

VÁCLAV KUPEC¹, ALP AYTAÇ², YUSUF KURT³

DESIGN OF AN AUDIT UNIVERSE: LET'S AUDIT CHALLENGING PROCESSES OF MODERN PUBLIC ADMINISTRATION

Abstract

The continual transformation of public administration gives rise to new risks. What are the risks and how to mitigate them? The answer to these questions is the application of the concept of audit universe. An audit universe is a collection of selected areas of public administration that need to be regularly audited for potential risks, compliance with the law, and strategic goals. It is of importance to society as it promotes efficient management of public administration processes and supports transparency and responsibility in the management of public resources. The article aims to design a methodological framework for the implementation of an audit universe that will integrate selected data analytic approaches, comprehensively identify major risks, and define areas for subsequent auditing of public administration. To meet the aim, the methods of criteria-based selection of organizational units, key processes, identification, and assessment of risks are used together with text analytics. The results show an audit universe and give an overview of key areas of public administration for further auditing, which will be used as a basis for planning and efficient risk management. An audit universe will also help to determine the granularity of the audit, i.e. the extent and detail in which the selected processes should be audited. This is supplemented with audit diagnostics that present sets of risk subprocesses for the audit universe and further auditing. The advantage is direct facilitation of a systematic and efficient approach to auditing of public administration, support for the necessary transparency, and responsibility for the optimization of public resources

Key words: Audit, Audit Universe, Public Administration, Risk

1 Faculty of Social Sciences, University of St. Cyril and Methodius in Trnava, Bučianska 4/A, 917 01, Trnava, Slovakia, email: vaclav.kupec@ucm.sk, ORCID iD: <https://orcid.org/0000-0003-3731-994X>..

2 Faculty of Economics and Administrative Sciences, Bursa Uludag University, Görükle Kampüsü 16059 Nilüfer/Bursa, 16130, Bursa, Türkiye, email: alpaytac@uludag.edu.tr, ORCID iD: <https://orcid.org/0000-0003-4949-4884>..

3 Özalp Vocational School, Van Yüzüncü Yıl University, Bardakçı District, Tuşba/Van, 65090, Van, Türkiye, email: yusufkurt@yyu.edu.tr, ORCID iD: <https://orcid.org/0000-0002-1071-4205>..

1 INTRODUCTION

The development of our society is continually transforming many social paradigms (Kupec, 2023). This development affects also public administration, or in other words the administration of public affairs (Erneker, Pána, 2017). It can be proved that public administration is being transformed by digital transformation, increased transparency, and support of civic participation (Karpa et al., 2023), and other trends. These trends, together with the ongoing implementation of other phenomena that currently include artificial intelligence, contribute to a predictive and proactive model of public administration. At the same time, public administration must adapt to other trends, which are often risky (Yessimova, Danyshbayev, Yergaliyev, 2024). The presented transformation indicates a shift from traditional bureaucratic systems to modern public administration systems that are better suited to the needs of the citizens and society.

The continual transformation of public administration gives rise to paradigms the aim of which is to manage the trends and provide solutions to the challenges of modern public administration that put emphasis mainly on efficiency, productivity, and democratic values (Bryson, Crosby, Bloomberg, 2014). The transformational, or modern paradigms support the active participation of citizens, the involvement of stakeholders, and joint management through various processes, such as deliberative democracy, electronic democracy, and participative budgeting (Bingham, Nabatchi, O'Leary, 2005). These paradigms reflect the impact of globalization and neoliberalism on public administration and lead to reforms that are aimed at targeted improvement of the provision of public services and satisfaction of citizens (Acar, 2020). This development references the continual enrichment of public administration (Kupec, 2023) and its adaptation to the evolving needs of society.

The abovementioned developments of our society (Draková, 2024) as well as a continual transformation of public administration include existing, evolving, and new risks (Ključnikov et. al., 2025). They mostly have the attributes of social, economic, technological, and environmental threats, which calls for proactive strategies of mitigation to ensure social safety (Khadzhyradieva et al., 2021) at both national and international levels. Proactive strategies aim to minimize the impacts of the threats on society (Zhanseitova, Tleuberdiyeva & Auelbekova, 2022), which may affect the setting of public policies. Current research also emphasizes the need for further scientific analysis of these topics. Risks are identified and comprehensively managed using the techniques of risk management (Sidorova et al., 2022) that can mitigate risks.

Risk management has greatly evolved since Markowitz's statistical model. Today, risk management includes a wide range of sophisticated techniques, including risk value calculation, conditional value at risk, and load testing

(Alexander, 2009). In line with current trends, risk management has become more data-oriented. It also digitally combines traditional subjective assessment (Švec et al., 2024) with other analytical methods, such as Bayesian networks, to create a more comprehensive assessment of risks. Subsequently, risk management is understood as a complex of conduct and thinking that aims to mitigate or eliminate risks (Vávrová, 2014). Thus, risk management is one of the specialized activities that are necessary for the supervision of strategic policies (Ayuningtyas, Harymawan, 2022), which can also apply to public administration policies.

Risk management is connected to auditing in its application, primarily thanks to risk analysis (Kupec, 2018). Here it concerns the so-called risk-based audits. Within the context of the ongoing transformation, auditing plays a crucial role in risk mitigation (John, Sharma, 2023). At the same time, auditing is defined as a scientific discipline that monitors selected processes, registers results, and proposes action steps (Müllerová, 2013). Auditing in public administration is a key element for the optimization of processes and ensuring efficient management. It includes mapping and analyzing organizational processes to identify areas for improvement and rationalization. Audits assess selected risks and focus on threats to efficiency, effectiveness, and economy (Cassel, 2014). As public administration faces increasing pressures to prove efficient management of resources, auditing is an extremely useful tool in the public sector.

What risks does public administration face, and does it need to be audited? An answer to these questions may be the concept of an audit universe. “The audit or risk universe identifies all risks that could be subject to audit. The result is a list of possible audit engagements that could be carried out.” (Murdock, 2018, p. 53) The audit universe is, thus, a comprehensive framework for planning and performing audits. According to some theories, it includes data analysis and approaches based on risk assessment, and in this way, it goes beyond the traditional methods of classical management. The audit universe is based primarily on data analytics, from planning to reporting, and helps detect hidden threats (Cangemi, 2014) to public administration. The concept of the audit universe goes beyond the traditional performance of audits. Currently, the audit universe is an inherent part of modern auditing and allows for a more comprehensive perspective of the audited environment.

Thus, we can conclude that the current development of society has been comprehensively transforming public administration, which responds to general modern trends. The implementation of technology such as artificial intelligence allows for more efficient and proactive models in public administration. The above transformation may also improve selected public services. Public administration must at the same time respond to new risks that have emerged in the public space due to the transformation. The risks have aspects of social, economic, technological, and environmental threats, which calls for the application of

proactive strategies to mitigate these risks. For this, risk management together with modern auditing methods and audit universe approaches can be used, since the audit universe provides tools for comprehensive planning and identification of risks in public administration. These approaches, in turn, help improve public policies and the satisfaction of citizens.

Modern public administration and its transformation towards digital, transparent, and participative models face risks that are linked to various threats and require advanced methods of risk mitigation. The problem (P1) relevant for scientific and professional solutions is, thus, an innovative implementation of the audit universe in public administration that would include a comprehensive risk analysis for the identification of hidden threats to public administration efficiency. The aim (A1) of the paper is, thus, to design a methodological framework for the implementation of the audit universe that will integrate selected data analytic approaches, comprehensively identify major risks, and define areas for subsequent auditing of public administration. The contribution (C1) will reflect modern processes in public administration, including responsible management, transparent decision-making, and better use of resources, which will create a mix of positive impacts on society.

1 LITERATURE REVIEW

A literature review presents the author's selection of literature based on a literature search and content analysis of the selected topics. A literature search facilitates an understanding of the current state of scientific knowledge (Machi, McEvoy, 2012) and a synthesis of individual theories (Bell, Bryman, Harley, 2011). A content analysis subsequently allows a multi-criteria selection (Weber, 1990) and presentation of theoretical results (Gavora, 2015). The PRISMA 2020 methodology in the Web of Science, Scopus, and ProQuest databases was employed for the areas of "Audit", "Audit Universe", "Public Administration", and "Risk" which constitute the fundamental content of the present review. Relevant texts were selected from scientific disciplines that concern exclusively "Economics", "Law", "Management", and "Public Administration". The selection was defined by the time interval (2015–2024), the number of citations, and the publication of documents.

1.1 Public Administration

The application space of the present paper is public administration. How is public administration perceived or defined in current theories? In the Czech Republic, the study of this area is inspired by American and European schools of thought (Potůček et al., 2017). Public administration is a prominent

area of study as the pressure to enhance its efficiency increases. Efficient and modern public administration is understood as a service to citizens where efforts to implement reforms are present (Marišová, Lichnerová, Machyniak, 2021). Public administration represents a basic subsystem of our social system (Matei, Antonovici & Săvulescu, 2017). This system serves the satisfaction of individual and collective needs of citizens in society. The given system of public administration is performed by the state and the bodies are dependent on it (Szynowski, 2019).

“In a society organized by state, public administration refers to the administration of public affairs that is implemented as the exercise of executive power in the state. This executive power is mostly characterized as public authority that is implemented primarily by the state.” (Erneker & Pána, 2017, p. 11). Public administration can be interpreted using the abovementioned social, economic, technological, environmental, and other perspectives (Potůček et al., 2017). Another interpretation of public administration is that it is a bridge connecting society and politics (Feka & Abdullai, 2019). Public administration in its modern understanding is thus a highly complex organism. This complexity arises from the very character of the public sector, which mediates the provision of services and ensures social self-administration (Bruno, 2018), which contains potential risks.

1.2 Supervision of Public Administration

The elimination of potential risks or supervision of public administration is helped by Supreme Audit Institutions (SAI) or Supreme Audit Offices (SAO). “The Supreme Audit Office performs the audit of public spending from the state budget. Thus, the audit comprises a formal audit (accounting and documentary) and a content audit (economic), the aim of which is to establish how economically, efficiently, and effectively the public spending was handled.” (Ochrana et al, 2010, p. 41). The mandate of the supreme audit offices to audit the economy, efficiency, and effectiveness is reflected in new public management. The approach of SAIs/SAOs differs in different countries, which is given by their constitutional position and administration culture (Pollitt & Summa, 1997). Regardless of the differences in their audit activities, the comparison of these institutions will detect similarities in their historical trajectory and institutional development (Hudáková Stašová, 2019).

Supreme audit institutions, by delegation, ensure the responsibilities of the public sector through different audits. They include audits of financial statements, audits of compliance with regulations, and performance audits (Cordery & Hay, 2019). Comparative studies have detected the abovementioned differences in the extent of the audits, the number of audited entities, the focus of the audits, and the types of the performed audits (Hudáková Stašová, 2024). Supreme audit offices as independent state bodies audit, in particular, the use of financial resources and

property of the state, local self-administrations, and, finally, the resources provided by the European Union. The audit activities are performed by an audit activities plan (Helešiová, 2022). An audit activities plan is a fundamental document for the performance of auditing across the different areas of public administration.

1.3 Auditing and Audit Universe

An audit universe is a basic paradigm for advanced auditing, and it can be claimed that it includes a complete range of potential audits based on risk assessment and their significance. An audit universe serves as a basis for the preparation of annual audit plans that are usually divided into more detailed quarterly plans (Cangemi, 2014). “The audit universe should be a full list of all possible audits even if there is no intention currently (or insufficient resources) to audit them all. This should be listed in a table or spreadsheet.” (Nzechukwu, 2016, p. 32) It can be concluded that an audit universe is a comprehensive list of all potential areas, processes, functions, projects, and entities in an organization that can be audited. It serves to identify risks and plan audit activities, and it documents key processes and risks of the organization. It is an important tool for the prioritization of audit activities.

“The audit universe consists of the complete range of potential audit activities and auditable entities. It generally includes programs, initiatives, units, risks, and activities an organization is engaged in, exposed to, and that collectively contribute to the achievement of the organization’s objectives.” (Murdock, 2018, p. 53) This quote can be applied *mutatis mutandis* to processes, organizations, or the whole public administration. The definition of the audit universe assumes that it is a priority approach of the audit function, with a list of all potential areas of audit. The creation of an audit universe documents key processes and risks (Senft, Gallegos, 2010), and in this way, it is a comprehensive list of all potential areas, processes, functions, projects, and entities in an organization that can be potential subjects of audit. An audit universe is a basis for planning audits, and risk identification, and it initiates the implementation of audits as such.

1.4 Let’s Audit

If an audit is designed around the idea of risk mitigation, it is referred to as a risk-based audit. “It is a process, an approach, a methodology, and an attitude of mind rolled into one.” (Griffiths, 2005, p. 5) The genesis of risk-based audit is methodologically rooted in the verification of internal processes in organizations, and it can be universally and globally used also in public administration. A risk-based audit is an approach that focuses on areas of risk. It aims to increase responsibility by ensuring transparency, and verification of the selected control

mechanisms. A risk-based audit represents a shift from a directive activity to an activity that contributes to risk management and the achievement of broader aims (Mohammadi, Kalali, Najafzadeh, 2014). A researched audit and its professional approaches require strong support from the stakeholders, which in public administration refers to the setting of the political administration and its performance.

Risk-based audit in public administration allows auditors to perform better-targeted and more efficient audits that consider major risks (Mohammadi, Kalali, Najafzadeh, 2014). Based on this methodology, the audit resources can be efficiently managed. The implementation of this type of audit in the public sector is affected by such factors as internal processes, the engagement of top management, or the frameworks of the performed policy. "The essence of risk-based audit is therefore customer-focused, starting with the objectives of the activity being audited, then moving on to the threats (or risk) achievement of those goals and then to the procedures and processes to mitigate the risk." (Griffiths, 2005, p. 6) In summary, this type of audit is first a comprehensive process that requires a detailed design and implementation, and its benefits include better risk management and control, including in public administration.

1.5 Final Questions?

The literature review (performed using the PRISMA 2020 methodology) focuses on methodological and theoretical approaches to public administration, the audit universe, the application of risk-based audits, and their symbiosis. Public administration is defined as a comprehensive system oriented to efficiency and satisfaction of the needs of the citizens. The audit universe provides a framework for the planning of modern audits, identification of risks, and prioritization of activities. A risk-based audit subsequently allows targeted risk management and increases responsibility and transparency in the entire public sector. Based on the abovementioned literature review, two questions (Q1 and Q2, see below) can be formulated for solution:

Q1Descriptive: What potential risks in public administration can be part of the audit universe?

Q2Explonatory: What auditing approaches and methods can be used to verify the risks in public administration?

2 RESEARCH METHODOLOGY

The research focuses on the potential risks that occur in public administration. The detected risks, embedded in the audit universe, can be better

audited and subsequently mitigated. Risk is a natural part of human society (Kupec, 2018) and it is, therefore, approached in the following way: “It indicates a potential negative effect on an asset that may derive from given processes in progress or given future event. In the common language, the risk is often used as a synonym for the probability of loss or danger.” (Hillson, Murray, Webster, 2007, p. 5.) This theory confirms that risks are present in all environments that human society finds itself in (Kupec, 2018). “Risk is a measure of the probability and consequence of uncertain future events.” (Yoe, 2012, p. 1) Methodologically, potential risks can be calculated using the following formula (Formula 1), which combines probability and consequence:

Formula 1. Risk Measurement

$$\text{Risk} = \text{Probability} \times \text{Consequence}$$

Source: Yoe, 2012, p. 1.

The measured risks can be (before being embedded in the audit universe) a part of a risk analysis with the following methodology: “The risk analysis comprises risk identification and estimation.” (Andersen, Garvey, Roggi, 2014, p. 75) Methodological processing of the risk analysis starts with the abovementioned formula, which measures probability and impact or consequence. “The first is its occurrence probability. The second is its impact (or consequence) on an engineering system project.” (Garvey, 2009, p. 4). A risk analysis is a process of defining threats, the probability of their occurrence, and their impact on public assets. The determination of risks and their seriousness build on the definition and further develops the analysis in two ways – the first is the identification of risks, the factors that have positive or negative impacts; the second is the determination of the extent of the risk from the point of view of its impacts (Fotr & Hnilica, 2014).

A risk analysis is primarily a methodological process, the aim of which is to understand the substance of the risk and its characteristics. It includes a detailed consideration of the uncertainties, sources of risks, probability, events, scenarios, control mechanisms, and their effectiveness (Djenadic et al., 2022), which falls into the framework of the audit universe, in this case within public administration. The application possibilities of a risk analysis include the CRAMM method, the OCTAVE method, or the Delphi method. “The Delphi technique is a procedure to obtain a reliable consensus from a group of experts.” (Tarantino, 2011, p. 58) This method contributes to the risk analysis, assesses the sources and causes of risks, the impacts and probability of occurrence of the impacts for the identified risk events, and the effectiveness of the available control. In this situation, the level of risk can be determined by integrating the impacts and the probabilities of risk (Bakhtavar et al., 2021).

The subject matter draws on the hypothetical presumption that processes in public administration contain risks. A risk analysis can be performed by interviews and determination of the probability of occurrence and extent of impact of the individual risks. The interviews and the determination of the probability of occurrence and impact of the individual risks can be performed effectively using the CAWI method. The results then show the evaluation of risks on a scale from least frequent occurrence to most frequent occurrence and the assessment of the impact of the individual risks on a scale from least expensive occurrence to most expensive occurrence. Based on the potential risks that have been determined in this way and their individual calculated data, a categorization of risks can be proposed based on the significance together with a graphical depiction in the form of a heat map of risks. An analysis performed in this way systematically determines the substance of the risks and their characteristics, which helps to manage them (Kupec, 2023).

The diagnostic auditing model is then applied as the basic methodological approach (Kupec, 2023). The primary part of this model is focused on risks and risk processes in public administration, and it categorizes and determines their risk significance. The model proposes as the basal step in the audit the determination by the relevant analytics of the risks that will be subsequently verified based on the extent of occurrence and frequency of impact. The model systematically provides the basic sets of major risks and at the same time, it categorizes the individual risks also based on their significance, thanks to which it provides a methodological tool not only for auditors and their work (Kupec, 2023). The categorized risks in public administration are the following: the first category includes critical risks, the second category includes serious risks, the third category includes medium risks, and the fourth category includes moderate risks. See the categorization table below (Table 1).

Table 1. Categorization of risks

Critical	Risks of expenditures
	Risks of revenues
	Risks of cost-effectiveness
	Risks of financial operations
High	Risks of efficiency
	Risks of compliance (external regulations)
	Risks of legality
Medium	Risks of effectiveness
	Risks of relevant regulations
	Risks of compliance (internal regulations)
Low	Risks of fulfilling resolutions
	Risks of handling complaints
	Risks of handling petitions

Source: Kupec, 2023, p. 97; Own processing.

Based on risks that have been determined in this way, a comparison is made with the results of audit reports for the period of the last three full years (from 2021 to 2023) by the selected Supreme Audit Institutions (Supreme Audit Office

of the Slovak Republic), which at the same time expands previous research. For selected audit reports, the audited areas are examined and subsequently calculated – it can be hypothetically deduced that the selected audited areas have already undergone a risk analysis (see granularity (Kupec, 2023)) and are therefore significant. At the same time, they can also be used for a universal audit universe. Because of the introductory theses and the determination of the aim (A1), the subsequent literature search, and the design of questions (Q), a hypothesis (H1) can be formulated:

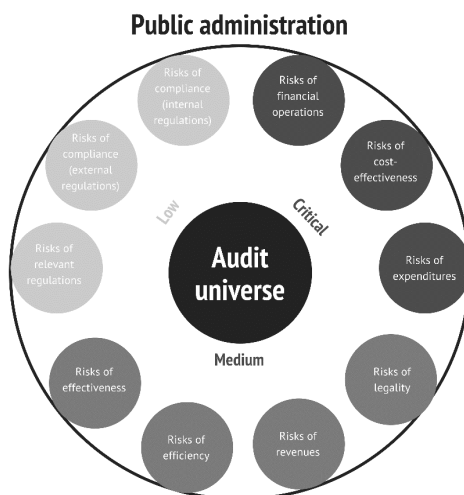
H1: If the data in audit reports can be used, areas for the subsequent auditing of public administration can be determined within the framework of the audit universe.

3 RESULTS AND APPLICATION NOTES

To analyze the audit reports of the Supreme Audit Office of the Slovak Republic, the tab “Audit Reports” on the official website was analyzed, where all reports for 2021 through 2023 were selected for the analysis. In the reports, the introductory texts on the summary and assessment of the audit results were analyzed. Using artificial intelligence, keywords related to the selected risks were searched for in these sections in the reports; the keywords are defined in Methodology, Chapter 2 (for reasons of efficiency, only critical, serious, and medium risks were included; moderate risks were not included). Thus, it concerned specific risks, or the focus on specific areas of expenditure, income, economy, financial operations, efficiency, legal regulations, legality, and effectiveness. The registered results subsequently show how often the given areas are checked in audits, which at the same time provides the basis for the construction of the audit universe.

The audit universe is constructed based on full-text analytics of 88 audit conclusions. The conclusions were issued in 2021 (25 conclusions), 2022 (34 conclusions), and 2023 (29 conclusions). The results determine the threats to public administration (Smejkal & Rais, 2013, p. 95) and the potential risks (Fotr, Hnilica, 2014, p. 16). The resulting model (Q1) of the audit universe depicts the expected occurrence of risks from least frequent to most frequent, which at the same time shows the impact of the individual risks from least expensive to most expensive (see Picture 1). This fulfills the task formulated for this paper and its aim, as the model of the audit universe should include the whole range of potential audit activities and auditable entities. It must also include the programs, initiatives, units, risks, and activities (Murdock, 2018, p. 53) that are included in the process of transforming public administration.

Picture 1. Audit universe



Source: Own processing.

3.1 Audit Universe and Risk (Q1)

If the result is a model of the audit universe, it must be linked to practice. The abovementioned areas, or risks, can be included in the planned audits. Audit planning can be divided into a strategic plan (3 to 5 years) which covers all areas of public administration. The strategic plan can be further divided into an annual plan (1 year), which covers selected areas of public administration. The annual plan can be further divided into an operational plan (parts of the year), which covers the individual areas of public administration. Based on the audit testing and audit management, it can be recommended to link the strategic plan to, for instance, the term in office in a public administration body. This means that the strategic plan or audit universe will be divided into the years of the parliamentary term. At the same time, it is advisable to prepare the annual plan in such a way that it contains both the demanding areas of the audit universe and the less demanding areas, to ensure the balance of the audit process.

The practical verification of risks in the audit universe focuses on the following audit steps. After the audit plan has been approved, mainly based on predefined criteria, such as scoring matrices that divide the risks. The area of critical risks, such as the abovementioned finance and expenditures, have the highest priority in the audit, particularly for the strategic plan, while less serious risks such as the abovementioned regulations and compliance are less prioritized. To understand the links between the risks, a map of risks can be drawn that will visualize the key areas and enable performing cluster analysis of the risk factors. Based on these analyses and visualizations, concrete audits are proposed. This

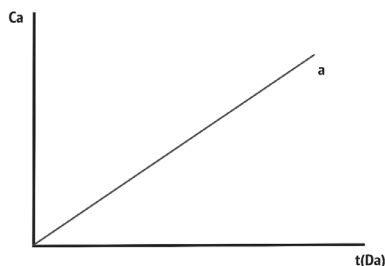
audit process ensures efficient long-term risk management and adaptation to newly emerging threats in public administration.

3.2 Audit Universe and Granularity (Q2)

The audit universe works with selected risks and subsequently also helps to determine the granularity of the audit, i.e. the detail and breakdown to which the selected public administration processes should be audited. These processes can be broken down repeatedly (Kupec, 2023) and fractal theory can be applied to them (Jančaříková, 2019) because when the process is enlarged, a self-similar structure of the process is created (Zhao et al., 2022) regardless of the scale of magnification. It is then possible to design a process based on the abovementioned audit universe and subsequently determine the necessary degree of granularity for it. But how to determine the necessary level of granularity? Or, in other words, how can we determine when the breakdown of the process is detailed enough to efficiently detect potential risks? The answer can be found in economic laws that symbiotically mix risks at the individual levels of processes and the time costs of auditing them.

It can be assumed that at each lower level of the process the risk, or the impact of the costs of the risk, is lower. Similarly, it can be assumed that the risk identification at each lower level of the process generates relatively higher costs. The optimum level of the necessary granularity (a) can therefore be read at the intersection of the axis of time (x) and costs and the granularity axis (y) and the level of detail of the process breakdown (see graph 1). It can, therefore, be recommended to determine the level of process breakdown in the preparation of individual audits, justify the determined level, and make proper note of it. Subsequently, it is advisable to determine the optimum granularity of the process according to the impacts of the risk and the potential level of cost of risk. The intersection of the time axis (x) and granularity axis (y) will then help us determine the required level of granularity of the audited process. The entire process must be recorded methodologically and discussed with the audited entity.

Chart 1. Audit granularity



Where:

a = Audit granularity

t = Time; Da = Audit detail

Ca = Audit cost

Source: Own processing.

3.3 Audit Universe and Diagnostics (Q2)

When it is clear from the audit universe which areas or risks should be audited and at what level of granularity, it is recommended to focus on what to audit. “Contemporary audits, while performed using modern approaches, are demanding in terms of time, personnel, and finance.” (Kupec, Čapošová, Písař, 2021, p. 25). It is, therefore, recommended to use the method of diagnostic audit. In the current turbulent time when the costliest commodity is the auditor’s time, it is reasonable to use the diagnostic approach first. This approach helps to sort out and determine the process level up to which the audit will be performed and define the strategic direction of each audit. Thus, the following thesis concerns diagnostics that are borrowed from medical science and can diagnose highly sophisticated problems and health risks based on universal checks (Kupec, 2023).

Audit diagnostics presents sets of risk subprocesses that are repeated for the main processes. They include “time”, “implementation” and “workers”. These sets can be further divided by finer classification into individual points that are called diagnostic points. In the “time” group, this includes the time of the start, the period of duration, and the time of the termination. In the “assessment” group, it includes efficiency, economy, or effectiveness. Finally, the “implementation” group, includes the sequence of processes, their legality, and financing. The group “workers” is not further divided, and it intersects with all the other three sets. The approach serves for a well-founded determination of the primary diagnostics of the audited processes. The proposed diagnostic sets of time, assessment, implementation, and workers are repeated fractally at each level of the self-similar process (Kupec, 2023), which can be used in public administration.

3.4 Audit Universe and Practice (Q2)

This section can be summarized based on the above results and the application notes. An audit universe can be used for modern auditing to audit challenging processes in public administration that undergo reforms. In this case, the audit universe presents a list of selected areas of public administration that require regular auditing about potential risks, compliance with law, as well as strategic goals. The results present an overview of key areas in public administration that are designated for further auditing, which, first, serves as a basis for planning and second, for efficient risk management. The advantage is direct facilitation of a systematic and efficient approach to auditing of public administration, support for the necessary transparency, and responsibility for the optimization of public resources. Thus, audit in public administration can be applied based on the following methodological framework.

The audit universe presents a proposal of areas and risks that can be audited. The risks can be included in the planned audits and subsequently checked. It is advisable to prepare the annual plan so that it contains both the demanding areas of the audit universe and the less demanding areas, to ensure the balance of the audit process. The audit universe also helps to determine the granularity of the audit, i.e. the detail and breakdown to which the selected public administration processes should be audited. Thus, it is advisable to determine the optimum granularity of the process in the preparation phase of the individual audits based on the potential impacts of risk and the potential cost of risk. After it has been determined based on the audit universe what areas should be audited and with what granularity, it is advisable to focus on what should be audited. The answer to this question is provided by audit diagnostics, which provides the sets of risk subprocesses. They include “time”, “assessment”, “implementation” and “workers”.

4 DISCUSSIONS

The present paper studies in detail the concept of the audit universe in public administration, emphasizing a thorough analysis of the basic principles and their application in practice. The results of the presented research open up space for discussion that should include not just a critical assessment of the obtained findings, but also a deeper reflection of their relevance in terms of current theories and approaches that dominate the current discourse regarding audit and management of public institutions. The key aspect of the discussion is also the identification of potential limits in the research process, which includes issues with methodology, deficiencies in data sources, or limitations related to the interpretation of results. Conclusions formulated in this way can serve not

only as a basis for the formulation of recommendations aimed at eliminating the mentioned shortcomings but also as a starting point for future research projects.

The whole text and its basic paradigms draw on theories of the development of our society in the context of transformation processes in public administration (Erneker, Pána, 2017), which presents new risks (Yessimova, Danyshbayev, Yergaliyev, 2024). Their mitigation requires strategies to ensure social safety (Khadzhyradieva et al., 2021). For this, risk management can be used (Sidorova et al., 2022), which mitigates or eliminates the given risks (Vávrová, 2014). Risk management is connected to audit (Kupec, 2018) in the form of the so-called risk-based audit. Audit in public administration is a key element for the optimization of processes and ensuring efficient management (Cassel, 2014). The audit verifies the risks embedded in the audit universe, which is a comprehensive framework for planning and executing audits (Cangemi, 2014), which does not need to be discussed.

The research of the audit universe faces certain limitations that might affect the accuracy and relevance of the presented results. This may be addressed in the following way. The primary limitation is the difficulty in obtaining data: Public administration has available large data sets, the accessibility of which is limited by various barriers – the data used in the audit results were extensive. The secondary limitation is the purity of data: The data used in public administration contain errors caused by various factors – the data used might include certain errors. The tertiary limitation is the assessment of the obtained data: The assessment often depends on the employed methods that might not be accurate – the data might have been interpreted inaccurately. These limitations must be considered responsibly in the planning and implementation of further research projects as well as in the practical application of the audit universe.

The presented discussion also emphasizes the importance of an interdisciplinary approach that allows the transfer of knowledge among different areas of public administration and contributes to a better understanding of the concept of the audit universe. It is a professional tool for the development of audit theories as it provides a systematic framework for the identification, analysis, and assessment of risks, processes, and resources in the entire public administration. The given concept makes it possible to study the complex dynamics of public administration. Thanks to its interdisciplinary nature, the audit universe supports the combination of economic, legal, and social perspectives, and in this way, it contributes to a deeper understanding of how to optimize public institutions in the context of increased expectations of society and globalization. The research in this field helps enrich the theoretical framework of public administration and strengthen professional practice, thus enhancing the interconnectedness between the academic community and auditors.

At the same time, the audit universe contributes to practice in public

administration as it provides a complete framework for its professional management. It allows the verification of risk areas that require systematic attention and the setting of priorities in audits, which leads to increased source efficiency. In practice, this concept supports the introduction of modern approaches that improve audit processes and their results. Thanks to the methodology proposed above, public institutions can respond more easily to the public administration that is in the process of transformation. The audit universe also helps to better coordinate the individual organizational units in public administration and creates a space for the introduction of individual standards and audit approaches that increase their professionalism. Its practical contribution lies also in the strengthening of the prevention function of audit approaches, which facilitates the timely detection of potential problems and their solution before any damage is caused.

Further research and the development of the audit universe may focus on the development of the current methodology. One of the potential academic directions is the integration of advanced data analyses and artificial intelligence, which will enable the automation of risk identification. This approach may significantly contribute to the ability to predict problems and adapt audit approaches to the specific needs of public administration. Another possible direction is the broadening of the interdisciplinary approach to audit that will enrich the audit universe with findings from behavioral sciences, psychology, or environmental economics, which would enable a more comprehensive assessment of factors impacting the performance of public administration. Other directions include the development of the audit universe for the so-called continuous audits that would replace the traditional periodical audits and enable continuous monitoring of public administration. These directions suggest that the audit universe will play an irreplaceable role in the modernization of the entire public administration.

CONCLUSION

Based on the performed analytics it can be concluded that the current trends are transforming public administration towards digital, transparent, and participative models of administration that require tackling complex risks linked to technological, economic, social, and environmental threats. The implementation of technologies such as AI enables more efficient management of public administration and a shift towards a proactive approach that includes risk prediction and mitigation. Advanced methods of risk management and modern audits, particularly the concept of the audit universe, play a key role in this transformation. This framework enables a systematic risk analysis based on data analytics, which contributes to the improvement of public policies and efficient use of resources. The paper highlights the importance of an advanced approach to risks, which includes identification, quantification, and categorization of risks into

critical, serious, medium, and moderate risks. The methodology includes selected techniques, such as the Delphi method, the results of which may be visualized as heat maps of risks. The practical application can be demonstrated in the analysis of audit conclusions of a selected SAI, the results of which identified key risks of public administration and defined the potential areas for audit. The resulting audit universe presents risk areas that can be audited (Q1). At the same time, it helps determine the granularity of the audit, i.e. the detail in which the processes in public administration should be audited (Q2). Finally, it specifies what should be audited by audit diagnostics that presents sets of risk subprocesses (Q2). This approach optimizes audit processes and at the same time increases transparency, efficiency, and responsibility of public administration towards the public. The resulting audit universe framework presents a fundamental tool for modern risk management and supports strategic decision-making in public administration

REFERENCES

1. ACAR, E. (2020). New Public Administration Understanding and Reform Effects as Products of Neoliberal Management Concept. In *Comparative Approaches to Old and New Institutional Economics*, IGI Global, pp. 133-156. <https://doi.org/10.4018/978-1-7998-0333-1.ch008>
2. ALEXANDER, G. J. (2009). From Markowitz to modern risk management. *The European Journal of Finance*, Vol. 15, No. 5-6, pp. 451-461. ISSN 1466-4364. <https://doi.org/10.1080/13518470902853566>
3. ANDERSEN, T. J., GARVEY, M., ROGGI, O. (2014). *Managing Risk and Opportunity: The Governance of Strategic Risk-Taking*, Oxford: Oxford University Press. ISBN 978-0-19-968785-5.
4. AYUNINGTYAS, E. S., HARYMAWAN, I. (2022). Risk Management Committee and Textual Risk Disclosure. *Risks*, Vol. 10, No. 2, pp. 1-15. ISSN 2227-9091. <https://doi.org/10.3390/risks10020030>
5. BAKHTAVAR, E. et al. (2021). Fuzzy cognitive maps in systems risk analysis: a comprehensive review. *Complex & Intelligent Systems*, Vol. 7, No. 2, pp. 621-637. ISSN 2199-4536.
6. BELL, E., BRYMAN, A., HARLEY, B. (2011). *Business Research Methods*. Oxford: Oxford University Press. ISBN 978-01-9880-987-6.
7. BINGHAM, L. B., NABATCHI, T., O'LEARY, R. (2005). The New Governance: Practices and Processes for Stakeholder and Citizen Participation in the Work of Government. *Public Administration Review*, Vol. 65, No. 5, pp. 547-558. ISSN 1540-6210. <https://doi.org/10.1111/J.1540-6210.2005.00482.X>
8. BRUNO, A. (2018). The “organizing” paradigm in public administration:

- learning by focusing on customer orientation. *Journal of Workplace Learning*, Vol. 30, No. 3, pp. 186-198. ISSN 1366-5626.
9. BRYSON, J. M., CROSBY, B. C., BLOOMBERG, L. (2014). Public Value Governance: Moving Beyond Traditional Public Administration and the New Public Management. *Public Administration Review*, Vol. 74, No. 4, pp. 445-456. ISSN 1540-6210. <https://doi.org/10.1111/puar.12238>
 10. CANGEMI, M. P. (2014). Performing a Strategic Risk-Based Assessment: Integrating Data Analytics into the Audit Universe. *EDPACS*, Vol. 49, No. 5, pp. 1–6. ISSN 0736-6981. <https://doi.org/10.1080/07366981.2014.916144>
 11. CASSEL, F. (2014). Financial audit in the public sector. London: Routledge. ISBN 978-1315-848-38-9. <https://doi.org/10.4324/9781315848389-8>
 12. CORDERY, C. J., HAY, D. (2019). Supreme audit institutions and public value: Demonstrating relevance. *Financial Acc & Man*, Vol. 2019, No. 35, pp. 128-142. ISSN 1468-0408. <https://doi.org/10.1111/faam.12185>
 13. DJENADIC, S. et al. (2022). Risk Evaluation: Brief Review and Innovation Model Based on Fuzzy Logic and MCDM. *Mathematics*, Vol. 10, No. 5, pp. 1-26. ISSN 2227-7390.
 14. DRAKOVÁ, Z. (2024). Technological Progress and the Transformation of Society: Perspectives for Individual Development. *Perspective Politice*, Vol. 17, No. 2024, pp. 49-55. ISSN 2065-8907. <https://doi.org/10.25019/perspol/24.17.0.5>
 15. ERNEKER, J., PÁNA L. (2017). Systémové aspekty veřejné správy. České Budějovice: VŠERS. ISBN 978-80-7556-015-5.
 16. FEKA, E., ABDULLAI, J. (2019). Ethics in the Public Administration of Mitrovica Municipality. *Revista De Stiinte Politice*, Vol. 2019, No. 63, pp. 12-21. ISSN 1584-224X.
 17. FOTR, J., HNILICA, J. (2014). Aplikovaná analýza rizika ve finančním managementu a investičním rozhodování. Praha: Grada Publishing. ISBN 978-80-2479-185-2.
 18. GARVEY, P. R. (2009). Analytical Methods for Risk Management. Boca Raton: Chapman & Hall. ISBN 978-1-58488-637-2.
 19. GAVORA, P. (2015). Obsahová analýza v pedagogickom výskume: Pohľad na jej súčasné podoby. *Pedagogická orientace*, Vol. 25, No. 3, pp. 345-371. ISSN 1211-4669.
 20. GRIFFITHS, P. (2016). Risk-Based Auditing. Farnham: CRC Press, ISBN 978-1317-062-71-4.
 21. HELEŠIOVÁ, S. (2022). Control activities in the field of public administration with a focus on the supreme audit office. *Auspicia*, Vol. 2021, No. 3, pp. 48-61. ISSN 2464-7217. https://doi.org/10.36682/a_2021_2_3
 22. HILLSON, D., MURRAY-WEBSTER, R. (2007). Understanding and Managing Risk Attitude. Hants: Gower Publishing. ISBN 978-0-566-08627-4.

23. HUDÁKOVÁ STAŠOVÁ, L. (2019). The scope of control of the supreme audit office in the Slovak Republic and in the other Visegrad Four countries. *Society and Economy*, Vol. 41, No. 3, pp. 245-262. ISSN 1588-9726. <https://doi.org/10.1556/204.2019.006>
24. HUDÁKOVÁ STAŠOVÁ, L. (2024). Audit Activities of the Supreme Audit Offices in the V4 Countries: Comparative Analysis. *Croatian and comparative public administration*, Vol. 24, No. 2, pp. 269-302. ISSN 1848-0357. <https://doi.org/10.31297/hkju.24.2.3>
25. JANČAŘÍKOVÁ, K. (2019). *Didaktické přístupy k přírodovědnému vzdělávání předškolních dětí a mladších žáků*. Praha: UK. ISBN 978-80-760-3051-0.
26. JOHN, A. S., SHARMA, D. (2023). The Role of Audit in Mitigating Risks Associated with the Digitalization of HR Processes. *International Journal of Advanced Research in Science, Communication and Technology*, Vol. 3, No. 1, pp. 374-381. ISSN 2581-9429. <https://doi.org/10.48175/ijarsct-12055>
27. KARPA, M. I. et al. (2023). Artificial intelligence as a tool of public management of socio-economic development: economic systems, smart infrastructure, digital systems of business analytics and transfers. *AD ALTA Journal of Interdisciplinary Research*, Vol. 13, No. 1, pp. 13-20. ISSN 2464-6733. <https://doi.org/10.33543/1301341320>
28. KHADZHYRADIEVA, S. et al. (2021). Risks in Public Administration in the Context of Globalisation. *International Journal of Criminology and Sociology*, Vol. 2020, No. 9, pp. 2921-2928. ISSN 1929-4409.
29. KLJUČNIKOV, A. et. al. (2025). Breaking down entrepreneurial barriers: exploring the nexus of entrepreneurial behavior, innovation, and bank credit access through the lens of the theory of planned behavior. *International Entrepreneurship and Management Journal*, Vol. 21, No. 13, pp. 1-35. ISSN 1554-7191. <https://doi.org/10.1007/s11365-024-01025-w>
30. KUPEC V. (2023). *Moderní kontrola veřejné správy*. Praha: Wolters Kluwer. ISBN 978-80-7676-713-3.
31. KUPEC, V. (2018). First Step of Marketing Audit: Risk Analysis. In *MARKETING IDENTITY: Digital Mirrors – part I*. Trnava: UCM, pp. 370-380. ISBN 978-80-8105-984-1.
32. KUPEC, V., ČAPOŠOVÁ, E., PÍSAŘ, P. (2021). *Modern Strategy and Challenges of Management in Cultural Institution*. Krakow: Research and Publishing Institute for Security and Defence Studies. ISBN 978-83-64035-76-0.
33. MACHI, L. A., MCEVOY, B. T. (2012). *The Literature Review: Six Steps to Success*. California: Corwin. ISBN 978-14-5224-088-6.
34. MARIŠOVÁ, E., LICHNEROVÁ, I., MACHYNIAK, J. (2021). Efficiency of the functioning of public administration: a regional empirical study.

- Administratie Si Management Public, Vol. 2021, No. 36, pp. 165-180. ISSN 1583-9583.
35. MATEI, A., ANTONOVICI, C. G., SĂVULESCU, C. (2017). Adaptive Public Administration. Managerial and Evaluation Instruments, Vol. 15, No. 4, pp. 763-784. ISSN 1581-5374.
 36. MOHAMMADI, J., KALALI, A., NAJAFZADEH, A. (2014). Risk-Based Auditing. Asian Journal of Research in Business Economics and Management, Vol. 2014, No. 4, pp. 366-372. ISSN 2249-7307. <https://doi.org/10.5958/2249-7307.2014.01000.7>
 37. MÜLLEROVÁ, L. (2013). Auditing pro manažery, aneb, Proč a jak se ověřuje účetní závěrka. Praha: Wolters Kluwer. ISBN 978-80-7357-988-3.
 38. MURDOCK, H. (2018). Auditor Essentials: 100 Concepts, Tips, Tools, and Techniques for Success. Farnham: CRC Press. ISBN 978-11-3803-691-8.
 39. NZECHUKWU, P. O. (2016). Internal Audit Practice from A to Z. Farnham: CRC Press. ISBN 978-1315-352-15-2.
 40. OCHRANA, F. et al. (2010). Veřejný sektor a veřejné finance. Praha: Grada Publishing. ISBN 978-80-247-3228-2.
 41. POLLITT, CH., SUMMA, H. (1997). Reflexive Watchdogs? How Supreme Audit Institutions Account for Themselves. Public Administration, Vol. 75, No. 1, pp. 313-336. ISSN 1467-9299. <https://doi.org/10.1111/1467-9299.00063>
 42. POTŮČEK, M. et al. (2017). Public policy: a comprehensive introduction. Praha: Karolinum Press. ISBN 978-80-246-3556-9.
 43. SENFT, S., GALLEGOS, F. (2010). Information Technology Control and Audit, Third Edition. Farnham: CRC Press. ISBN 978-14-3983-860-0.
 44. SIDOROVA, E. et al. (2022). Forming a Risk Management System Based on the Process Approach in the Conditions of Economic Transformation. Risks, Vol. 10, No. 5, pp. 1-15. ISSN 2227-9091.
 45. SMEJKAL, V., RAIS, K. (2013). Řízení rizik ve firmách a jiných organizacích. Praha: Grada Publishing. ISBN 978-80-2478-787-9.
 46. ŠVEC, M. et al. (2024). Slovak Mimicry of Online Content Moderation on Digital Platforms as a result of the Adoption of the European Digital Services Act. Media Literacy and Academic Research, Vol. 7, No. 2, pp. 81-95. ISSN 2585-9188. <https://doi.org/10.34135/mlar-24-02-06>
 47. SZYNOWSKI, R. (2019). Competences of Public Administration of the Slovak Republic in the Area of Defense. In Internal Security, Vol. 11, No. 2, pp. 151-164. ISSN 2080-5268.
 48. TARANTINO, A. (2011). Essentials of Risk Management in Finance. New Jersey: John Wiley & Sons. ISBN 978-04-7063-528-5.
 49. VÁVROVÁ, E. (2014). Finanční řízení komerčních pojišťoven. Praha: Grada Publishing. ISBN 978-80-2474-662-3.
 50. WEBER, R. P. (1990). Basic Content Analysis. London: SAGE Publications.

ISBN 978-0-8039-3863-2.

51. YESSIMOVA, Sh. A., DANYSHBAYEV, S. A., YERGALIYEV, D. N. (2024). Navigating the future: resilient scenarios for development in public administration. *The Journal of Economic Research & Business Administration*, Vol. 2024, No. 2, pp. 165-178. ISSN 2617-7161.
52. YOE, Ch. (2012). *Principles of Risk Analysis: Decision Making Under Uncertainty*. Boca Raton: Taylor and Francis Group. ISBN 978-04-2902-112-1.
53. ZHANSEITOVA, G. S., TLEUBERDIYEVA, S. S., AUELBEKOVA, A. K. (2022). Risk management in public administration. *ECONOMIC Series of the Bulletin of the L. N. Gumilyov ENU*, Vol. 2022, No. 2, pp. 144-154. ISSN 2789-4339. <https://doi.org/10.32523/2789-4320-2022-2-144-154>
54. ZHAO, F. et al. (2022). Cross-Scale Study on Lime Modified Phosphogypsum Cemented Backfill by Fractal Theory. *Minerals*, Vol. 12, No. 4, pp. 1-18. ISSN 2075-163X.