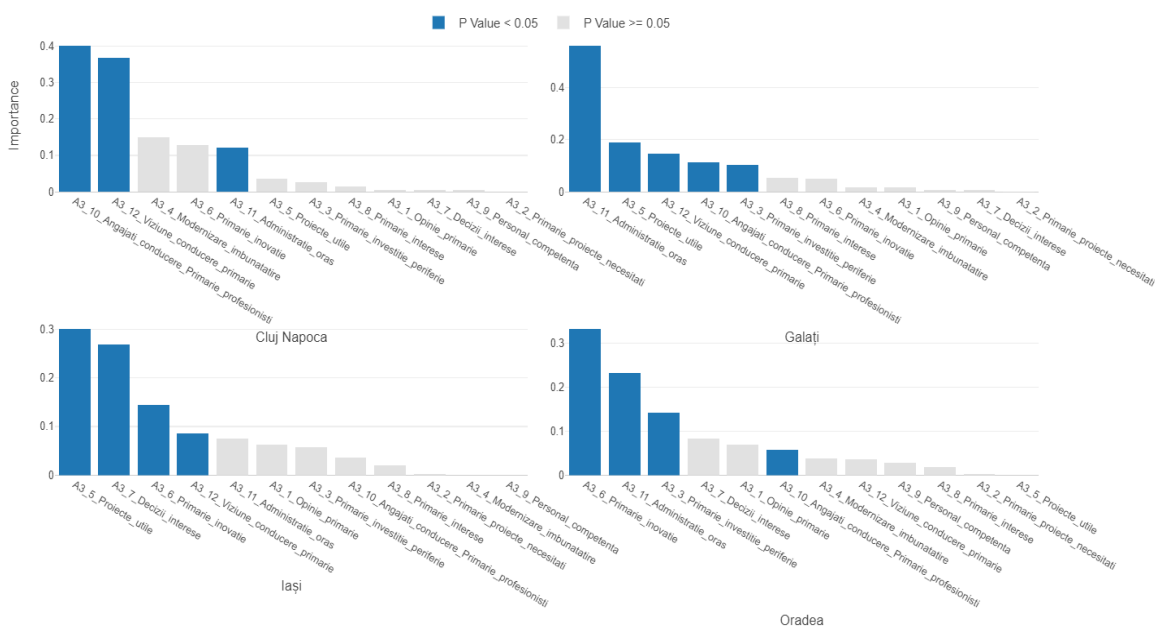

Hierarchy of importance of predictors – A2_1 - MLR
Source: Exploratory Public App

The importance of the independent variables in the prediction of the dependent variable can be seen in the previous figure, attached as a print screen from the Exploratory Public application, so a P-Value lower than the significance threshold of 0.05 is recorded through the Linear Regression model the independent variables the city:
- Cluj-Napoca - independent variable A3_10: Employees with management positions in the City Hall are well trained professionally;
  - independent variable A3_12: The management of the City Hall has a long-term vision and a clear goal regarding the administration of the city;
  - independent variable A3_11: The city is well administered;
- Galati - independent variable A3_11: The city is well administered;
  - independent variable A3_5: The new projects carried out by the City Hall are useful for citizens;

◇ independent variable A3_10: Employees with management positions in the City Hall are well trained professionally;
◇ independent variable A3_12: The management of the City Hall has a long-term vision and a clear goal regarding the administration of the city;
◇ independent variable A3_3: The local municipality invests as a priority in the poor areas of the city;
◇ Iași - independent variable A3_5: The new projects carried out by the City Hall are useful for citizens;
◇ independent variable A3_7: The decisions taken by the City Hall are influenced by interest groups;
◇ independent variable A3_6: The City Hall has an innovative approach and solutions for city administration;
◇ independent variable A3_12: The management of the City Hall has a long-term vision and a clear goal regarding the administration of the city;
◇ Oradea - independent variable A3_6: The City Hall has an innovative approach and solutions for city administration;
◇ independent variable A3_11: The city is well administered;
◇ independent variable A3_3: The local municipality invests as a priority in the poor areas of the city;
◇ independent variable A3_10: Employees with management positions in the City Hall are well trained professionally.
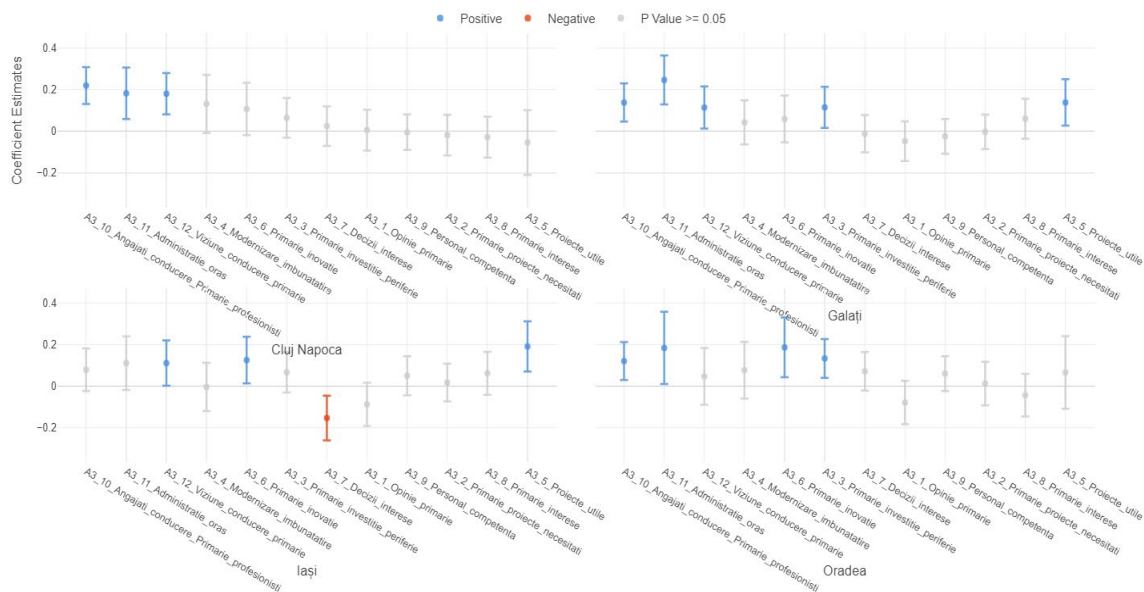
Graphical representation of regression coefficients – A1_1 - MLR
Source: Exploratory Public App

P-Value and coefficients in regression analysis work together to show which relationships in the model are statistically significant and the nature of those relationships, describing the mathematical relationship between each independent variable and the dependent variable.

The positive or negative correlation between each independent variable and the dependent variable is given by the sign of each linear regression coefficient. Thus, for the city:

◇ Cluj-Napoca - the positive coefficient of A3_10 of +0.2198 indicates that, as the value of the independent variable increases, the mean of the dependent variable also tends to increase;
◇ Galatians - A3_11's positive coefficient of +0.2464 indicates that as the value of the independent variable increases, the mean of the dependent variable also tends to increase;

✧ Iasi - the positive coefficient of A3_5 of +0.0658 indicates that as the value of the independent variable increases, the mean of the dependent variable also tends to increase;

✧ Oradea - the positive coefficient of A3_6 of -0.1863 suggests that as the independent variable increases, the dependent variable A2_1 tends to increase.

In conclusion, among the 12 mentioned parameters, which are independent variables, for the dependent variable A1_1, the relationships are statistically significant, for:

✧ Cluj-Napoca - the F4 factor in a positive sense;
✧ Galatians - the F4 factor in a positive sense;
✧ Iasi - the F2 factor in a positive sense;
✧ Oradea - the F2 factor in the positive sense

and there is a population-level effect, as can be seen in the following figure attached as a print screen from the Exploratory Public application.
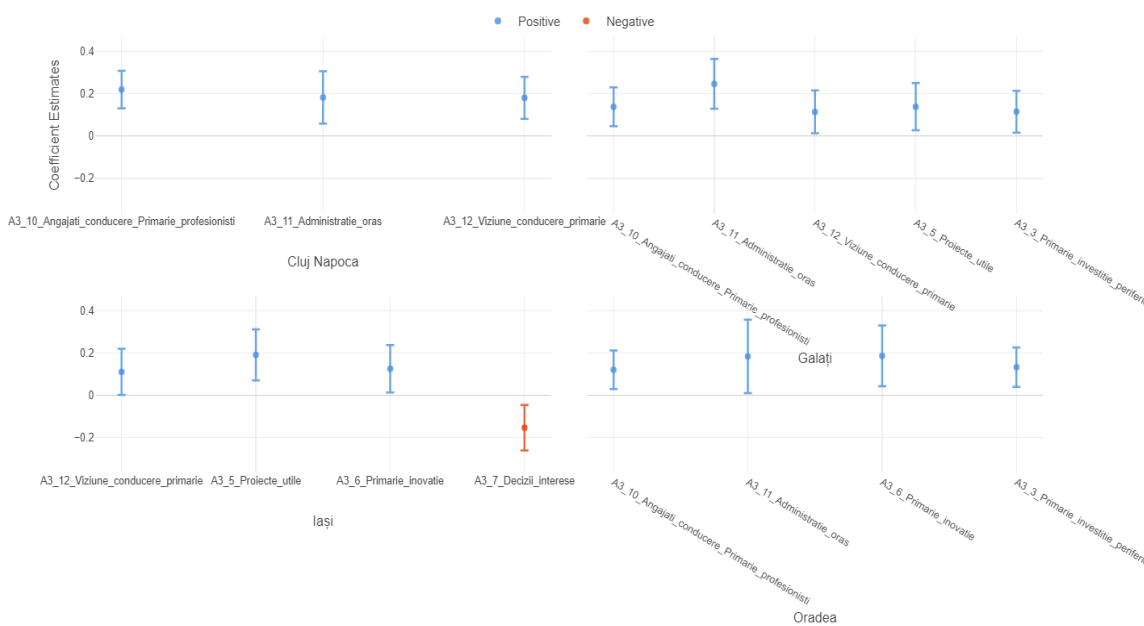
Graphical representation of regression coefficients – A2_1 - MLR
Source: Exploratory Public App

Centralization of dependent/independent variables - MLR

City	Dependent variable VD2			Determining factor VI
	A2_1	**A2_2**	**A21_3**	
Cluj-Napoca	A3_10	A3_12	A3_12	Factor 4. VI4_Quality of management and leadership
Galați	A3_11	A3_3	A3_10	Factor 4. VI4_Quality of management and leadership
Iași	A3_5	A3_6	A3_6	Factor 2. VI2_Entrepreneurship
Oradea	A3_6	A3_6	A3_10	Factor 2. VI2_Entrepreneurship

Source: personal contribution, based on processed data

The analysis showed that the determining factors, according to the respondents to the questionnaire, are Factor 4_Quality of management and leadership VI4 local public administration reacts to the demands of citizens and Factor 2_Entrepreneurship VI2 which proves that it reflects the transfer of the entrepreneurial approach in public administration, as

a way of reducing bureaucracy and increasing efficiency, leaders being considered key performance factors within public institutions, and the behavior of decision-makers and civil servants affects the ways of solving citizens' requests.

Among the 12 mentioned parameters, which are independent variables, for the dependent variable PG1_6, the relationships are statistically significant, for:

◇ Cluj-Napoca - the F4 factor in the positive sense;
◇ Galați - the F2 factor in the positive sense;
◇ Iași - the F4 factor in the positive sense;
◇ Oradea - the F4 factor in the positive sense

We apply the linear regression calculation formula:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12}$$

where:
β0 is the constant
β1 is the coefficient for X

As it is a multiple regression, several terms βkXk are added to the equation up to K independent variables (X_k).

In our case, the dependent variable Y for the city of Cluj-Napoca is calculated as follows:

$$Y = 0,8670 + 0,0338 * A3_1 + 0,0218 * A3_{10} + 0.1954 * A3_{11} + 0,0148 * A3_{12} + 0,0031 * A3_2$$
$$+ 0,0015 * A3_3 + 0,0992 * A3_4 + 0,3032 * A3_5 + 0,1369 * A3_6 - 0,0287 * A3_7$$
$$+ 0,0344 * A3_8 - 0,0069 * A3\_9$$

In conclusion, among the 12 mentioned parameters, which are independent variables, for the dependent variable PG1_6, the relationships are statistically significant, for:

◇ Cluj-Napoca - the F2 factor in the positive sense;
◇ Galați - the F2 factor in the positive sense;
◇ Iași - the F2 factor in the positive sense;
◇ Oradea - the F4 factor in the positive sense

and there is a population-level effect.

The centralization of the information that demonstrates the relationships between the dependent variables that make up the dependent variable and the independent variables is presented in the following table.

Centralization of dependent/independent variables - MLR

City	Dependent variable VD3						Determining factor VI
	PG1_1	PG1_2	PG1_3	PG1_4	PG1_5	PG1_6	
Cluj-Napoca	A3_5	A3_11	A3_11	A3_12	A3_11	A3_5	Factor 4. VI4_Quality of management and leadership
							Factor 2. VI2_Entrepreneurship
Galați	A3_11	A3_11	A3_11	A3_6	A3_11	A3_6	Factor 4. VI4_Quality of management and leadership
							Factor 2. VI2_Entrepreneurship
Iași	A3_11	A3_5	A3_11	A3_11	A3_5	A3_5	Factor 4. VI4_Quality of management and leadership
							Factor 2. VI2_Entrepreneurship

City	Dependent variable VD3						Determining factor VI
	PG1_1	PG1_2	PG1_3	PG1_4	PG1_5	PG1_6	
Oradea	A3_6	A3_10	A3_6	A3_10	A3_11	A3_11	Factor 4. VI4_Quality of management and leadership
							Factor 2. VI2_Entrepreneurship

Source: personal contribution, based on processed data

As in the case of the XGBoost model, the dependent variable VD3, for all four cities that were the subject of the analysis, resulted in the fact that the determining factors, according to the respondents to the questionnaire, are Factor 4_Quality of management and leadership VI4 and Factor 2_ Entrepreneurship VI2**.**

Centralization of dependent/independent variables - MLR

City	Dependent variable		Determining factor VI
	VD1	VD2	VD3
Cluj-Napoca	Factor 4. VI4 Quality of management and leadership	Factor 4. VI4 Quality of management and leadership	Factor 4. VI4 Quality of management and leadership
			Factor 2. VI2_Entrepreneurship
Galați	Factor 4. VI4 Quality of management and leadership	Factor 4. VI4 Quality of management and leadership	Factor 4. VI4 Quality of management and leadership
			Factor 2. VI2_Entrepreneurship
Iași	Factor 4. VI4 Quality of management and leadership	Factor 2. VI2_Entrepreneurship	Factor 4. VI4 Quality of management and leadership
			Factor 2. VI2_Entrepreneurship
Oradea	Factor 4. VI4 Quality of management and leadership	Factor 2. VI2_Entrepreneurship	Factor 4. VI4 Quality of management and leadership
			Factor 2. VI2_Entrepreneurship

Source: personal contribution, based on processed data

From the analysis of the information obtained following the processing of the same set of data obtained from the respondents to the questionnaire, for testing the hypotheses H1, H2, H3, H4, H5, H6, H6 and H7, with the help of Machine-Learning (ML) XGBoost algorithms and Linear Regression, similar results were obtained.

In conclusion, Factor 4 and Factor 2 were identified by the two algorithms as important. The determining factors, according to the respondents to the questionnaire, are Factor 4_Quality of management and leadership VI4 and Factor 2_ Entrepreneurship VI2 and the predictive analysis model Linear Regression, for the dependent variables VD1, VD2, VD3, validates the hypotheses:

  ◇ *H1: Public policies and organizational culture in local public administration influence citizens' beliefs about their satisfaction with interacting with local public administration*;
  ◇ *H2:* Public policies and organizational culture in local public administration influence citizens' beliefs about the response of local public administration to their demands;
  ◇ *H3:* Public policies and organizational culture in local public administration influence citizens' beliefs about satisfaction with public services offered by local public administration in different areas
  ◇ *H5:* The entrepreneurial spirit and the initiation of changes in the local public

administration influence the citizens' perception of the responsiveness of the local administration to collective (social) needs);

✧ *H7: The quality of management and leadership in local public administration influences citizens' perception of the responsiveness of local administration to collective (social) needs)*

5.2.3. Analysis of variation Kruskal–Wallis

For the three factors that resulted from the testing as being important through the independent variables identified, it is checked if there are significant differences on different demographic data, for each of the four important cities for the research carried out, regarding the attitude of the citizens towards the ability to react of the public administration to their needs, as a way of evaluating the performance of the local public administration.

The Kruskal-Wallis statistical test was used for parameters A3_5: New projects carried out by the City Hall are useful for citizens, A3_6: The City Hall has an innovative approach and solutions for city administration, A3_10: Employees with management positions in the City Hall are well professionally trained, A3_11: The city is well managed, A3_12: The management of the City Hall has a long-term vision and a clear goal regarding the administration of the city, by residential area, income and gender*.*

5.2.3.2. Results obtained by means of the Kruskal-Wallis test

By means of the same computer application, Exploratory Public, testing was done using the information obtained from the respondents, for the independent variable A3_5 "The new projects carried out by the City Hall are useful for the citizens", variable that determines the F2 Factor, for the four cities, according to their income, so:
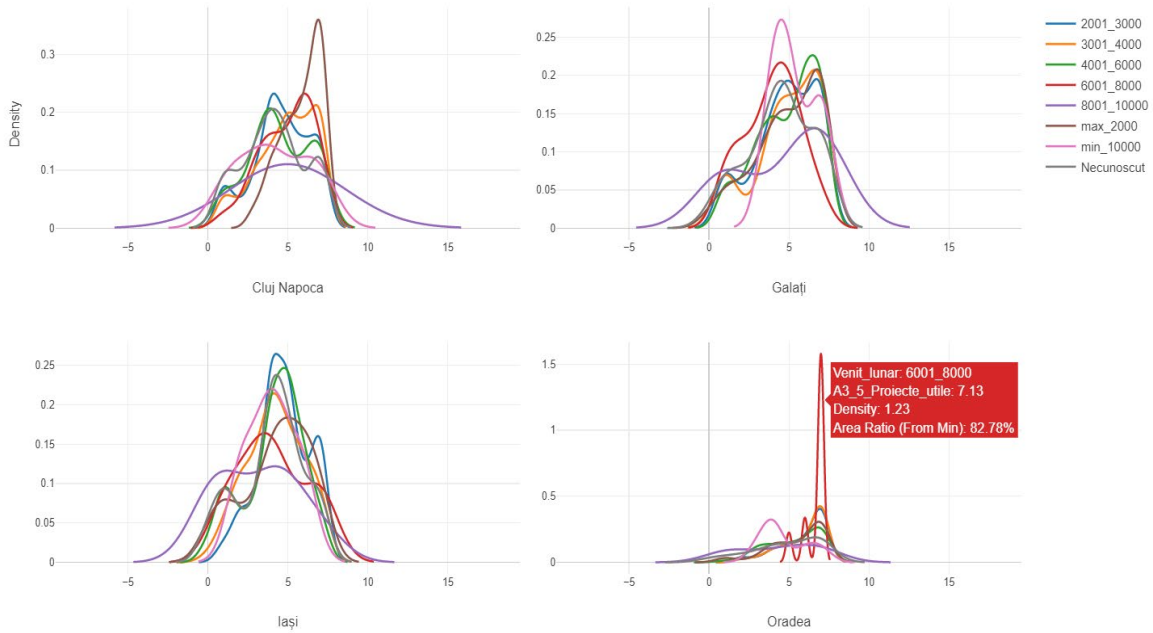
S-applied the Kruskal-Wallis statistical test, for the variable under analysis, and a different P-Value was obtained for the four cities, namely the cities of Galati with 0.4604 and Iași with 0.5641 above the significance threshold, which indicates that there is no significant differences between cities and monthly income, analyzed and below the significance threshold - the city of Cluj-Napoca with 0.01678 and Oradea with 0.0115, which indicates that there are significant differences between the analyzed variables.

The 4 groups formed by the cities were examined, detecting insignificant differences between the citizens' answers for the cities, Galaţi and Iași, and significant differences for the cities of Cluj-Napoca and Oradea.

The statement is also supported by the graphic representation for the 4 cities obtained as a result of the testing, which highlights the distribution of responses by income category, data marked with different colors.

The values of the independent variable A3_5 are indicated on the X-axis of the graph, and the Y-axis expresses the density, which means the distribution of values on intervals. In this case, the distribution in the cities of Iași and Galați differs from the cities of Cluj-Napoca and Oradea, subject to testing.

The graphic representation of the distributions in the following figure and the P-Value confirm the insignificant and significant differences between the cities, the graphs having a relatively similar representation, except for the cities of Iași and Galati.
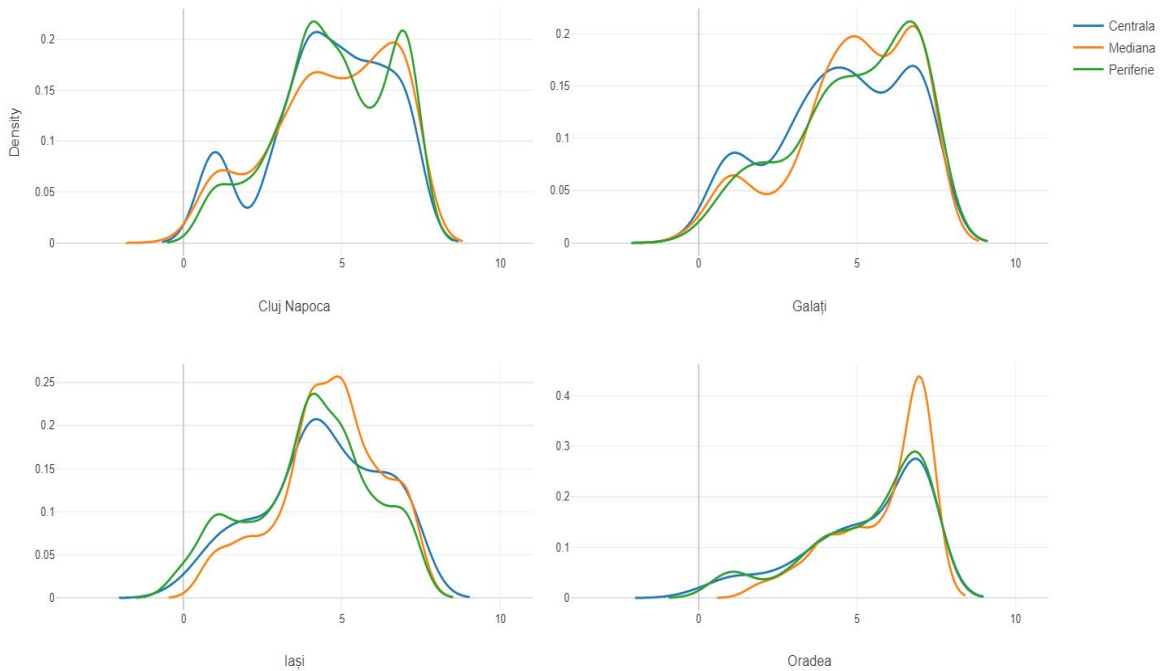
Parameter data distribution A3_5 – Kruskal-Wallis statistical test
Source: Exploratory Public App

The test was repeated for parameter A3_5 "The new projects carried out by the City Hall are useful for citizens" related to the explanatory variable "residential area", for the four cities and a value for P-Value above the significance threshold of 0.05 was obtained.

Since a value higher than the reference value of 0.05 was obtained, then in the case of inhabited areas there are no significant differences for the analyzed parameter.

The distribution of the data is shown in the following figure, the line graph of the inhabited areas, showing a relatively similar shape to them.

Parameter data distribution A3_5 – Kruskal-Wallis statistical test
Source: Exploratory Public App

Following the application of the Krustal-Wallis statistical test on the predominant independent variables in the responses of the responding citizens, the non-existence of significant differences between different demographic characteristics (sex, residential area, monthly income, income per family member) was demonstrated).

Chapter 6. Final conclusions, personal contributions, research limitations and further research directions

6.1. Final conclusions and personal contributions

One of the major changes in public management was the imposition of the concept of performance in public administration, demonstrating that its fundamental objective aims to facilitate the reorientation of the values promoted in the public system, so as to lead to increased performance. Some of the public institutions have developed and implemented performance indicator systems designed to measure the level of satisfaction of public interests, by using a value scale and by identifying the expenses made for this purpose. This mode of evaluation is of the effect-to-effort type. The recent practice and theory in public administration promotes a new approach, which seeks to change the traditional approach, by focusing on the outputs (results) from service-providing institutions that are intended for the needs of the beneficiaries - citizens and the business environment. Against the background of the changes introduced by the increasingly obvious acceptance in practice of the concepts promoted by the new public management, which mainly aims at introducing concepts taken from corporate management, it has reached the point of treating the beneficiaries of public services as clients of public administration.

In the actions taken by the Government of Romania to continue the reform in the public administration, there was a constant increase in the degree of involvement of local communities in the management of issues related to public administration, at the regional and local level. Moreover, through the Government Strategy on accelerating the reform in public administration, Romania fits into the latest trends regarding the evolution of public management, promoting ways of evaluating performance in public administration by adapting the concepts of efficiency and effectiveness to the specifics of the field and by positioning the citizen in the center of the approach, which indirectly links it to public policies. Through the Strategy for the consolidation of public administration 2014-2020, which subscribes to the directions given by the Europe 2020 Strategy, objectives are proposed that take into account both the increased role of citizens as beneficiaries of public services, and the need to increase the performance of management practiced in public administration.

This doctoral research aimed to highlight the evolution of the new public management, whereby public administrations are forced to become more active and take initiatives to measure their own performance. In continuation of these efforts, a way of evaluating the performances of public institutions is proposed, starting from the elements that the beneficiaries of the services evaluate as customers.

The research aimed to develop a theoretical framework and carry out an empirical examination of the relationship between the demands and needs of citizens and the extent to which the public administration responds to them, as a way of evaluating the performance of the public sector from the point of view of end users. The point of view of researchers and practitioners converges towards the acceptance of the fact that the opinion of the beneficiaries of public services must be taken into account, in a very serious way, by the political decision-makers. Also, the researchers claim that citizens are the clients of the public administration, given the fact that they are the main beneficiaries of the services offered, and, therefore, they must be involved in all actions related to the evaluation of the performance of public administrations. The involvement of the beneficiaries of public services in the evaluation of the performance of the provider can lead to changes in the operating mode of the public administration, leading to an increase in the satisfaction of citizens; the changes

are mainly based on political and cultural factors. In addition, the contribution of factors related to politics and organizational culture was considered in order to understand the responsiveness of the public administration. This approach will provide a comprehensive insight into the question of what is important to citizens when contacting public institutions.

To reach this level, the match between what the beneficiaries of public services want and what governments offer them through the public system they administer has been identified and assessed. Thus, the way in which public administrations respond to the expectations and needs of citizens, as the main beneficiaries of their activity, represents a synthesis of business considerations, public policies and human and cultural determinants, which describe the complexity of public administrations. Public policy and cultural aspects best describe the antecedents that influence how public needs are met through service delivery. In this research, politics and administrative culture are interrelatedly analyzed, given the complexity of public administration activity and the factors that determine it.

The research was done on a sample of citizens from four cities-municipalities of Romania, respectively: Iași, Galați, Cluj-Napoca and Oradea, located in three development regions. The representativeness for Romania was taken into account, the creation of premises for comparability between local administrations, as well as highlighting the differences in the way citizens appreciate the activity of local public administrations, the correlation with the socio-demographic characteristics of cities and urban development. According to the ranking of municipalities by ranks, all four cities included in the case study are municipalities of rank I, which means that they are municipalities of national importance, having a potential influence at the European level.

The collection and verification of information from the target audience was done by a specialized market research firm. Also, data provided by bodies and institutions of major importance in economic and social life such as the European Commission and the National Institute of Statistics were used for the research, as well as data and information obtained from practitioners.

The development of the model for the evaluation of the performance of public institutions by the beneficiaries of public services involved the establishment of research directions, the formulation of the methodological framework and the definition of the seven hypotheses, which were tested:

◇ **Hypothesis H1:** Public policies and organizational culture in local public administration influence citizens' beliefs about their satisfaction with interacting with local public administration;

◇ **Hypothesis H2:** Public policies and organizational culture in local public administration influence citizens' beliefs about the response of local public administration to their demands;

◇ **Hypothesis H3:** Public policies and organizational culture in local public administration influence citizens' beliefs about satisfaction with public services offered by local public administration in different areas;

◇ **Hypothesis H4:** The social orientation or the commercial approach of the local public administration influences the citizens' perception of the responsiveness of the local administration to collective (social) needs;

◇ **Hypothesis H5:** The entrepreneurial spirit and the initiation of changes in the local public administration influence the citizens' perception of the responsiveness of the local administration to collective (social) needs;

◇ **Hypothesis H6:** The organizational culture among local public administration officials influences citizens' perception of the local administration's responsiveness to collective (social) needs;

◇ **Hypothesis H7:** The quality of management and leadership in local public administration influences citizens' perception of the responsiveness of local administration to collective (social) needs.

The research includes the experimental application of Machine-Learning XGBoost and Linear Regression algorithms for the four selected cities, Cluj-Napoca, Galați, Iasi and Oradea, in order to validate the hypotheses and classify the four identified factors. Work scenarios were established regarding the dependent variables VD1 - citizens' satisfaction

regarding the interaction with the local public administration, VD2 - the reaction of the local public administration to the citizens' demands, VD3 - citizens' satisfaction with the public services offered by the local public administration in different fields, related to the 12 independent variables structured in four factors. By using predictive analysis models, XGBoost and Linear Regression through the dependent variable VD1 compared to the 12 independent variables, Hypothesis no. 1 of the research. To validate Hypothesis no. 2 and 3 used the same predictive analysis models, but considered the dependent variables VD2 and VD3 and the same 12 independent variables. At the same time, through the same algorithm and predictive analysis models, Hypotheses no. 5 and 7. For the four cities, the factors influencing citizens' perception of how public administrations respond to the expectations and needs of citizens, as the main beneficiaries of their activity, were determined as a synthesis of business considerations, public policies and factors human and cultural in nature, which describe the complexity of public administrations.

At the end, the Kruskal–Wallis statistical test was applied to the predominant independent variables in the responses of the responding citizens, which belong to the previously identified factors, in order to demonstrate the existence or non-existence of significant differences between different demographic characteristics (gender, residential area, monthly income, income per member by family). It was found that there are no significant differences of the respondents on different demographic characteristics, nor on the cities, municipalities, county seat where they live.

For all four cities that were the subject of the analysis, it turned out that the determining factors, according to the respondents to the questionnaire, are **Factor 4_Quality of management and leadership VI4 and Factor 2_Entrepreneurship VI2. Factor 4_**The quality of management and leadership stood out unequivocally, being the first option of the respondents regardless of the development region, city, residential area, etc., highlighting the need for strategic interventions that influence the organization's activity in the long term, leading to the improvement of its performance. Thus, effective performance management is based on both behavioral indices and the expected, assumed and achieved results. It is interesting that the citizens have this opinion in the conditions where, through the eGovernment transition programs, part of the services of the local administrations in the country's large municipalities are being moved online. The general opinion is that the low performance of an organization is solely due to its employees, a fact confirmed by the feedback of some study participants. But the achievements of an organization can be influenced by a series of both internal and external factors, of which we can exemplify: the organizational environment, the management style practiced, the socio-economic environment in which the organization operates, etc.

A permanent preoccupation of the management, of the entire management team at the local level, must be the evaluation of the performance management, thus, an evaluation in a general context and not looking only at certain aspects or specific elements is necessary.

From the theoretical point of view, respectively of the latest trends in public administration research, the results confirm the alignment with the elements that give the new public management its specificity: the quality of management and leadership and the introduction into public administration of concepts taken from the business environment, as a way of increasing the efficiency of its activity. Moreover, from the point of view of practice in local public administration, the results of the study can be interpreted as a reaction of the citizens to the reform of local public administrations in Romania, to the identification of the stage in which Romania is on the road that must be traveled to achieve the assumed objectives, successively, by the Governments of Romania, through the strategies dedicated to the development of public administration. Also, given the fact that the objectives already assumed converge towards increasing the role of citizen consultation in identifying problems in local public administration and their co-optation in the process of finding solutions, the results of this research can guide political decision-makers in formulating the objectives for the strategies that will be developed and will give a more significant national character to the adaptation of the objectives formulated by the European Union, which could lead, in the future, to visible results obtained following the application in the public administration, as well

as to a more efficient use of the funds allocated by the European Union for financing increasing the efficiency of public administration.

6.2. Further Research Directions and Research Limitations

From this perspective, we mention the fact that one of the limits of the research is related to the approach to the evaluation of performance in public administration by consulting citizens; although the research subscribes to the new trends promoted both by specialized literature and by practice - by taking over, constantly, in the European and national strategies for the modernization of the public administration, the evaluation of the public administration is a complex process, which involves taking into account and of other factors, including financial ones. Another limitation of the research is given by the inclusion in the study sample of its national character, the research area stopping at the level of Romania, due to the difficulty of collecting data directly from the respondents from the countries of the European Union. Thus, at the level of political decision-makers, the conclusions of the study can be used mainly for the development of national strategies.

Due to the fact that a company specialized in market surveys was used to carry out the survey, the seriousness of the respondents can be guaranteed, with the certainty that they really checked the answers according to their personal beliefs, without superficiality. For the doctoral research, a composite sample was used following the selection from a list of cities that were found in the panel of respondents of MKOR Consulting, consisting of more than 40,000 members subscribed during the last six years. The research was done on a sample of citizens from four cities-municipalities of Romania, respectively: Iași, Galați, Cluj-Napoca and Oradea, located in three development regions. All these cities-municipalities of Romania: Iași, Galați, Cluj-Napoca and Oradea, are first-rank municipalities and poles of national or regional development, in accordance with the hierarchy of municipalities by rank, having a potential influence at the European level. On the one hand, the study benefited from the opinion of some residents of some areas considered developed and of interest according to the strategies of the European Union, the citizens' opinion/answers being based on personal experience, acquired in the municipality where they live. There is a possibility that residents of small towns may have a different opinion, which is another limitation of the study.

Regarding the sample, by size and age and gender structure checks, it has statistical relevance. The inclusion of large cities with a large mass of the target audience made it easier to meet statistical relevance requirements, but led to limitations in other sample characteristics. Thus, the characteristics that define residents of large cities may differ from those of residents of small towns, which could highlight other aspects of the research. Moreover, the public administrations of small cities are likely to be much less dynamic and then citizens may be less positive in their evaluation, or have many more unresolved problems and see the solutions in a different way.

From the perspective of the potential limitations of the study, we conclude with a proposal designed to support doctoral students, who, in order to carry out research works of the type of comparative analyses, at national or European level, between different states, are in great need of institutional support from on the part of the universities where they attend doctoral school courses, or to create a tradition in accessing research funding programs, national or international. The proposal is for the benefit of all those involved in the research activity, cooperation in this field facilitating the work of doctoral students and giving them the opportunity to make truly remarkable discoveries, which can be successfully used including by political decision-makers, at national or European level.

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