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Recent Advances in
Public Sector Management

Edited by Peter Yao Lartey

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Meet the editor

Dr. Peter Yao Lartey is a research associate at the Niagara Community Observatory (NCO), Brock University, Canada, where he is currently working on a research project titled "Regional Innovation Systems: Comparing Niagara and Other Midsized Regions in Canada." He earned his Ph.D. from Jiangsu University, China, focusing on internal control effectiveness in public organizations. He holds an MBA in finance from Cardiff Metropolitan University and a diploma in accounting. His research interests include corporate governance, public administration, and knowledge management. Dr. Lartey has authored numerous academic works and is involved in projects on internal audit independence, green hydrogen adoption, AI in hospitality, and financial inclusion for women's empowerment in West Africa.

Contents

Preface

Public sector management is undergoing major transformation in recent years, designed to address growing global challenges, rapid technological advancements, and the increasing complexity of governance structures. In this ever-changing landscape, public institutions are challenged to balance efficiency, transparency, and innovation while navigating the needs of their jurisdictions. This book, *Recent Advances in Public Sector Management*, brings together the insights of leading academics and governance professionals who explore these shifts, offering fresh perspectives on the modern-day challenges and opportunities within the field of public administration.

The chapters in this volume reflect a diverse array of regional and thematic focuses, discussing the practical implications of governance reforms and innovations across the world. Dr. Sebata Dennis opens with a global perspective on the latest trends in public sector management, setting the tone for the subsequent chapters that delve into specific regions and issues. For example, Associate Professor Kipen Volodymyr examines the quality of public services in conflict-affected territories of Ukraine, while Dr. Magakwe Jack explores the transformative potential of data analytics in public decision-making.

As governments increasingly integrate digital technologies into their operations, the relationship between public administration and artificial intelligence (AI) is examined by Dr. Puczko Aleksandra. Similarly, Dr. Eric Kepeh Moh's contribution on e-governance post-COVID-19 in Cameroon illustrates the role of technology in fostering local development. Case studies on e-government services by Dr. Pavleska Tanja and Giovanni Paolo Sellitto, as well as platform-based local development in Cabo Verde by José Maria Gomes Lopes, provide real-world examples of how digital tools are reshaping governance.

At the same time, this collection emphasizes the importance of accountability, ethics, and reform in governance systems. Khali Mofuoa's narrative on professionalizing South Africa's public service and Wonder Mafuta and Joseph Kamuzhanje's exploration of subnational governance in Zimbabwe address these themes head-on. Further, Habiba Bhouri critically analyzes Europe's regulatory approach to AI, while Ofonmbuk Etido Atakpa discusses social policy implementation in Nigeria from 2015 to 2023.

The final chapter, focusing on public procurement and its support for small and medium-sized enterprises, emphasizes the importance of regulatory frameworks that

foster inclusivity and economic growth. Contributions from Charles Tsikada, Asad Ullah, and Shahid Imran add depth to this discussion by highlighting the intersection of policy and economic development.

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Chapter 1

Global Perspectives on the Latest Developments in Public Sector Management: Challenges, Opportunities, and Impacts

Dennis Sebata

Abstract

This book chapter's data analyzes public sector management trends and challenges that cut across national borders. It also offers evidence-based recommendations and insights for advanced public sector management theory and practice. Thus, careful consideration is needed when examining the public sector management trends covered in this chapter through the six main themes of digital reforms, public and private sector management, social policy implementation, collaborative governance, and public sector innovation. This was made possible by the deft use of a variety of techniques. Although there are numerous approaches to solving this problem, this chapter provides a thorough, adaptive, collaborative, and learning-oriented approach to advanced public sector management. The practical frameworks and suggestions offered can also be beneficial to practitioners and policy makers. This chapter describes public sector management as a challenging, dynamic, diverse, mixed, risky, and challenging field that operates on a transnational scale. A plethora of institutional, historical, political, social, and economic factors, in addition to their own, influence it. The chapter examines public sector management from a transnational angle, identifies gaps and restrictions in the literature, makes recommendations, and presents chances for further study and advancement.

Keywords: change implementation, global perspectives, innovation promotion, public sector management, social welfare policies

1. Introduction

Public sector management is a crucial area that impacts the lives and well-being of millions of people worldwide [1]. Managers in the public sector have an obligation to deliver policies and services that satisfy the demands and requirements of stakeholders, citizens, and legislators [2]. However, these managers face numerous challenges and stresses in their work, such as increasing demands, limited resources, changing environments, and conflicting interests [3]. This book chapter aims to answer these questions from a cross-national perspective and provide a comprehensive understanding of how public sector managers overcome these challenges [2].

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1.1 Cross-national perspectives

Cross-national perspectives are crucial to the study of public sector management because they allow for the comparison and contrast of different approaches, models, and practices in different countries and regions [1]. Knowledge can be gained from other people's achievements and mistakes when we adopt this viewpoint, identify best practices and innovations, and understand the contextual factors that influence public sector management [2]. Therefore, this book chapter takes a cross-national perspective to examine current trends and challenges in public sector management and provide evidence-based insights and recommendations for theory and practice [3].

1.2 E-gov models: Layne & Lee vs. UN & ASPA

Two primary models that delineate the stages of e-government development are commonly employed to examine its development. According to the (first model), which was put forth [4], e-government initiatives move through four stages as organizational, technological, and integration complexity rises:

- Cataloging: During this stage, informational webpages are made by government agencies. During this stage, communication is one-way, from the governed to the government.

- Transaction: During this stage, organizations can assist with online transactions, allowing for two-way dialog. Developing an electronic interface for services and information provided by the government is the main goal.

- Vertical integration: During this stage, government operations are integrated into functional domains [5]. For instance, databases may be shared by organizations like the FBI, CIA, and NSA that operate in the same functional area.

- Horizontal Integration: During the last stage, a central portal is used to integrate several functional areas into the same electronic system [5]. This phase concentrates on integrating e-government operations into the current government structure in addition to the vertical integration phase.

In 2002, the American Society for Public Administration and the United Nations unveiled the (second model) [6]. This model proposes a five-stage development process:

1. Creation: The establishment of an official government web presence.

2. Expanded: There are more and more active government websites.

3. Interactive: Forms can be downloaded by users, who can communicate with officials online.

4. Transactional: Online payments are available to users for transactions.

5. Smooth: Government agencies have successfully integrated electronic services [5].

Considering that the models developed by Layne and Lee as well as ASPA-UN are comparable, these subjects have always been researched and developed further [7]. Whether the "cataloging" tier of the Lee and Layne framework and the "emerging" and "enhanced" stages of the ASPA-UN model are equivalent has been the subject of much investigation [6]. It is obvious that more research is needed to ascertain whether the "transactional" and "interactive" phases are comparable to the "transactional" Layne and Lee's model phase. That is conceivable to do additional research to determine if vertical and horizontal integration are included in the "seamless" steps [5]. Schelin used both models to create a typology of e-government in 2003 after realizing these overlaps (see **Table 1**).

There is a vibrant research community and a lot of interest in this field. It could be argued that the typology and the [4, 6] models are all overly simplistic [8]. In essence, it is thought that the phased approach to e-government development is insufficient. Many studies have been done to look at how e-government development stages progress; these stages are not always in a rigid linear or chronological sequence [7]. Furthermore, these models may not be relevant everywhere, especially when considering developing nations. It is evident that more investigation is needed to ascertain whether these nations can learn from the triumphs and mishaps of e-government deployment in developed nations [8]. It is reasonable to believe that developing nations could complete all phase requirements at once and climb the learning curve considerably faster. (See above **Table 1**).

By taking these steps, future developments should make it possible for policymakers to modify e-government plans to fit the unique circumstances of their nation:

1. *Understanding the Local Context*: First and foremost, policymakers need to comprehend the distinct political, cultural, and socioeconomic backdrop of their nation [4]. This entails knowing the infrastructure, degree of digital literacy, and preparedness of governmental organizations for digital transformation.

2. *Learning from Others*: The implementation of e-government in foreign nations, especially those with comparable contexts, can provide policymakers with valuable insights into both its successes and failures. However, rather than merely using these tactics, it is critical to adapt.

3. *Stakeholder Engagement*: It is essential that all parties involved—citizens, public servants, and businesses—be involved. Your contributions can offer insightful information about how e-government services are designed and implemented [4].

4. *Phased Implementation*: A more gradual approach to implementation might be more effective than a big bang strategy. This makes it possible to adjust, learn, and change direction.

5. *Building Capacity*: The development of requisite capacity in government institutions ought to be the primary focus of policymakers. These cover providing necessary infrastructure and training government workers.

6. *Ensuring Accessibility and Inclusivity*: All citizens, including those in remote locations and those with disabilities, should be able to access e-government services.

7. *Legal and Regulatory Framework*: It is imperative for policymakers to establish a legal and regulatory framework that is conducive to e-government.

Phase	Initiation	Helps	Technology	Inhabitants
Step 1: a fresh online presence.	Administrative	Few, if any	Just the Web.	Go solo
Step 2: improved online visibility.	Informational and administrative.	Few transactions, few forms.	Web, e-mail	Links to nearby organizations.
Step 3: an active Internet presence.	Data, users, and administrators.	Quantity of online forms submitted.	Web, e-mail, portal	Some connections to federal and state websites.
Step 4: online transactions.	Data, people.	Numerous formats and exchanges.	Digital platforms	A few connections to national and state websites.
Step 5: a flawless online presence.	Operators	Include all in-person, mail-order, and phone services.	Digital platforms and EDI	Connects various government agencies and levels.

Source: Ref. [8].

Table 1.
Types of e-government.

This covers rules and laws pertaining to digital identity, data security, and electronic commerce.

8. *Monitoring and Evaluation*: The implementation of e-government initiatives should also be monitored and assessed through mechanisms. Insightful feedback for ongoing development may result from this.

A better strategy is needed for this well-known issue [4]. Recall that e-government cannot be approached in a one-size-fits-all manner. Nowadays, most people agree that strategies ought to be customized for the particular circumstances of every nation.

2. Aims and objectives

The aims and objectives section is a crucial part of any research project. It describes the purpose of the study and the precise goals that the research is supposed to accomplish. The "aim" refers to what the research hopes to accomplish in broad terms, while the "objectives" are the specific steps that will be taken to achieve the aim.

The following section will detail the aims and objectives of our research, providing a clear roadmap for what the study hopes to discover and the methods we will use to do so. This will serve as a guide for the research process and help ensure that the work remains focused and relevant.

The primary goals of this chapter in the book are:

1. Cross-national analysis of the literature on public sector management.

2. Formulate a problem statement or research question to direct the chapter.

3. Choosing a suitable methodology and research design for the chapter.

4. Observe the selected research design and methodology when gathering and analyzing data.

5. Utilizing data analysis and a review of the literature, write the chapter's body.

6. Write the chapter's summary and citations.

7. For coherence and clarity, the chapter should be revised and edited.

This book chapter's primary contributions include offering a thorough and critical overview of current trends and challenges in public sector management from transnational perspectives [9], presenting and discussing the empirical results and implications of data analysis, and offering workable frameworks and recommendations for policymakers and practitioners. Additionally, the chapter offers a multidisciplinary method for studying public policy management.

2.1 Structure of the chapter

This is how this book chapter is structured: The literature is examined in the next section on public sector management from a cross-national angle, highlighting

key issues, issues, and gaps [9]. The chapter's research question or problem is developed in the following section. The body of the chapter, data collection and analysis, and research design and methodology are covered in detail in the sections that follow. Final edits and revisions, a reference list, and a summary of the findings conclude the chapter [9]. This structure makes sure that ideas and information flow logically and makes it easier to comprehend public sector management from a transnational angle.

3. Methodology

Since no field research has been conducted in the context of this book chapter, the methodology mainly consists of an extensive literature search. Due to its ability to examine broad sources and materials from different nations and areas, this approach is especially well-suited for studying public sector management from a cross-national perspective [9].

The primary method for gathering and processing data will be a review of the literature. This is a systematic search for written resources about management in the public sector [10]. Sources include books, papers, journal articles, and other scholarly publications. This section can go over the use of a panel (VAR) to analyze the changing dynamic relationships between various entities over time. Complex social phenomena can be understood and interpreted by applying panel vector autoregression (panel VAR) as a qualitative research method [11]. The objective is to locate, evaluate, and synthesize the corpus of existing knowledge on the topic.

The steps below serve as a guide for the literature search procedure:

1. Source identification entails defining search terms pertaining to public sector management and transnational perspectives, as well as selecting which databases and search engines to use.

2. Screening and selection: The identified sources' titles and summaries are examined, and the most pertinent ones are chosen for full-text reading.

3. The topic's applicability, the research's caliber, and the writers' and publication organizations' legitimacy are a few examples of the selection criteria.

4. Reading and making notes: This entails carefully reading the chosen sources and making notes on the key ideas, arguments, revelations, and references.

5. The international dimensions of managing the public sector are given special consideration.

6. Analyze and summarize: This entails contrasting and comparing the results from various sources, spotting recurring themes and patterns, pointing out contradictions and gaps in the data, and formulating conclusions based on the available information.

7. Composing the review entails integrating the findings into the larger context of public sector management, arranging the notes into a logical narrative, and properly citing sources.

3.1 Reflective practice

In the discussions on methodology, it is emphasized that a thorough literature review and reflective practice are crucial components in investigating the dynamic and intricate field of public sector management. With a focus on public sector management from a transnational perspective [10], this approach offers a solid and adaptable way to advance our understanding of the subject, develop theory, and enhance our practice. The methodology, which includes reflective practice, contributes to a deeper comprehension of the subject, raises the legitimacy and openness of research, and enhances the quality of work.

3.2 Dynamic relationships and panel VAR

Dynamic Relationships and panel vector autoregression (panel VAR) offer a strong framework for comprehending the interaction between several variables over time when used in the context of a verification technique. In fields like macroeconomics and finance, where it is critical to comprehend the dynamic relationships between heterogeneous entities, panel VAR is a particularly helpful statistical methodology. Panel VAR's strength is its capacity to capture the co-movements and temporal dependencies of several time series, giving rise to a thorough picture of the dynamics of the system. Researchers can effectively track and analyze the evolution of relationships between variables by incorporating this method into a review paper [12, 13]. This can provide valuable insight into the underlying mechanisms of the phenomena being studied. Because of this, panel VAR is an effective tool for analyzing and synthesizing the body of research, finding gaps in the knowledge, and recommending future lines of inquiry.

3.3 Interpreting dynamic relationships

While panel VAR is typically used in a quantitative context to study dynamic relationships between different entities over time, it can also be used qualitatively to interpret these relationships. For example, the use panel VAR to understand how different economic variables interact with each other over time and then use qualitative skills to interpret what these interactions mean in a broader social or economic context.

3.4 Understanding heterogeneity

Panel VAR allows for the study of heterogeneous units, which can be very useful in qualitative research. For example, you might use panel VAR to understand how different sectors of the economy respond to certain shocks or policy changes [14]. The use qualitative methods to delve deeper into why these sectors respond in the way they do.

3.5 Incorporating theory

Panel VAR models can be derived from economic theory [14]. These theories can direct the interpretation of the panel VAR results in a qualitative setting. One can use economic theory to interpret the existence of a relationship, for instance, if the panel VAR model indicates that two economic variables are strongly correlated. Similar to conventional VARs, panel VARs may be used to assess theories or give researchers

information about the relative veracity of various economic models [14]. As long as the decision rules are logarithmically linearized around the equilibrium state, panel VARs can be easily obtained from common intertemporal optimization problems that are subject to constraints. Panel VAR is a flexible tool in economic research because of this.

3.6 Case studies

For a rich, in-depth understanding of the dynamic relationships between variables in a particular context, use panel VAR in case studies. For instance, they might employ panel VAR to examine the financial effects of a particular policy change before using qualitative research techniques to comprehend the real-world experiences of those impacted by the change [14]. Recall that although panel VAR is an effective tool for comprehending dynamic relationships, it is crucial to combine it with other qualitative techniques to offer a comprehensive, nuanced understanding of the phenomenon you are researching [14]. Always make sure that your application of panel VAR is based on a thorough comprehension of the relevant theories and contexts.

3.7 Choice of model, approximation, and interpretation

Within the framework of the generalized method of moments (GMM), researchers employ panel VAR for model choice, approximation, and deduction. Choosing the appropriate model for the data, estimating the parameters of the model, and making inferences from those estimates are all included in this process.

3.7.1 Model selection

In the context of panel vector autoregression (panel VAR), model selection involves choosing the best model that fits the data. This is typically done by comparing different models based on some criterion, like the AIC, alternatively known as the Bayesian Information Criterion (BIC) or the Akaike Information Criterion. Typically, the best model is determined by calculating the lowest AIC or BIC.

3.7.2 Estimation

Once the model is selected, the next step is to calculate the model's parameters. Within the framework of panel VAR, this is typically done apply the generalized method of moments (GMM) technique. GMM is a flexible system of estimation that allows for model parameters to be estimated even when the model does not meet certain assumptions, such as homoscedasticity or normality.

3.7.3 Inference

After the model parameters have been estimated, the next step is to make inferences based on these estimates. This involves interpreting the estimated parameters in the context of the problem. For example, in the context of income elasticity of demand, the estimated parameters can tell us how the quantity demanded changes in response to a change in income.

Results illustrated in **Table 2** show that the consumer's expenditure on good B increases as income increases but at a decreasing rate. This suggests that good B is a normal good (since expenditure on it increases with income) but not a luxury good

Income of the consumer ($)			
	40	50	100
Effective	Consumer spending ($)		
A	10	18	40
B	10	11	20
C	10	10	10
D	10	8	6

Source: Ref. [14].

Table 2.
Adjustments needed in the event of an income shift.

(since the rate of increase slows down as income increases). Therefore, one can infer that the income elasticity of demand for good B is more than 0 but not equal to 1.

In a Vector Autoregression (VAR) system, all variables are typically treated as endogenous. This means that they are determined within the system and can be influenced by other variables in the system [11]. However, panel VAR can also accommodate exogenous shocks. These are unexpected events that are not determined by the system but can have significant effects on it.

Now, let us consider the scenario where a company opens a new factory on an abandoned site on the outskirts of a city. This event could be considered an exogenous shock to the local economy. It is an external event that could have significant effects on various aspects of the local economy (see **Table 3**).

The externalities, or indirect effects, resulting from the factory's opening might be as follows:

A rise in the amount of air pollution: The way the factory runs could lead to an increase in air pollution, especially if it involves processes that release pollutants into the air. This is a negative externality as it could have detrimental effects on the health of the local population and the environment.

An increase in rents on neighboring factory premises: Opening the new factory could increase the demand for neighboring factory sites, leading to an increase in their rents. This is a positive externality for the owners of these sites, but it could also be a negative externality for those looking to rent such sites.

The change in the appearance of the neighborhood: The opening of the new factory could lead to changes in the appearance of the neighborhood. This could be a positive or negative externality, depending on the perspective. It might be viewed positively,

	A rise in atmospheric pollution	A rise in the industrial sites' nearby rentals	The neighborhood's appearance has changed
A	No	No	Yes
B	No	Yes	No
C	Yes	No	Yes
D	Yes	Yes	No

Source: Ref. [11].

Table 3.
Endogeneity and exogenous shocks.

for instance, if the previously derelict ground is now being put to productive use. On the other hand, it could be seen as negative if the factory detracts from the esthetic appeal of the neighborhood.

Given these potential externalities, the correct answer to your question would be *Option D: yes, yes, no*. This is because both the rents of nearby factory sites and air pollution may rise as a result of the new factory's opening, but it does not necessarily change the appearance of the neighborhood in a negative way [10].

Software Implementation: There are software packages available, such as in Stata, which were developed specifically for panel VAR models. These packages make it easier for researchers to implement panel VAR in their studies.

Policy Evaluations and Macroeconomic Analyses: Panel VAR models are often used in policy evaluations and macroeconomic analyses that require taking into account the interdependencies across sectors, markets, and countries.

Remember, while panel VAR is a powerful tool, it is important to use it appropriately and understand its assumptions and limitations. Always ensure that your data meets the requirements of the panel VAR model to get reliable and valid results.

The approach will also heavily include reflective practice. The objective is to critically think about the literature research process, findings, and implications. This entails analyzing the research's biases and presumptions, the literature's advantages and disadvantages, and the moral and practical issues surrounding public sector management [10]. Reflective practice enhances work quality, contributes to a deeper comprehension of the subject, and raises the legitimacy and openness of research.

This book chapter's methodology, which focuses on public sector management from a transnational perspective, entails a thorough literature review and reflective practice. Even without fieldwork, this methodology offers a solid and adaptable way to explore the dynamic and complex area of public sector management. It expands our understanding of public sector management, develops theory, and improves our practice.

3.8 Social-ecological interactions and poverty traps: a new perspective

In the context of poverty traps, it is important to broaden the concept by adopting a social-ecologically integrated definition. Path dependencies, social-ecological diversity, external drivers, and cross-scale interactions are all important considerations in this approach [10]. In certain situations, more efficient and comprehensive methods to reduce poverty can be devised by taking into account the various social-ecological feedback loops that establish and sustain poverty traps. Deep understanding of various interrelated factors contributing to poverty traps, including social, economic, and ecological factors, is required to adopt this broader perspective.

This subtopic seeks to explore the intricacies of poverty and how social and environmental factors interact with one another. *Poverty* is a multifaceted issue influenced by various economic, social, and environmental factors. However, traditional development economics often overlook the importance of social and environmental factors in poverty reduction efforts [15].

Therefore, this subtopic explores how an integrated understanding of these interactions can lead to more effective development interventions [15, 16]. For instance, social factors such as gender inequality and poverty may worsen if a person is excluded from social and educational opportunities. Environmental factors such as climate change, land degradation, and natural disasters can also contribute to poverty.

Thus, an integrated approach considering social and environmental factors can lead to more effective poverty reduction strategies. By understanding how these factors interact and influence each other, policymakers can develop interventions that address the root causes of poverty and promote sustainable development [16].

3.9 Cross-scale interactions

- Cross-scale interactions refer to the influence that processes at one scale (e.g., local, regional, or national) have on processes at another [17]. The authors in Ref. [15] traps the poverty traps in the context, it is crucial to understand how decisions and events at the macro-level (like national economic policies or global market trends) can impact micro-level phenomena (like household income or individual livelihood strategies). Conversely, micro-level changes can aggregate and lead to macro-level outcomes [17]. For instance, individual decisions to over-exploit natural resources due to poverty can lead to environmental degradation at a larger scale, further exacerbating poverty [16].

3.10 Extending the application of poverty trap theory

This subtopic discusses the definition of poverty traps that has been proposed through social-ecological integration and has been reported in research [18]. According to the authors in Ref. [19], in order to comprehend the dynamics of poverty traps more fully, it is crucial to take into account path dependencies, cross-scale interactions, the influence of outside forces, and social-ecological diversity analyze the different social-ecological feedbacks that contribute to and sustain poverty traps by taking a more comprehensive view [15, 17]. In the end, as Ref. [17] suggests, this approach might result in more successful tactics for more integrated poverty reduction.

3.10.1 Social-ecological diversity

- The term "social-ecological diversity" describes the range and diversity of ecological and social systems, as well as how they interact [20]. Recognizing this diversity is important because different social-ecological systems can exhibit different pathways to and from poverty traps [17]. For example, in some contexts, environmental conservation might provide opportunities for poverty alleviation through ecotourism or payments for ecosystem services [15]. In other contexts, conservation might limit access to resources and thus contribute to poverty [21].

It is crucial to exercise caution while integrating the considerations mentioned earlier into the comprehension of poverty traps, as it can assist in elucidating the intricate social-ecological feedback loops that produce and sustain poverty traps [17, 21]. This approach requires a deep understanding of the various interrelated factors contributing to poverty traps, including social, economic, and ecological factors. As [19] noted, it is possible to design more effective and integrated strategies to alleviate poverty in certain cases by adopting this broader perspective [21].

3.10.2 Panel vector autoregression (Panel VAR)

It is important to note that the remedy suggested in this context satisfies these conditions [19]. Focusing on the poverty traps are created and maintained by

social-ecological feedback loops and taking into account the interconnections between various factors provides a more comprehensive and integrated approach to poverty alleviation [17, 19]. This approach will likely be more effective in sustainably reducing poverty, as it addresses the underlying causes rather than just the symptoms of poverty.

Since these analyses are outside the scope of this work, comprehensive only provides a brief description of them [19]. Panel vector autoregression, or panel VAR, is an econometric statistical technique that is used to analyze data over time for a range of entities, including countries, companies, and individuals [11]. A multivariate version of the vector autoregression (VAR) model is used to predict time series data.

Several authors have developed more advanced techniques by using a more thorough explanation found here:

1. *Panel Data*: This data set comprises observations made for the same entities (e.g., over several time periods, nations, or people). You can manage variables that change over time but not between entities, as well as variables that change between entities but not over time, with this kind of data structure.

2. *Vector Autoregression (VAR)*: This is a statistical model that can be used to capture the linear relationships between multiple time series. By providing an equation for each variable in a VAR, each variable in the model is treated symmetrically to provide an explanation according to the lags of all other variables and its own lags during its evolution [12].

3. *Panel VAR*: This merges the two ideas that were previously discussed. Panel data have been used to adapt the VAR model. This lets you investigate how variables relate to each other and to time as well as how entities interact. It is employed in your paper to calculate the effect on other economies of an increase in long-term nominal interest rates in the United States.

A versatile and reliable framework for examining intricate financial and economic issues is offered by the panel VAR model. It is imperative to acknowledge that the outcomes of the model are contingent upon the caliber and characteristics of the data in addition to the particular presumptions of the model. For instance, it makes the assumption that, in real-world scenarios, the relationships between variables are linear and do not vary over time. As such, one should proceed with caution when interpreting the results.

In summary, the methodology and approaches highlighted in the discussions provide a comprehensive and integrated way to investigate public sector management and poverty traps, respectively. Through a thorough literature review and reflective practice, advance the understanding of the subject and enhance the quality of work. By adopting a social-ecologically integrated definition of poverty traps and considering cross-scale interactions and social-ecological diversity, design more effective and integrated strategies to alleviate poverty.

After going over the study's methodology, next up is the review of the literature. This research would not be possible without the literature review, which offers an extensive synopsis of the body of existing research on the topic. It enables us to situate our study within the larger academic discourse, identify gaps in the literature, and comprehend the current state of research. The literature will discuss the key theories, models, and empirical studies pertinent to our research question in the section that

follows. This will help us understand our findings in the context of the body of existing literature, in addition to giving our study some context. Let us proceed with the literature review.

4. Literature review

Literature research is a crucial part of any research. This is a comprehensive overview of existing scientific works and scientific sources related to our research topic. This includes books, scholarly articles, reports, and other relevant sources.

The purpose of the literature review is multifold. It allows us to:

1. Understand the current state of research on our topic.

2. Identify the major themes, findings, and debates in the field.

3. Spot gaps in the existing literature that our research aims to fill.

4. Position our research within the broader academic discourse.

5. Provide a theoretical framework for our study.

In the following section, the study will delve into the key theories, models, and empirical studies that are relevant to our research question. This will not only provide a context for our study but also help us interpret our findings in light of the existing literature. Let us proceed to the literature review.

Public sector management is a complex and diverse field that involves the oversight of public organizations, services, and policies. It involves applying management principles to improve the performance and outcomes of public entities. Public sector management is influenced by social, economic, political, cultural, historical, institutional, and environmental factors. Challenges such as increasing demands, limited resources, and conflicting interests are common in public sector management. Additionally, trends like social policy implementation, new management approaches, public-private collaborations, governance innovations, and digital reforms shape the practice of public sector management in various contexts and time periods.

A conceptual model analyzing the relationship between public administration, civic engagement, policy complexity, and social problem-solving is shown in **Figure 1**. A thorough explanation of the connections and content can be found here:

- *Public Management and Citizen Competence*: According to the model, there is a negative relationship between the degree of autonomous citizen competence and modifications made to the public administration system [22]. This implies that alterations in public administration could lead to a decrease in citizens' autonomy.

- *Public Management and Policy Complexity*: The degree of institutional and political complexity, on the other hand, is positively correlated with modifications to the public administration system. It would seem from this that more intricate institutions and policies are being produced as public administration develops.
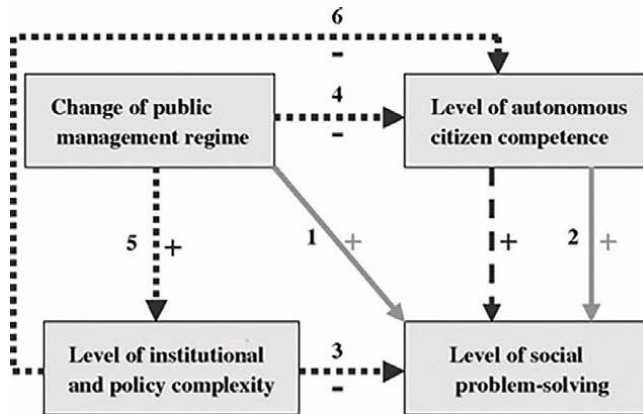
Figure 1.
Mapping impacts of public administration changes. Source.

- *Citizen Competence and Social Problem Solving*: Proficiency in autonomous civic competence is positively correlated with social problem-solving abilities. This implies that citizens with greater competence are better equipped to confront and resolve social issues. Political complexity and social problem-solving: On the other hand, social problem-solving is negatively impacted by an increase in institutional and political complexity [23]. This could be seen as intricate politics impeding the successful handling of social issues.

The model also reveals a direct and favorable correlation between autonomous citizen competence and institutional and policy complexity, implying that citizens become more competent in navigating policies as they become more complex.

These observations are supported by a small number of comparative studies:

- The detrimental effects of public management reforms on citizen competency (4).

- The beneficial impact of modifications in public administration on political complexity (5).

- Civic competence's beneficial effects on resolving social issues (2).

- Political complexity's detrimental effects on finding solutions to social issues (3).

- The relationship between civic competence and political complexity is positively correlated (1, 35).

4.1 Public administration overhaul: ripple effects

These connections form a complex web that illustrates the delicate balance between governance, individual capabilities, and societal challenges [21]. The model underscores the importance of considering these factors holistically to enhance social problem-solving.

The effects of the advent of Digital-Era Governance (DEG) and New Public Management (NPM) are covered in **Figure 1**. It serves as an example of how the NPM's

disintegration, competition, and incentives gave way to the DEG's reintegration, needs-oriented holistic nature, and digitalization [5]. The equation presented in the article illustrates how social problem solutions have changed $((\Delta S))$ as a function of direct political regime change $((R))$, civic competence $((O))$, and the intricacy of policy $((X))$:

$$\Delta S = aR - oR - x1R - x2R \qquad (1)$$

Here, (x_1) and (x_2) directly and indirectly indicate the rise in political complexity, respectively, and (a) represents the effectiveness of regime change and (o) the mediated side effects resulting from diminished civic competence [23].

As per the equation's solution, the overall impact on resolving social issues can be calculated by adding the direct consequences of a regime shift and subtracting the adverse effects resulting from heightened political complexity and diminished civic competence [20, 23]. This demonstrates the necessity of managing the immediate effects of regime change efficiently, empowering citizens, and streamlining politics.

4.2 Levels and methods of cross-national analysis

Numerous investigations have examined the impacts of adopting a cross-national viewpoint, which juxtaposes and evaluates various nations and areas concerning their approaches, models, and policies related to public sector management [18]. All the same, the cross-national perspective can be used at any level of analysis—global, regional, national, subnational, or local—as the literature has covered. A cross-country perspective can also employ various comparative methods, such as quantitative, qualitative, or mixed methods, as this is widely acknowledged in the literature [21]. A cross-national viewpoint can also make use of various comparison metrics, including performance, efficacy, efficiency, accountability, responsiveness, innovation, and satisfaction.

These key findings from the analysis of the various approaches indicate that a cross-national perspective can serve a variety of comparative objectives, including clarification, assessment, education, and advancement. Numerous discoveries refuted this idea and made it necessary to reevaluate the widely accepted notion that there can be various comparison challenges and limitations when considering a cross-national perspective, including data availability, quality, comparability, interpretation, generalization, or portability.

There is a wealth and diversity of literature on public sector management from a transnational perspective, addressing a wide range of subjects, themes, concerns, and arguments. However, the study will concentrate on six key areas for the purposes of this book chapter that are pertinent and significant to public sector management from a transnational perspective: digital reforms, public sector innovation, collaborative governance, new public sector management, public and private sector management, and social policy implementation. These subjects mirror some of the primary goals and contributions of this book chapter, as well as some of the prevailing trends and difficulties in public sector management from a global viewpoint. The study will examine the literature on each of these subjects in the ensuing subsections, highlighting the main points, novel ideas, and gaps in the body of knowledge.

4.3 Social policy implementations

In particular, vulnerable and disadvantaged groups like the impoverished, the elderly, the disabled, the unemployed, the sick, children, women, minorities, and

immigrants are the focus of social policy, which tries to enhance people's overall well-being. The domains and sectors that are covered by social policy include family, migration, the environment, housing, work, health, education, and social security [21].

The procedures and methods used to convert the objectives of social policy into tangible actions and outcomes are known as implementation procedures. Various actors, including managers, employees, organizations, citizens, stakeholders, and policy makers from civil society, as well as both private and public sectors organizations, are engaged in the implementation of social policies [21]. There are many factors that affect the way social policies are implemented, including institutional, historical, political, cultural, economic, and environmental factors. Conflicting interests, growing demands, scarce resources, and shifting environments are just a few of the obstacles and limitations that affect the application of social policy measures. The implementation of social policies is also marked by a number of trends and developments, including assessments, impacts, innovations, and reforms [21]. The manner in which social policies are implemented in various contexts and eras is shaped and altered by various factors, challenges, trends, and developments.

The literature on each of these subjects will be examined in more detail in the following section, beginning with the application of social policy. The focus of our discussion will be on the literature's main points, key takeaways, and gaps, and how they relate to public sector management globally [21]. This offers a firm basis for the remaining portions of the book chapter, which include formulating a research question, choosing a research design and methodology, gathering and analyzing data, composing the chapter's body, composing its conclusion, and editing the chapter. Watch the space for updates and conversations regarding cross-country public sector management.

A two-factor comparison that emphasizes the influence of the United States might be more insightful. S. Interest rate fluctuations' impacts on the global economy and the public sector's contribution, innovations to their mitigation [23]. In a nutshell, the following describes the impact of US interest rates: long-term nominal interest rates in the United States can move long-term interest rates in other economies by one percentage point. Advanced Economies' Reaction: Within 37 months, the impact peaks in advanced economies at about 1.6 percentage points. Emerging markets' response: At their peak, long-term interest rates in emerging markets increased by about 1.6 percentage points. Public sector resilience: Developments like better policy frameworks and tax reforms are assisting some nations in defending their domestic financial systems against shocks from the outside world [20]. These findings are based on panel vector autoregression estimates; additional information is available online in appendix 1.2, which also includes information from IMF calculations and the OECD database [24]. In order to mitigate the detrimental effects of the US government's unpredictable fiscal policy on bond spreads globally, the document emphasizes the significance of strong fiscal policy and structural reforms in the public sector [24]. This aligns with the public service development's social responsibility component [23].

4.4 Results of the literature search

This section presents the findings from an extensive analysis of previous academic publications on the subject of study. This section will detail the number of sources that were considered, the final set of studies included in the review, as well as the selection and exclusion criteria applied.

The research will discuss the key themes, theories, and empirical findings that emerged from these sources and how they relate to our research question. This section

will also highlight any gaps or inconsistencies in the literature, which our research aims to address.

In the following section, the study will delve into the specific results of our literature search, providing a detailed analysis of the most relevant and impactful studies encountered. This will lay the groundwork for our subsequent discussion and interpretation of these findings in the context of our research. Let us proceed to explore the results of our literature search.

A comprehensive analysis of the literature on the application of cross-national social policy measures reveals a number of noteworthy conclusions:

1. *Role of Public Sector Managers*: Social policy implementation is greatly aided by public sector leaders. Their responsibilities encompass the creation, provision, and assessment of social policies and services. People's well-being is greatly impacted by their choices and deeds, especially those of marginalized and vulnerable groups.

2. *Collaboration and Coordination*: A variety of actors, including those in civil society organizations, as well as the public and private sectors, interest groups, and policymakers, must effectively collaborate and coordinate for social policy to be implemented. Public sector executives frequently serve as liaisons between these various parties.

3. *Adaptation to Contextual Factors*: Managers in the public sector need to adjust to a range of contextual factors, including B. environmental, institutional, historical, political, social, and cultural aspects. These elements may have an impact on how successfully and efficiently social policies are implemented.

4. *Challenges in Social Policy Implementations*: Implementing social policies presents a number of difficulties for public sector leaders, including a lack of resources, institutional obstacles, political unrest, social resistance, cultural diversity, and moral conundrums [23]. The effectiveness and fairness of social policy outcomes may be impacted by these issues.

5. *Trends and Developments*: The body of research delineates a number of patterns and advancements in the application of social policy measures, including assessments, impacts, innovations, and reforms. These patterns and advancements demonstrate the intricacy and dynamics involved in putting social policy measures into practice.

These findings allow for a thorough comprehension of social policy measures' implementation from a cross-national standpoint. In putting social policies into practice, they emphasize how crucial it is for managers in the public sector to work together, coordinate, adjust to contextual factors, and overcome obstacles. In this crucial field, they also highlight the need for more study and application.

4.5 Critical analysis and development of argument

A thorough grasp of the subject and a critical evaluation of the body of prior research are evident in the literature search. It finds the key themes, issues, and gaps in the literature and uses the evidence to build a cogent and persuasive case. It exhibits a high degree of scholarly engagement with a distinct emphasis on the role that managers play in government in carrying out social policies from a global standpoint.

4.6 Academic engagement

A strong commitment to science is evident in the literature research. Books, journal articles, reports, and other scholarly publications are just a few of the many sources and materials that it covers. It incorporates these sources into a larger framework of public sector management while critically evaluating their claims, observations, and implications. Furthermore, it tackles the theoretical and empirical discussions in the area, promoting the growth of theory, the discovery of new information, and the enhancement of public sector management practice [25].

All things considered, the literature review serves as a strong starting point for the other sections of the book chapter, which include formulating a research question, choosing a research design and methodology, gathering and analyzing data, composing the chapter's body, composing the conclusion, and editing and revising the chapter. The study of public sector management from transnational perspectives will become more academically engaged through this process, which will also deepen understanding, strengthen critical analysis, and bolster argumentation.

5. Organizational transformation and information flow in civil society

These same insights are offered by a recent report published in the literature, which lays out a conceptual framework that highlights the intermediate steps, the changes that public authorities and civil society entail, and the path from primary IT changes to policy outcomes. There are discussions about the earlier research; the contents and connections are covered in detail here:

- *Primary IT Changes*: This represents the initial technological advancements or modifications that set off subsequent changes and serves as the foundation of the framework.

- *Technology Effects in Public Agencies*: These are the direct effects of IT modifications that alter public agencies' technological capacities and infrastructure.

- *Organization Changes in Public Agencies*: Public institutions are changing structurally and culturally in response to the effects of technology in order to adjust to the new IT realities.

- *Information Changes in Civil Society*: The handling and dissemination of information in civil society is influenced by the evolution of public authorities, and this has an impact on citizens' perceptions of and interactions with government services [12, 13].

- *Behavior Changes in Civil Society*: The way that citizens behave, including their expectations and dedication to public services, is affected by shifting information flows.

- *Policy Outcomes*: New or updated policies that collectively, these shifts have produced the changing landscape of public administration and service delivery.

There is a direct correlation between IT innovations and changes in public agencies, even though the majority of research suggests that more IT outsourcing promotes

organizational change. This demonstrates the value of outside collaborations and the influence of the private sector on the advancement of the public sector [26].

As an example of how IT advancements can have far-reaching effects beyond immediate technological upgrades, the framework in **Figure 2** shows how technological, organizational, and societal changes are interconnected. This points to the possibility of a "ripple effect," in which initial IT modifications trigger a chain of events that eventually affect policy decisions. It offers a road map for comprehending the various effects of IT on public administration and governance in addition to acting as a visual depiction of this intricate process.

5.1 Organizational and legal hurdles in digital reform

Several important conclusions are drawn from the literature review on digital reforms in public sector management from a cross-country perspective:

1. *Role of Digital Reforms*: Digital reforms are predicated on the idea that technology can enhance public services and policies' efficacy, accessibility, quality, and efficiency while also bolstering citizens', stakeholders', and policymakers' participation, engagement, and empowerment [27].

2. *Variations Across Regions*: According to Ref. [28], technological, social, economic, political, and institutional factors influence the diversity of digital reform initiatives across nations and regions.

3. *Impacts and Effects*: Initiatives for digital reform have an impact on public sector performance and management that is both favorable and unfavorable. They enhance policy implementation and service delivery, but they can also lead to problems with equity, privacy, and security [29].

4. *Challenges and Barriers*: According to Ref. [30], digital reform initiatives need to get past several organizational, legal, financial, technological, and cultural obstacles.
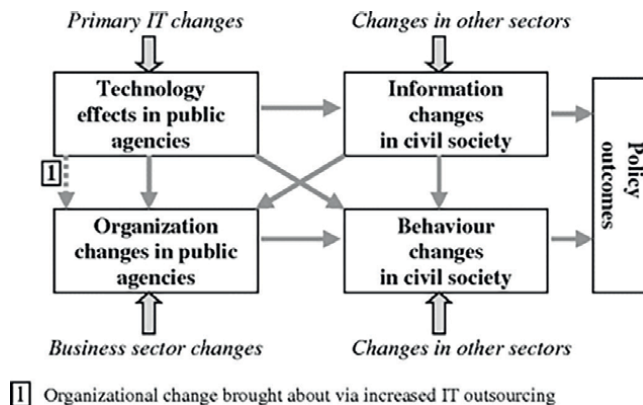
Figure 2.
IT Changes in Modern Public Management. Source: Ref. [26].

5.2 Overcoming barriers to digital reform

Initiatives for digital reform face many obstacles, as noted by authors in Ref. [30]. These consist of barriers related to organizations, law, money, technology, and culture. An organization may, for instance, be resistant to change due to long-standing practices and frameworks. Privacy concerns can give rise to legal issues [8]. Financial limitations may restrict the resources available for putting reforms into action [31]. Older infrastructure or a lack of technical know-how may be the cause of technological obstacles [13]. Employee resistance resulting from being accustomed to traditional work practices is one example of a cultural barrier [6].

5.3 Program theory evaluation and logic analysis

By deducting the number of unemployed persons from the total labor force for each nation, we can determine which nation had the greatest number of employed individuals in 2012. This tells us which nation had the highest number of employed individuals [31]. The computation is shown here:

- *Egypt*: (27.7 {Million} - 12.6% Times 27.7 {Million} = 24.2 {Million})

- *Iran*: (26.4 {Million} - 15.3% Times 26, 4 {Million} = 22.3 {Million})

- *Italy*: (25.1 {Million} - 9.3% Times 25.1 {Million} = 22.8 {Million})

- *Turkey*: (27.4 {Million} - 8.0% Times 27.4 Text {Million} = 25.2 {Million})

Turkey had the highest number of employed people in 2012, with 25.2 million employed people. Combined with evaluating program theory and logic analysis, understanding employment trends can inform the development and evaluation of economic programs [32]. Logic analysis could be used to evaluate whether initiatives to reduce unemployment are based on sound theory and are effective (**Table 4**) [31].

This approach improves program design and evaluation validity, leading to more effective strategies to achieve economic goals [12, 29].

To relate the employment data to program theory evaluation and logic analysis, it is prudent to consider the following [32]:

- *Program Theory Evaluation*: Evaluate the effectiveness of government job creation programs by analyzing employment trends. For example, if a program aims to

	Country	Percentage of unemployed individuals	The number of people employed (in millions)
A	Egypt	12.6	27.7
B	Iran	15.3	26.4
C	Italy	9.3	25.1
D	Turkey	8.0	27.4

Source: Ref. [32].

Table 4.
Rate of unemployment and workforce size.

reduce the unemployment rate, actual employment figures can be used to assess whether the program's objectives are being achieved.

- *Logic Analysis*: Comparing anticipated outcomes (derived from the program's theory) with real employment data can aid in improving the strategies of the program. Logic analysis can offer alternatives or enhancements to attain the intended outcomes if the anticipated decrease in unemployment is not seen [32].

- *Impact on Public Services*: Workforce participation has a direct bearing on public service delivery, job creation, and citizen trust in government [26]. Because of the increased tax income, the creation of new jobs, and the increased public trust in the government's ability to manage the economy, high employment can result in improved public services.

To summarize, the employment statistics from 2012 can be an essential component in assessing and enhancing economic initiatives, which will ultimately lead to stronger public service delivery and governance. For instance, Turkey's greater employment rate may be a sign of the effectiveness of its economic policies at the time [26].

5.4 Public service delivery

The literature suggests that the analysis of employment trends may account for this effect, and that the use of logic analysis and program theory evaluation can have a big impact on public service delivery [26]. These observations show some potential implications and are consistent with the data that is currently available:

1. *Informing Policy and Program Development*: Public agencies can create policies and programs that effectively address the needs of the populace by having a better understanding of employment trends [32]. Programs to offer education, career training, and other employment services, for instance, could be created if a nation has a high unemployment rate.

2. *Enhancing Service Delivery*: In order to guarantee that programs are founded on solid theory and produce the desired results, program theory evaluation, and logic analysis can be used to enhance service delivery. More successful and efficient services may result from this.

3. *Improving Accountability*: Because they offer a transparent framework for assessing program performance, these assessment techniques can also enhance accountability. In addition to ensuring the efficient use of public funds, this can give decision-makers important information.

4. *Facilitating Continuous Improvement*: In conclusion, these evaluation techniques can promote ongoing enhancement by pinpointing areas in which programs are falling short of goals and offering possible ways to improve.

Summing up, by making sure that programs are successful, efficient, accountable, and always improving, the application of such strict evaluation techniques can greatly enhance public service delivery [32].

5.5 Deep vs. shallow-inscribed e-government applications

The degree to which these applications force their design upon users is conveyed by the concept of deep and shallow e-government applications. Applications that are deeply engraved can be seen as mainly restrictive and creatively challenging. Their intended use is prescribed by "deep inscriptions" found within. Conversely, applications with a flat typographical style offer greater adaptability and enable diverse user interactions.

An instance of a deep e-government application would be a tax reporting system that necessitates users to adhere to a particular workflow. On the other hand, a government website that lets users freely navigate and access information in a non-linear way might be considered a flat-written application.

Lastly, the opinion addresses the ideas of deep versus shallow e-government applications, the difficulties of digital reform, and the function of program theory evaluation and logic analysis in resolving these difficulties [33]. Policymakers and evaluators working on digital transformation projects can benefit greatly from an understanding of these factors (**Table 5**).

The text discusses two types of e-government applications: design-imposing and reality-supporting [26]. Design-intensive applications are restrictive and contain "deep inscriptions." Strong systems, values, competencies, and processes are necessary or enforced by them [33]. The South Asian planning/budgeting system's decision support system serves as one illustration [34]. It necessitates a collection of logical design inscriptions regarding the objectivity of information, the formality of procedures, people's roles and skills, organizational strategies present, organizational culture rationale, and organizational politics absent [34]. These intricate designs lessen the likelihood of local adoption and thwart improvisation during deployment [33]. Users are forced to either accept or reject the system's contextual recommendations. They must drastically alter their context if it does not match in order to comply with the e-government application's requirements [35].

To lessen user appropriation and improvisation, some e-government domains purposefully prioritize the design-oriented approach [27]. For instance, because staff autonomy was frequently associated with corruption, the majority of e-transparency cases looked at limited design flexibility [33].

Conversely, applications that support reality are more empowering and have "superficial inscriptions." Few systemic contextual components are required or enforced by them [36]. An application for word processing is a typical example. Certain design presumptions are made regarding the capabilities, technological framework, and cultural norms surrounding documentation and technology [27]. Nevertheless, compared to the decision support system, these assumptions are far lower. Inscriptions with a flat design are more malleable and can be modified, appropriated, and improvised to fit the context of the user. According to Ref. [35] analysis, applications that supported reality possessed a far greater probability of success than those that imposed design.

Reality-Supporting	Design-Imposing
e-Government Application	e-Government Application
(Shallow inscription)	(Deep inscription)
Source: Heeks [27].	

Table 5.
Deep vs. shallow enrolled e-government applications.

Another factor is the e-government project's overarching idea. According to Ref. [36], e-government designers' exposure to the realities of the user context is one factor in project planning [35]. For instance, the Sri Lankan Revenue Department made the decision to publish financial reports in a more transparent manner by using the Internet. The designers' comprehension of the user context had an impact on this choice [3].

In conclusion, e-government application success hinges on how well designers understand the user context and strike a balance between design and reality-supporting components [37]. These findings reveal a profound comprehension of the subject, a careful reading of the literature, a critical evaluation of the body of current knowledge, and a persuasive argument [9]. According to Ref. [38], they also exhibit a high degree of academic commitment and, as a result, show a willingness to contribute to the continuing academic discussion on digital reforms in public sector management from a transnational perspective [35, 38]. Future research and advancements in this field may be guided by the gaps and limitations in the literature that have been identified.

5.6 Regional variations in change management

Several significant conclusions are drawn from the literature review on change management from a cross-national perspective:

1. *Drivers and Triggers:* A number of factors are responsible for driving and triggering change management practices and initiatives—cultural, political, social, technological, economic, and ecological aspects [27].

2. *Differences between regions:* Depending on their objective, scope, extent, speed, and duration, change management initiatives and practices differ between nations and regions [28].

3. *Impact and Effects:* The performance and management of organizations are impacted by change management activities and procedures in both positive and negative ways. According to Ref. [29], they can foster resistance, risk, and uncertainty in addition to increasing adaptability, innovation, and efficiency [11].

4. *Obstacles and Difficulties:* There are a number of obstacles and difficulties that face change management programs and techniques, such as those related to motivation, leadership, communication, and culture [30, 39].

5. Comparative analysis of change management practices

The literature does, however, also highlight certain shortcomings and gaps:

1. *Lack of a clear definition:* According to Heeks [27], change management is not well defined or conceptualized.

2. *Comprehensive comparison is required:* According to Ref. [28], a thorough and methodical comparison and analysis of change management programs and practices across various nations and regions are required.

3. *Robust assessment:* According to Ref. [29], there is a need for accurate and reliable measurement and assessment of change management initiatives and their effects on organizational performance and management.

4. *Critical review is necessary:* Change management assumptions, constraints, and alternatives need to be reviewed critically and reflectively [30].

These findings show a profound comprehension of the subject, a careful reading of the literature, a critical evaluation of the body of current research, and a persuasive argument [28]. Additionally, they exhibit a high degree of academic engagement, suggesting a readiness to add to the continuing scholarly discourse on change management in public sector management from a transnational perspective [29]. The gaps and restrictions found in the literature also point to potential areas for future study and advancement in this field [30].

6. Context-specific management practices

Perspective: The management of the public sector functions within a multifaceted and intricate setting. Management practices are not always universally applicable, as highlighted by the authors in [2]. Conversely, they contend that various political, social, and historical factors have shaped public administration. Public management reform, according to Ref. [37], is the intentional modification of public sector organizations' organizational structure and operating procedures with the goal of enhancing performance.

Achieving a balance between theoretical frameworks and real-world implementation is essential for the effective management of the public sector [2], acknowledging that political dynamics, resource limitations, and stakeholder interests all affect managerial choices. To effectively handle the intricacy of governance, managers must establish a connection between theory and practice. This is further supported by Kiran's [36] research on government transformations, which also highlights the importance of having capable leadership during periods of major change.

Evolving landscape: Public Sector Management, eighth edition, recognizes the challenges of the present. Public administration is being impacted by issues like geopolitical shifts, climate change, and technology disruptions. Decision-making and service delivery, for instance, are changing as a result of the combination of artificial intelligence and data analytics. In public organizations, sustainable practices are also necessary due to the climate crisis. Readers are urged to discuss these modern problems and look for creative solutions that address societal demands [2]. Furthermore, covered in Lartey are new developments in the public sector that are influencing how governments function, such as AI-driven companies and digital reforms.

Global perspective: National boundaries are not a barrier to public sector management. The authors in Ref. [2] stress the value of having a global viewpoint. They look at how management practices are impacted by variations in economic development, cultural norms, and governance models. Managers can apply best practices to their own context and draw lessons from diverse experiences by having a thorough understanding of these global nuances. The need for resilience and creative solutions on a global scale is further highlighted by Capgemini's research on important trends in the public sector [20, 36].

For policymakers, scholars, and practitioners who are struggling with the intricacies of public administration, these offer insightful information [22]. A solid grasp of the subject, extensive reading of the literature, critical evaluation of the body of current research, and a persuasive argument are all evident in the literature review. It also indicates a strong commitment to academia and a readiness to add to the current scholarly debate on public sector management from a transnational angle. Future research and advancements in this field may be guided by the gaps and limitations in the literature that have been identified.

7. Discussion

Our research's discussion section, where we interpret and clarify the significance of our findings, is a crucial component. Here, we make a connection between our findings and the initial research questions and objectives. We also talk about the parallels, discrepancies, and surprising findings between our findings and those of earlier research.

This section discusses conclusions drawn from the study regarding e-government, development models, and the idea of poverty traps. It is about how the work expands the existing body of knowledge and how it might impact practice, policy and future research directions.

Additionally, discuss the shortcomings of our investigation and offer ideas for further research. This might involve fresh research questions based on our discoveries or alternative approaches to delve deeper into these subjects.

In essence, the discussion section is where we make sense of what our findings mean in the broader context of our field. It is where we tell the story of our research and illustrate its contribution to the wider academic discourse. Let us proceed with a detailed discussion of our findings.

In the discussion section, we delve into the findings from our literature search and how they relate to the broader context of our research. Based on this examination of models of e-government development and the concept of poverty traps, several important findings emerged:

1. *E-Government Development Models*: Both the [27] and the [6] models provide valuable frameworks for understanding the stages of e-government development. The intricate relationships between social and environmental factors that contribute to poverty, however, may be oversimplified by them [8].

2. *Cross-Scale Interactions and Social-Ecological Diversity*: A more nuanced picture of persistent poverty may be obtained by taking into account as part of an integrated understanding of poverty traps; research indicates that cross-scale interactions and social-ecological diversity are important [19, 21].

3. *Limitations of Stagist Approach*: The stagist approach to e-government development may not adequately capture the non-linear and dynamic nature of poverty. Moreover, these models may not be universally applicable, particularly in the context of developing countries that can learn from the experiences of developed countries [8].

4. *Need for Tailored Strategies*: Policymakers need to tailor e-government strategies to their country's unique context, taking into account local socioeconomic, cultural, and political factors [23]. This includes understanding the level of digital literacy, infrastructure, and the readiness of government institutions for digital transformation.

These findings highlight the need for a more integrated and nuanced understanding of poverty traps and e-government development. They also underscore the importance of tailoring strategies to the unique social-ecological context of each country. Future research directions are suggested, and the following section looks at how these findings might affect practice and policy.

8. Conclusions drawn from the research

The implications of a study refer to the potential impact and applicability of the research findings in real-world contexts. They can be theoretical, practical, or policy-related and can influence future research directions, professional practice, or decision-making processes.

The following ramifications might apply to the research on e-government development models and the idea of poverty traps:

1. *Theoretical Implications*: The findings enable a more sophisticated understanding of poverty traps and the advancement of e-government, which adds to the body of knowledge already in existence. They challenge the oversimplified stagist approach and highlight the importance of considering complex social-ecological interactions.

2. *Practical Implications*: For practitioners and policymakers, our research suggests the need for tailored e-government strategies that take into account the unique socioeconomic, cultural, and political context of each country [23]. It also underscores the importance of cross-scale communications and social-ecological diversity in understanding and addressing poverty.

3. *Policy Implications*: Our research could inform the design and implementation of policies aimed at alleviating poverty and improving e-government services. Policymakers might need to consider the complex dynamics of poverty traps and the role of social-ecological interactions in shaping these dynamics.

9. The study's limitations

Every study has its bounds, and acknowledging them is crucial for maintaining the integrity and credibility of the research. In our study, potential limitations could include:

1. *Scope of Literature Review*: While we strived to conduct a comprehensive literature review, it is possible that some relevant studies were inadvertently omitted.

2. *Applicability of Models*: The models of e-government development and poverty traps discussed in our study may not be universally applicable, particularly in relation to developing nations.

3. *Complexity of Social-Ecological Interactions*: While our study highlights the importance of social-ecological interactions, fully capturing the complexity of these interactions is challenging.

These limitations should be taken into account when interpreting our findings. They also suggest avenues for future research, such as conducting more in-depth studies on the social-ecological dynamics of poverty traps in specific contexts.

10. Conclusion

As this chapter draws to a close, it is appropriate to consider the key takeaways and conclusions from the examination of e-government development models and

the notion of poverty traps. This is the main conclusion that can be drawn from this work.

The study started out by looking at the conventional e-government development models put forth by the [6] as well as [4]. Yıldız [8] found that although these models offer a useful framework for comprehending the phases of e-government development, they might oversimplify the intricate relationships between social and environmental factors that cause poverty).

Next, the subject of poverty traps came up for discussion. In order to comprehend and combat poverty, it was emphasized how crucial it is to take into account cross-scale interactions and social-ecological diversity. According to Ref. [19], adopting a wider viewpoint can aid in creating more comprehensive and successful approaches to reducing poverty).

Nevertheless, it also recognized the limitations of our research, such as the extent of the literature review and the suitability of the models examined. Notwithstanding these limitations, the study adds to the corpus of knowledge by offering a more nuanced comprehension of poverty traps and the development of e-government.

All things considered, our research emphasizes the necessity of a more comprehensive and nuanced understanding of e-government development and poverty traps. It emphasizes how crucial it is to modify tactics to fit the particular social-ecological context of every nation. While there's no universally applicable solution approach to e-government or poverty alleviation, the research suggests that considering the complex dynamics of poverty traps and the role of social-ecological interactions can lead to more effective and sustainable solutions [17].

It is envisaged that as the study goes on, the findings will inspire more research in this field and result in better policy development and execution in the domains of e-government and poverty alleviation [18]. Anticipate how these observations will be used and developed in subsequent research.

11. Recommendations

From a cross-national perspective, the following recommendations are put forth for policymakers and public sector management practitioners based on the findings of the data analysis and literature review of the chapter:

1. *Holistic and Integrative Approach*: Take a comprehensive and integrative approach to managing the public sector, taking into account and balancing the various interconnected issues, challenges, trends, and developments that both affect and are impacted by public sector oversight. To promote peace, prosperity, and solidarity in Europe and beyond, the European Union, which consists of 27 member states, coordinates and integrates the public sector management of these states in a variety of areas and sectors [5, 25]. This is an example of EU policy.

2. *Collaborative and Participatory Approach*: Take a cooperative and interactive approach to managing the public sector that involves all of the various and interconnected parties involved. The United Nations, which involves the public, commercial, and civil society sectors of its 193 member states in the development and execution of international policies and services, provides an illustration of this strategy [25].

3. *Adaptive and Innovative Approach*: Adopt a flexible and creative management strategy for the public sector that can adjust to the shifting demands and de-

mands of stakeholders, citizens, and legislators. Singapore serves as an illustration of this strategy, as it is continuously innovating and adjusting its public sector management to satisfy the shifting demands and expectations of its stakeholders, citizens, and policymakers [7, 25].

4. *Learning and Improvement Approach*: Use an approach to public sector management that is centered on learning and improvement, assessing and evaluating the results and performance of public sector management practices and initiatives. Canada exemplifies this strategy by continuously assessing its public sector management practices and initiatives, as well as by taking lessons from the achievements and shortcomings of others [25, 33].

Along with these challenges and barriers, these recommendations face: B. strong motivation, coordination, and communication skills in addition to facing hurdles and obstacles due to cultural differences [39]. Stakeholder engagement, strategic planning, capacity building, effective leadership, and ongoing learning and development, however, can all help to overcome these obstacles [25].

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Conflict of interest

I hereby assert that I have no conflicts of interest related to multiple interests held by an individual or organization. These interests could potentially influence the purity of motives or decision-making processes. Financial, personal, and professional conflicts are among the many scenarios that can arise. As the author, I want to emphasize that I do not possess any such potential conflicts. This assurance ensures that everyone involved can make informed decisions and maintain integrity and trust. Hence, I affirm that there are no possible conflicts of interest associated with the information presented in this post or the knowledge it provides.

Declarations

Dr. Dennis Sebata, the distinguished author of this chapter, meticulously dissects the topic of "Global Perspectives on the Latest Developments in Public Sector Management: Challenges, Opportunities, and Impacts." His analysis spans both historical and contemporary viewpoints, offering a comprehensive exploration of the subject.

Dr. Sebata's profound knowledge and extensive experience in the field have equipped him to provide in-depth insights into the topic. This chapter stands as an invaluable resource for those aiming to broaden their understanding of public service management and its role in service delivery.

The author's expertise ensures a thorough and enlightening exploration of the subject matter, making this chapter a significant contribution to the field. Whether you are a student, a professional, or simply someone interested in public sector management, this chapter promises to enrich your knowledge and perspective.

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Chapter 2

Quality of Public Services in the Territories of Donetsk and Luhansk Regions Controlled by Ukraine

Volodymyr Kipen and Natalija Nykyforenko

Abstract

Relevance of the study of access to quality public services of the population living in the territories of Donetsk and Luhansk oblasts controlled by the Government of Ukraine is due to the high level of social vulnerability caused by the ongoing military conflict in eastern Ukraine and the ambiguous consequences of decentralization reform, as well as the introduction of quarantine restrictions caused by the COVID-19 pandemic. The purpose of the work is to analyze the quality of services provided by public authorities and local governments to residents of the government-controlled territories of the Donetsk and Luhansk regions, based on focus group interviews. Processed information on the range of available public services in these locations defines the most popular services and barriers to their delivery and criteria for assessing the activities of residents of public service entities, as well as ways to improve the quality of those services. The influence of the spatial factor on ensuring the quality of public services is significant. Due to the manifestations of crisis consciousness, formed in living conditions near the zone of military conflict, residents are not too demanding as to the quality of services and react mainly to cases of long-term lack of services, vital for life support. There are no clear criteria for assessing the quality of public services in their collective mindset. The availability of public services (the actual possibility of obtaining them at the place of residence) and the transparency of the authorities' activities that provide them are essential. For the most part, residents do not feel their responsibility for the quality of services. The influence of the spatial factor on ensuring the quality of public services is significant is revealed. The study showed the expediency of focusing the efforts of local authorities and the "third sector" on the formation of appropriate client competence of public service recipients controlled by Ukraine areas of Donetsk and Luhansk regions, in particular, of the full range of services available in situ, the conditions and mechanisms for their provision, the powers of local governments, the nature and essence of relations between the subjects of public services); on the development of instruments of "participatory democracy" and public control of power mechanisms. The prospects for improving the management of public

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services in the direction of further devolution and modernization of service delivery mechanisms through technological and depersonalization of processes, principles of "single window," efficiency, transparency, and customer-tailored orientation are outlined.

Keywords: public services, availability of services, quality of services, public authorities, local governments, focus group interviews, territories controlled by the government of Ukraine

1. Introduction

One of the important aspects of the decentralization reform, which has been implemented in Ukraine since 2014, is the creation of appropriate conditions for the development of capable territorial communities, the result of which should be an increase in the level of comfort of life, quality of services, optimization of the use of public funds, prompt and transparent solution of problems in situ, residents' broad awareness of community affairs, and their ability to influence management decision-making. Conceptually, the decentralization reform in Ukraine is based on the idea of a "service state," the ethics of "serving society" in the activities of public administration, which are institutionally implemented through formalization, standardization, comprehensive regulation of the sphere of public administration, as well as its deconcentration and demonopolization ([1], p. 124), the introduction of a model of client-oriented service to citizens, and the use of tools for evaluation by citizens of the activities of state authorities and management.

The implementation of the decentralization reform in the Donetsk and Luhansk regions was complicated by the temporary occupation of parts of these territories by the Russian Federation since 2014 and the associated infrastructural and migration losses, increased security and political risks, a controversial information field, severed economic ties, a significant increase in the population structure of the share of socially vulnerable groups. After Russia's full-scale invasion of Ukraine on February 24, 2022, a large part of the territory where this study was conducted was occupied. The aggressor brought enormous destruction, mass terror. The created system of providing public services to the population has been destroyed, and when the territories of Donetsk and Luhansk regions are returned to Ukrainian control, the Ukrainian state will have to completely restore it. This work can show what the system of providing public services by various government institutions was, how it was developed, and how it was perceived by the population until the moment of open aggression. The results can be useful in the process of recovery during the deoccupation of the territory.

The international community (thanks to advisory and expert support, grant funds, and independent monitoring) stimulated the Government of Ukraine and local self-government bodies to ensure the appropriate level of quality of public services in the territory of the Donetsk and Luhansk regions under the control of the Government of Ukraine. When evaluating public services in Western methods that are adapted to Ukrainian realities, an integrated approach is established, which involves the use of objective and subjective indicators – indicators of satisfaction with the quality of services, evaluations of the activities of government bodies, which are obtained through public opinion polls and reflect public evaluation of the results of the activities of public authorities through the population's perception of changes in

the level and quality of life. Among the mass polls of recent years in the Donetsk and Luhansk regions, which included questions about the respondents' assessment of the quality of the provision of certain types of public services or evaluations of the activities of government institutions at the central and local levels, one should mention the poll of the Ilko Kucheriv "Democratic Initiatives" Foundation [2], the poll Info Sapiens [3] and polls conducted by the sociological group "Rating" [4], on behalf of the Center for Analysis and Sociological Research of the International Republican Institute, polls within the framework of Transparency International's "Transparent Cities" program [5], polls as part of the evaluation of the SCORE Index for of Eastern Ukraine [6], etc.

The analysis of the results of these surveys revealed the presence of certain contradictions between subjective indicators of citizens' satisfaction with services, indicators of trust in the authorities and objective indicators of the activity of central authorities and local self-government bodies, as well as indicators of the progress of reforms. This led to the need for a more active application of the methodology of qualitative sociological research to identify the diversity of needs, interests, and requests of citizens, the mechanisms of forming assessments in their minds, and the influence of systematically changing situations on the assessment of the quality of public services. Local surveys by the method of focus groups and/or in-depth interviews provided local self-government bodies with important information for prompt "spot-on" response to problems in providing services to residents, eliminating manifestations of deprivation and preventing the growth of social tensions, and engineering strategic plans for community development.

The purpose of the work is to determine the quality of the provision of services by state authorities and local self-government bodies to residents of the territories of the Donetsk and Luhansk regions under the control of the Government of Ukraine based on the data of focus group interviews. The tasks were as follows: to identify the most-demanded public services by residents and barriers to their receipt; to find out the understanding of the essence of the concept of "public services" by their recipients and the criteria for evaluating the quality of services that are significant for them; to analyze the impact of the service situation on citizens' trust in the authorities; and to determine the directions and ways of improving service in the settlements covered by the study.

As part of the project of the Donetsk Institute of Social Research and Political Analysis "Services to the population and evaluation of the authorities in Donbas on both sides of the demarcation line" in 2021, we held six focus groups with residents of the cities of Mariupol, Slovyansk, Bakhmut of the Donetsk region, the cities of Severodonetsk and Lysychansk, and the villages of Stanytsia Luhanska and Luhansk region. About eight to ten people participated in each focus group (54 people in total). The composition of the groups was heterogeneous, the participants differed in gender, age, level of education, professional affiliation, and belonging to socially vulnerable groups. The development of the focus group survey guide was preceded by an analysis of works devoted to the assessment of the quality of public services, in particular, by V. Averyanov, E. Afonin, V. Bakumenko, T. Burenko, N. Hnydyuk, V. Gorelov, N. Gudyma, V. Dolechek, O. Babinova, I. Dragan, T. Kalyta, A. Kirmach, I. Koliushko, T. Mamatova, V. Melnychenko, N. Plahotniuk, V. Soroko, A. Chemeris, Y. Sharov, and V. Yaroshenko.

There is no clear formulation of the concept of "public services" in the scientific discourse. Among domestic researchers, there are discussions about the distinction between the concepts of "public services," "state services," "administrative services,"

"municipal services," "social services," and "public services." When developing the research toolkit, we referred to the understanding of public services as the activities of service providers (public sector entities) aimed at meeting the needs of consumers with budget funds provided by public authorities. We have divided public services by subjects of provision – into state services and services provided by local self-government bodies. Administrative services were singled out as a component of state and municipal services. Herewith, the latter was considered as the result of the exercise of power by subjects (executive authorities, local self-government bodies, state enterprises, institutions, and organizations), which ensure the legal shaping of the conditions for physical and legal entities to exercise their rights, freedoms, and legitimate interests upon application (issuance of licenses, certificates, and registrations).[1] According to the functional approach, we classified public services according to the basic spheres of life support – security, information, communal (including infrastructure, housing and communal services, and roads), cultural and leisure, medical, educational, social (social protection and social security), and transport. Regarding the assessment of the quality of public services, the following criteria were taken into account: service availability, effectiveness, timeliness, convenience of their provision, as well as professionalism, openness, and respect for customers. The content of these criteria is laid down in the "Concept of development of the system of providing administrative services by executive authorities."[2]

2. Research result

Focus group surveys showed that the concepts of "public services" and "state services" in the lexicon of the participants are not common due to the lack of formation of the "service state" model in Ukraine. The concept of "state support" was more in line with the interviewees' paternalistic view of their relations with the state and was mainly associated with various social programs, crisis response (to the pandemic, as well as to large-scale fires in Luhansk region), and social protection. According to the answers of the participants, two basic approaches to the understanding of "state services" are distinguished – narrow and broad. The first is related to the association of public services mainly with administrative services, the bureaucratic apparatus of the state. The second – with the full functionality of the state – is related to life support and regulation of the main spheres of social life. In this case, the participants referred to a wide range of services, which corresponded to the list of services previously selected for discussion by the researchers.

It turned out that the majority of focus group participants do not understand the importance of the principle of dividing state power into legislative, executive, and judicial branches as a foundation for observing the rights and freedoms of citizens. When discussing the responsibility of certain foundations and institutions for the provision of public services, the majority of interviewees focused on the vertical of the executive power, in fact, on its administrative functions. At the same time, the legislative branch of power was pushed to the periphery, with its representative function, rule-making, and the fact that the legislative power sets the "framework" for the

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[1] Decree of the Cabinet of Ministers of Ukraine "The concept of development of the system of provision of administrative services by executive authorities" dated February 15, 2006 № 90-p. URL: https://www.kmu.gov.ua/npas/29277890

[2] Same page.

actions of the executive power was ignored. As a result, the participants of the focus groups did not feel their own responsibility for the effectiveness of the mechanism of state power and therefore for the quality of the services offered to them by the state.

As for the functionality of the central and local authorities, the responses of the participants contained a certain of confusion caused by a lack of information about the progress of the decentralization reform, the power of city mayors, and the heads of the newly created military-civilian administrations (MCA). Thus, respondents associated the financing of educational, cultural, recreational, and medical spheres with local budgets, while in reality, subventions from the state budget are directed to the financing of these spheres. According to one of the participants, such "incomplete information" creates grounds for manipulation by representatives of both local and central authorities – "for the sake of earning positive ratings."

The problem of the participants' lack of awareness of the conditions and mechanisms of service provision, knowledge of the nature and essence of the relations between the subjects of service provision along the "center – region – city" vertical was raised at all focus groups. Participants rarely refer to official sources of information, more to information adapted for perception in social networks, messengers, news content on television, and interpretations of relatives and acquaintances. As a result, their perception of the situation with the provision of services is very different from reality. Competence is determined mainly not by knowledge, but by the depth of personal experience of receiving certain services, and as a result, their assessments of the quality of services are biased.

As a positive note, we note the generally favorable reaction of the interviewees to the processes of decentralization, the conviction that the proper quality of service should be provided locally – in accordance with the requests of residents and existing "sensitive points." There were signs of the establishment of "participatory democracy" practices, the development of public activism in situ. Many of the participants trusted the "third sector" to control the quality of services. The values of representative democracy were especially realized by citizens in cities where local elections were not held. In particular, the participants of the focus group in the city of Severodonetsk expressed concern about the prospects for the involvement of the "third sector" in cooperation with the local authorities after the creation of the MCA in Severodonetsk. In their opinion, the process of formation of the MCA was "in-house" – its newly appointed head did not communicate much with the community and did not plan to create a public council.

Apart from Stanytsia Luhanska, the quality of administrative services was highly appreciated by focus group participants in all settlements of Donetsk and Luhansk regions involved in the study. Due to the establishment of Centers for Administrative Services (CASs) in cities and the introduction of a client-oriented service model there, administrative services (issuing passports, extracts, certificates, registration of individual enterprises, etc.) are mainly provided on the basis of electronic queues, promptly and transparently. As an achievement, the participants noted the convenience of the "single window" principle in the provision of administrative services, compliance with the requirements of universal design in the premises of the Centers for Administrative Services and, therefore, their accessibility for people with special needs. At the same time, focus group surveys visualized such problems of providing administrative services as a lack of information about the available range of administrative services, the order of their provision, as well as a deterioration in the level of access of residents (especially the elderly) to administrative and social services during the quarantine period caused by COVID-19. According to the proposals expressed by

the participants, the mentioned problems should be solved thanks to the development of information navigation and digitalization of services: improvement of the websites of city councils/MCA (Slovyansk and Lysychansk), websites of communal enterprises, basic services, etc.; launch of new mobile applications; creation of call centers, etc. It was about implementing programs for training pensioners in online services, creating computer access points for them (through hubs and condominium offices).

In Stanytsia Luhanska, the participants characterized the situation with the provision of administrative services as critical. At the time of the survey, the local MCA had not yet been appointed, and the premises of the former district administration were closed. The participants expressed concern due to incomplete information about the situation with the MCA, about the formation of the local budget and arrears from the payment of salaries to employees of budget institutions. However, there was no administrative collapse in the town, because, according to the participants, the Civil Registry Offices, the State Migration Service of Ukraine, the State Tax Service of Ukraine, the Pension Fund of Ukraine, the State Employment Center, and the National Police of Ukraine were working at the proper level. The participants of the focus group noted that there is still a demand for receiving administrative services in Stanytsia Luhanska on the part of Ukrainian citizens living in the temporarily occupied territory.

From the participants of the focus groups among entrepreneurs, there were both positive and negative assessments of the services of the State Tax Service in situ. The positive ones related to the significant facilitation of reporting thanks to electronic services. Criticism was caused by the lack of competent consultations on the part of tax officials. In the context of the discussion of tax reporting, entrepreneurs also talked about the high risks of doing business in the region, about the negative impact of quarantine restrictions on their business activities. At the same time, they noted that they did not use state support during the pandemic and did not receive and do not receive operational information about support programs for entrepreneurs and that there are few such programs implemented at the city level.

Focus group participants noted that employment centers operate in all settlements involved in the study and that the demand for their services (for state support due to unemployment) increased significantly during the quarantine. However, the services of employment centers do not make it possible to effectively overcome the problem of unemployment in small towns due to the closure of bankrupt city-forming enterprises and the shrinkage of labor markets. Participants of focus groups in Bakhmut, Lysychansk, and Stanytsia Luhanska complained about the problem of unemployment.

Mostly negative feedback from the participants, such as "everything is bad there," echoed in the direction of local branches of the Pension Fund of Ukraine (PFU). Only the participants from Stanytsia Luhanska spoke sympathetically to the employees of the PFU, who have been working under a significant load for several years in a row, caused by the flow of clients from the occupied districts of Luhansk region. According to the participants of the focus groups, many difficulties in serving pensioners – -"resettlers" (people of retirement age who live in the occupied territories, but periodically go to the territory under the control of Ukraine to receive pensions) – are caused by the current order of pension service: pensions are issued only through JSC institutions of "Oschadbank." The constant queues at PFU branches (before the quarantine) were explained by focus group participants not only as a double burden on this structure in the settlements of Donetsk and Luhansk regions in territories under the control of the Government of Ukraine due to a significant flow of

pensioners – "settlers" from the occupied regions – but also by the age characteristics of this categories of clients, their lack of adaptability to using the online services of the PFU, and the current lack of electronic signatures (necessary for entering online services) for most clients.

The information of the participants about the activities of the Departments of Social Protection of the Population and Territorial Centers of Social Services of the Population was fragmented and sometimes contradictory, as most of them do not use the services of these institutions and were able to share only general observations or experiences of their relatives. Only in Lysychansk, there was the issue of untimely social support by the state to victims of large-scale fires in the fall of 2020.

As a result of the coronavirus pandemic, focus group participants described medical services as the most relevant at the time of the study. As for the quality of this type of service, the most complaints were about the non-transparency of the data on which services after the second stage of medical reform for patients are paid and which are free. The complexity of the access procedure to specialist doctors and the lack of relevant specialists on the ground was noted. The participants claimed that they did not receive the state-declared free treatment of the coronavirus disease and that there are problems with the hospitalization of patients with COVID-19. Ways to solve the mentioned problems include the need to inform the population about the list of unpaid and paid medical services (examinations, tests, and operations) with the help of the websites of city councils/MCA, mass media, distribution of booklets, notifications through personal offices of patients, information stands in hospitals; launching programs to attract doctors in cities (targeted training at medical higher education institutions and provision of housing for young specialists); introduction (restoration and expansion) of state programs for financial support for the treatment of serious diseases; and conducting complex operations. Among the positives of the medical reform, the participants named a significant improvement in the infrastructure of the health care sector, thanks to major repairs of hospitals and re-equipment of medical facilities in the cities of Mariupol and Bakhmut, as well as the introduction of an electronic waiting list for family doctors.

According to the focus group survey, preschool and secondary education is available in all settlements. None of the focus groups discussed overcrowding of groups in kindergartens or classes in schools. Focus group participants identified the main obstacles in the provision of educational services with the introduction of distance learning in schools during the quarantine, which, in their opinion, led to a certain deterioration of students' knowledge due to the lack of gadgets and high-quality Internet. The interviewed parents were concerned about the decrease in the level of financial and spatial availability of children's out-of-school education. The participants associated the improvement of the quality of the provision of educational services with the need to increase (or, at least, not reduce) the amount of funding in the field of school and out-of-school education and with a greater orientation of training programs on the formation of life competencies, practical skills of education seekers. Focus group participants consider the need to introduce a transparent system of payment for services in the field of extracurricular education to be an important measure (implementing it not as charitable contributions but as official payment for services at a specified cost, with the possible provision of benefits for socially vulnerable categories of the population).

Regarding the issue of security, the participants of the focus groups concentrated, first of all, on the activities of the patrol police, because, in their opinion, the work of the police in the frontline cities is extremely important for the prevention of terrorist

acts and vandalism in public places. Some participants noted the improvement of the technical support of this structure as positive facts that patrol officers respond to calls in a timely manner and conduct educational and preventive measures. Others, on the contrary, shared cases when patrol officers came to calls with considerable delay, unreasonably demanded the presentation of documents. During the discussion of this issue, the participants showed a clear lack of knowledge about the authority of the police.

Regarding the city infrastructure, the quality of communal services, and public transport, the focus groups discussed the lack of transparency of data from suppliers regarding the cost of services and changes in tariffs; lack of effective communication with service providers from the commercial sector; and underdevelopment of online services for paying for utilities. As a way to solve these problems, it was proposed to create special sites in cities where you could contact all utility service providers online and get all the necessary information about your address (find out about tariffs and debts). Participants of the focus groups in Mariupol and Bakhmut noted positive changes in the provision of communal services related to the creation of condominiums, as well as the regularization of the processes of timely street cleaning and garbage removal. In Lysychansk and Severodonetsk, problems related to wear and tear of utility systems (water pipes and sewers) were mainly discussed. Thus, in Lysychansk, respondents emphasized the problem of frequent multi-day water outages, in Sloviansk – frequent power outages. The most complaints about public transport were expressed in Lysychansk. Focus group participants from most cities complained about the poor state of roads in the city, while noting that intercity and regional roads have mostly already been repaired.

As for the quality of cultural and leisure services, according to the survey, the leisure infrastructure in small towns, is underdeveloped, it is necessary to increase funding from local budgets, search for investments, and grant funds for its development. For many focus group participants, the satisfaction of their own cultural needs belongs to secondary issues due to household chores, raising children, and work activities ("as long as unemployment remains at the previous level – never think about culture, leisure, etc."). In Mariupol, a city with a developed cultural infrastructure (theater, philharmonic hall, palaces of culture, and parks), focus group participants noted a number of positive changes in cultural life in recent years (thanks to significant financial investments in the cultural and leisure sphere, capital repairs are being carried out, and reconstruction of cultural and sports facilitie, and large-scale festivals are organized). In Severodonetsk, the participants talked about improving the leisure infrastructure after the city acquired the status of a regional center. On the other hand, in Sloviansk and Lysychansk, the interviewees complained about the "poverty" of the leisure infrastructure ("there is no place to spend time at all, only some pizzerias and cafes"). In Stanytsia Luhanska, residents noted that their cultural life is centered around the Palace of Culture and the library and that they are extremely worried about the destruction of the infrastructure and the prospect of "turning the town into a village."

The majority of research participants gave a positive answer to the question about the impact of the general level of service quality and provided at the state or local level, on indicators of citizens' trust in the authorities (central and local). However the majority of respondents evaluate the activities of local authorities in different communities equally mediocre. Although objectively they have a different level of service quality, which is determined by the existing infrastructure and the amount of financial investments in development of the service sector. Evaluation of services by focus group participants was carried out mainly in the "past-present-future" coordinate system, which resulted in the effect of "reserved trust" caused by the expectation of the best

from the future (typical were considerations such as "something is being done for the better, there is a positive dynamic, but there are still many unsolved problems, there is room to move forward"). Some participants gave an "weighted average" rating, as a result – excellent ratings for individual spheres of activity (for example, in Mariupol – Centers for Administrative Services, cultural and leisure sphere, were leveled by low ratings for the state of ecology, related to the activities of local metallurgical plants and their non-compliance with environmental standards). When clarifying the factors that led to low or, on the contrary, high assessments of the level of trust in local authorities, the participants who carried out assessments on a rational basis confirmed that these factors are connected, first of all, with the level of transparency of the authorities and the presence of a component of corruption in its activities. It turned out that, for many participants, the communicative important component is customer orientation and openness of local authorities, in particular an atmosphere of respect and courtesy in state/municipal institutions/organizations.

Emotional attachment to one's locality played a significant role in the evaluations of focus group participants of the activities of local authorities, such as "the city where I live and intend to continue to live cannot be bad." Emotionality was clearly manifested also due to the fact that when evaluating the activities of local authorities, the interviewees referred to their attitude toward certain personalities, rather than institutions. The expectations of individual focus group participants for the coming to power of "decent people" who will take care of the community's interests were connected with a simplified perception of power, a misunderstanding of the role of "restraint" mechanisms and other safeguards (regarding departure from democratic standards, corruption, and incompetence) will be motivated by a mission of service. The analysis of expectations for improving the quality of life on the ground demonstrated a certain naivety of the participants' ideas, caused by their insufficient awareness of the powers and nature of the actions of the relevant government structures, the sources and amounts of their funding, and the essence of economic processes and mechanisms. As a positive note, some participants of the study mentioned establishing a dialog between the local government and the community, developing the tools of "participatory democracy," and mechanisms of public control among the ways to improve the quality of local services. The focus group participants evaluated the central government's efforts in ensuring the quality of public services according to criteria similar to the evaluation of local authorities; "mediocre" grades dominated. The participants of the focus group from Stanytsia Luhanska gave somewhat higher ratings to the central government, which can be explained by the specifics of the settlement located on the demarcation line – its fate directly depends on the political will of the country's leadership, the latter's efforts to defend and support the frontline town.

3. Conclusions

Despite the certain progress of the decentralization reform and the results of the regional and local development programs implemented during 2015–2020 in the territories under the control of the Government of Ukraine of the Donetsk and Luhansk regions, the influence of the spatial factor on ensuring the quality of public services remained significant. At the same time, larger cities have more efficient service models and a wider range of services; within the limits of one city, the center is served better than the periphery, and service (in general and in certain spheres of life) in Donetsk region is of higher quality than in Luhansk region.

Due to manifestations of crisis consciousness formed in living conditions in close proximity to the zone of military conflict, paternalistic ideas about the interaction of "state-citizens," and underdevelopment of the "service state" model in Ukraine, residents of the territories controlled by the Government of Ukraine of Donetsk and Luhansk regions are not demanding of quality public services and react mainly to critical cases of long-term absence of services important for life support (in particular, interruptions with water or electricity supply), to inadequate quality of service (for example, medical), when it threatens their life and health.

There is no clear criteria for evaluating the activities of state and local authorities, as well as the services they provide, in the minds of average residents of the settlements covered by the study. The availability of the service is significant – the actual possibility of receiving it at the place of residence, as well as the level of transparency of the authorities that provide the service, the presence of a component of corruption in their activities. Communicative criteria – an atmosphere of respect and courtesy in state/municipal institutions/organizations – are gaining more and more importance.

Citizens (as voters, taxpayers, and members of the territorial community) mostly do not feel personal responsibility for the quality of the services provided to them. Rational/pragmatic arguments often give way to affective ones (manifestations of "local patriotism" or naive dreams of a "bright future") in their justification of expressed trust or distrust of the authorities.

The population's positive perception of the decentralization reform, programs of digitization of services, and activities of the Central National Agency for Public Services, allows to link the prospects of improving the public services management system with further transfer of powers to localities, modernization of service provision mechanisms thanks to technology and depersonalization of processes, application of the principles of "single window," as well as efficiency, transparency, and client orientation.

In addition to overcoming the identified specific local problems in the basic areas of life support, the study proved the feasibility of focusing the efforts of local authorities, as well as the "third sector" on the formation of proper client competence of recipients of public services in the territories of Donetsk and Luhansk regions under the control of the Government of Ukraine: on increasing the level of awareness of residents about the range of locally available services, the conditions and mechanisms of their provision, the powers of local self-government bodies and the MCA, and the essence and nature of relations between the subjects of the provision of public services; on the need for advocacy of the interests of socially vulnerable groups, development of tools of "participatory democracy," and mechanisms of public control of the authorities. This makes it necessary to pay increased attention to the informational and educational direction in regional and local development programs, which were created on the basis of the adopted Donetsk Region Development Strategy for the period up to 2027 and Luhansk Region Development Strategy for 2021–2027.

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Chapter 3

Advancing Governance: Role of Data Analytics in Driving Evidence-Based Decision-Making in Public Administration

Jack Magakwe

Abstract

As the public sector navigates the complexities of modern governance, integrating data analytics has emerged as a pivotal force in shaping evidence-based decision-making processes. This chapter explores the transformative impact of data analytics on public administration, emphasising its role in fostering efficiency, transparency, and informed governance. Through a synthesis of key studies and real-world examples, this chapter illuminates the evolving landscape of data-driven decision-making in the public sector. Public administration and management have transformed through the centuries. Decisions are no longer solely guided by intuition and experience. Embracing data analytics ensured public administration moved towards a future of streamlined efficiency, impactful policies, and empowered citizens. However, navigating this uncharted territory demands caution and moral clarity. This chapter embarks on a two-pronged exploration highlighting the transformative potential of data analytics for enhanced resource allocation, effective program design, and citizen-centric governance. Simultaneously, it emphasises the critical role of good governance and ethical behaviour in ensuring responsible and equitable use of this potent tool. Governments can chart a data-driven course towards a brighter future for all by upholding transparency, accountability, and citizen participation principles. Yet, ethical considerations must remain at the helm, safeguarding against algorithmic bias, data privacy erosion, and discriminatory outcomes. By balancing the allure of data with the principles of good governance and ethical behaviour, this chapter navigates the data-driven public sector towards a just and equitable society.

Keywords: evidence-based decision-making, data analytics, governance, operational efficiency, transparency, accountability, case studies, challenges, future directions

1. Introduction

In an era of rapid technological advancements, public administration and management stand at the crossroads of innovation and tradition. Traditional decision-making processes, often reliant on intuition and past experiences, are now being

redefined by the infusion of data analytics. This chapter delves into the significance of leveraging data analytics for evidence-based decision-making in public administration, highlighting its potential to revolutionise governance.

Integrating data analytics into public administration represents a paradigm shift in decision-making processes, promising enhanced efficiency and informed governance [1]. However, as with any transformative initiative, challenges abound. This chapter explores the hurdles faced by adopting data analytics in public administration, emphasising data privacy concerns and the demand for skilled personnel. Moreover, it outlines future directions, calling for investments in data literacy, inter-agency collaboration, and the development of ethical frameworks to guide the responsible use of data in decision-making.

Data analytics are increasingly crucial in driving evidence-based decision-making in public administration. By utilising data analytics, public administrators can gain valuable insights and identify trends and patterns that can inform policy-making and program implementation [2]. However, it is essential to recognise that there are considerations when dealing with data collected by a public institution. These considerations include addressing potential cybersecurity threats, protecting privacy, and ensuring data analytics do not reinforce existing inequities in delivering public services. In addition, effective data management practices are vital in the context of Artificial Intelligence (AI) in government [3]. They enable the organisation to properly collect, organise, store, and secure data, ensuring its quality and accessibility for analysis [4]. By prioritising data management alongside data analysis, public administration can maximise the value of its data assets and ensure that insights derived from analytics are reliable and accurate. Without proper data management in the context of Artificial Intelligence (AI), the acquisition of data or systems will not produce the desired outcomes in public administration [4]. Therefore, public administrators must invest in robust data management capabilities to support their data analytic efforts and enable effective evidence-based decision-making in the public sector.

2. Literature review

Globally, public sector institutions worldwide have undergone various reforms since the end of World War II to bring about positive change [5]. The urgency of such reforms resulted from numerous factors related to improving service delivery to citizens, implementing more effective and efficient systems, and improving performance management, transparency, and accountability. Most countries have also initiated public sector reforms. However, despite great effort and the number of resources assigned to such reforms, progress has remained slow and limited [6]. Data analytics in driving evidence-based decision-making, from determining credit scores to predicting behaviour, has become increasingly prevalent in various countries. However, system implementation has been met with scepticism and mistrust from the public.

Data analytics uses data, information technology, statistical analysis, quantitative methods, and mathematical or computer-based models to help managers gain insight into their business operations and make better, fact-based decisions [7]. Data analytics examines, cleans, transforms, and models data to discover useful information, draw conclusions, and support decision-making. It involves using various techniques and tools from statistics, mathematics, and computer science to analyse and interpret data [8]. Data analysis as a process has also been linked to big data. Big data is a general term for the massive amount of digital data collected from various sources [8].

According to Da Bormida [9], "big data" refers to the emerging use of large quantities of rapidly collected and complex data. For example, in the public health system in many countries, data and information are paramount to targeting and analysing the most prevalent types of sickness facing citizens. Utilising healthcare data can make more sense in making appropriate interventions. Advancements in information technologies and data analytics represent an opportunity to improve public sector outcomes and a milestone in facilitating the development of more robust systems for care in the case of public health [10]. It can be deduced that robust systems will influence public spaces' decision-making process and policy development.

In business operations, analytics provides managers with valuable insights, identifies trends, patterns, and correlations, and ultimately enables more informed and data-driven decision-making. First, how data analytics can be employed in complex public administration and management systems to enhance governance can be asked. Second, how can decision-making be reshaped through the power of data analytics in the public sector? Expanding on the definition of data analytics in the public sector, we highlight its potential impact on decision-making and policy development. Furthermore, data analytics is poised to revolutionise the landscape of public administration, reshaping decision-making from intuition-driven to evidence-based and delivering tangible benefits to citizens. Data analytics can enhance the effectiveness and efficiency of the service to citizens [11]. At its core, evidence-based decision-making relies on robust data. It translates into harnessing vast datasets generated through various administrative processes in the public sector. Governments can extract meaningful insights from this data by employing sophisticated analytics tools, facilitating a more nuanced understanding of societal needs and challenges [12]. Conversely, evidence-based decision-making in the public sector involves the conscientious use of high-quality evidence to inform policy choices, program development, and resource allocation [13]. Data analytics, conversely, refers to the systematic examination and interpretation of data to uncover meaningful insights, patterns, and trends [14]. The intersection of these two concepts creates a powerful synergy in which data analytics is a key enabler of evidence-based decision-making.

There are five reasons why data analytics can improve decision-making processes and policy development in the public sector. It enhances the effectiveness of public policies and resource optimisation. Resource optimisation maximises the efficiency and effectiveness of the resources available to a business or an organisation. It can identify waste areas and improve distribution across the organisation by analysing resource allocation patterns, such as how much time, money, or personnel are spent on different departments and programs [15]. One way to achieve resource optimisation is to use predictive maintenance models, which use data and analytics to anticipate and prevent potential failures or breakdowns of infrastructure, such as machines, equipment, or networks. Predictive maintenance models can reduce infrastructure upkeep costs by avoiding unnecessary repairs or replacements and increase service availability by ensuring optimal performance and reliability. It can be argued that resource optimisation assists public sector organisations in achieving their goals and objectives with minimal resources and maximum results and analysing resource allocation patterns to identify waste and optimise distribution across departments and programs [16]. For example, predictive maintenance models minimise infrastructure upkeep costs while maximising service availability.

One of the challenges public sector organisations face is delivering high-quality services to citizens promptly and cost-effectively. To achieve this, it is essential to analyse the service delivery pathways and identify the sources of inefficiencies hinder the

organisation's performance and productivity. Data-driven process improvements help to streamline service delivery pathways by eliminating unnecessary steps, reducing errors and delays, and optimising the use of resources [17]. It can be deduced that by implementing data-driven process improvements, public sector organisations can save time, reduce costs, improve citizen satisfaction, and enhance accountability and transparency.

Dynamic resource allocation is a strategy that matches the supply and demand of resources across different departments and regions of a public sector organisation. By analysing service demand patterns, such as crime rates, traffic flows, or population density, dynamic resource allocation can adjust the allocation of resources, such as police patrols, public transport, or health care, to meet the changing needs of the citizens. This strategy can optimise resource distribution based on actual needs rather than fixed or historical patterns, leading to improved service delivery and cost savings. Dynamic resource allocation can also enhance a public sector organisation's responsiveness flexibility, and ability to cope with uncertainty and complexity [18].

Data analytics in the public sector context can also be used to procure goods and services through a centralised procurement process. Centralised procurement consolidates the purchasing activities of a public sector organisation under a single authority or unit. By leveraging data analytics, centralised procurement can enhance the organisation's bargaining power with vendors, optimise inventory management of goods and services, and identify alternative suppliers that offer better quality or lower prices. It can minimise procurement costs, ensure better value for taxpayer dollars, and improve the transparency and accountability of the procurement process. Centralised procurement can also enable public sector organisations to achieve strategic goals, such as promoting social and environmental responsibility, fostering innovation and enhancing local economic development [19].

Streamlined processes are simplified, standardised and optimised to achieve the desired outcomes with minimal resources and time. Streamlined processes can enhance the performance and efficiency of public sector service delivery and improve citizen experience and satisfaction. Process automation uses technology to automate repetitive and routine tasks that are part of the service delivery process, such as data entry, document processing, and payment processing. By using data and analytics, process automation can identify the tasks that can be automated and design and implement the automation solutions. Process automation can reduce the human errors, delays, and costs associated with the service delivery process and free up staff time for more complex and value-added tasks. Process automation can also improve citizen experience and satisfaction, providing faster, more convenient, and more consistent services [20].

Performance dashboards are visual tools that use real-time data to monitor and display the performance of the service delivery process across different departments. Quality, efficiency, timelines or customer satisfaction are indicators of a performance dashboard. Using data and analytics, performance dashboards provide a comprehensive and transparent overview of service delivery performance and identify areas for improvement and best practices. Performance dashboards can foster transparency, accountability, and continuous process improvement, as they enable public sector managers and staff to track, evaluate, and adjust the service delivery process and communicate and share the results and feedback with stakeholders [21].

It can be deduced that data and analytics play a vital role in streamlining public sector service delivery processes. By using data and analytics, public sector organisations can implement streamlined processes, such as process automation, performance dashboards, and citizen feedback integration, which can enhance the performance and efficiency of the service delivery process and improve citizen experience and satisfaction.

3. Benefits of data analysis

Data and analytics have become essential tools for enhancing the performance and efficiency of public sector organisations. Public sector organisations can use data and analytics to improve their decision-making, service delivery, and resource management and achieve their strategic goals and objectives. Data and analytics can improve public sector programs through evaluation, social welfare targeting, and fraud detection [22].

Program evaluation measures the effectiveness and efficiency of public sector programs and identifies underperforming or ineffective initiatives. Program evaluation provides evidence and performance indicators that inform decisions about resource allocation, program redesign, or even termination of unproductive programs by analysing program data, such as inputs, outputs, outcomes, and impacts. It is argued that program evaluation can also enhance the transparency and accountability of the public sector and foster learning and innovation [23].

Social welfare targeting identifies individuals or groups that need specific assistance programs such as cash transfers, food subsidies, or health care [24]. By analysing demographics, economic indicators, and social service utilisation data, social welfare targeting can ensure that resources reach the most vulnerable and marginalised populations and maximise the impact and benefits of the programs. Social welfare targeting can also reduce programs' leakage and inclusion errors and promote social and economic inclusion and empowerment of beneficiaries [25].

Fraud detection identifies and prevents fraud, waste, and abuse of public funds, such as duplicate payments, false claims, and irregularities. By analysing financial transactions and identifying patterns indicative of fraud, fraud detection can protect taxpayers' money and strengthen the integrity and accountability of government programs. Fraud detection can also deter potential fraudsters, recover lost funds, and improve the trust and confidence of citizens in the public sector [26].

Risk mitigation through data analysis is a crucial strategy to enhance public safety and reduce crime rates. Governments can implement targeted prevention strategies to address underlying issues by analysing crime data and identifying high-risk areas. A proactive approach to public sector data processes allows for a more efficient allocation of resources and a focused response to areas with heightened vulnerability. As a result, risk mitigation strategies informed by data analysis contribute to a safer and more secure society, showcasing the potential of data-driven governance in improving overall public safety outcomes [27].

It can be concluded that data and analytics can play a vital role in improving the performance and efficiency of public sector programs. Public sector organisations can use data and analytics to implement targeted interventions, such as program evaluation, social welfare targeting, and fraud detection, to enhance their decision-making, service delivery, and resource management and achieve their strategic goals and objectives.

4. Bolstered effectiveness of governance

Data-driven policy design is a fundamental aspect of bolstering governance effectiveness. By analysing historical data and trends, policymakers can make informed decisions and develop policies that address real needs and yield measurable results. As highlighted by Head [28], incorporating data into the policy-making process enhances the accuracy and relevance of policies, ensuring that they align with

the actual conditions and challenges that communities face. This approach fosters a more evidence-based and outcomes-oriented governance framework, ultimately leading to more effective and impactful policies [28].

Personalised service delivery is another avenue through which effectiveness can be enhanced in governance. Governments can better tailor services and interventions to meet the diverse requirements of different populations by analysing individual needs and preferences. Guy and McCandless [29] argue that personalised service delivery leads to more equitable and impactful programs, ensuring that services are designed with a nuanced understanding of individuals' unique characteristics and challenges. This approach contributes to a more responsive and citizen-centric governance model, where interventions are finely tuned to the population's specific needs, resulting in improved outcomes and overall program effectiveness.

Open data initiatives are crucial for enhancing citizen engagement by promoting transparency and trust in governance. As Lee and Kwak [30] suggest, sharing government data through interactive platforms and dashboards enables citizens to access information easily, fostering a sense of transparency. This accessibility empowers citizens to hold governments accountable for their actions and decisions. By providing a comprehensive view of government activities, open data initiatives contribute to a more informed and engaged citizenry, ultimately facilitating their participation in decision-making processes.

Citizen feedback integration is another key element in strengthening citizen engagement within governance structures. Analysing public feedback gathered from surveys, social media, and public forums is a valuable tool for policymakers, guiding them in designing and implementing effective policies. This approach creates closed-loop systems where data-driven decision-making aligns with citizens' needs and concerns. By incorporating citizen feedback into the policy-making process, governments demonstrate a commitment to responsive governance and an understanding of the diverse perspectives within the community.

Collaborative problem-solving emerges as an innovative approach to citizen engagement, emphasising the partnership between governments and citizens in decision-making. Ruijer et al. [27] argue that involving citizens in data analysis and collaborative problem-solving fosters the co-creation of solutions. This approach goes beyond traditional top-down governance models, encouraging a more inclusive and participatory democracy. Governments strengthen the social contract by actively involving citizens in decision-making, building trust and legitimacy in their actions. Collaborative problem-solving ensures that policies and solutions reflect diverse perspectives and needs within the community, leading to more effective and inclusive governance.

5. Challenges and considerations

Data and analytics have become powerful tools for enhancing the performance and efficiency of public sector organisations. However, data and analytics also pose several challenges and considerations that must be addressed to ensure the data-driven public sector's quality, ethics, and equity. Three relevant challenges and considerations for using data and analytics in the public sector are data quality, ethical considerations, and the digital divide.

Data quality is the degree to which data are accurate, complete, and relevant for the intended purpose and context [31]. Data quality is essential for using data and analytics in the public sector, as poor data quality can lead to misleading conclusions and flawed policies that can have negative consequences for the public sector's

performance and the citizens' well-being. Therefore, it is important to ensure data quality by implementing robust data governance frameworks that define the roles, responsibilities, standards, and procedures for collecting, processing, storing, and sharing data across public sector organisations [27].

Ethical considerations are the moral principles and values that guide using data and analytics in the public sector. Ethical considerations are crucial for using data and analytics in the public sector, as they can help address privacy concerns, mitigate algorithmic bias, and prevent discriminatory outcomes that can harm citizens' rights and interests. Therefore, it is important to adhere to ethical guidelines and oversight mechanisms that ensure the respect, fairness, and accountability of data and analytics practices in the public sector, as well as the involvement and consent of citizens and stakeholders [32].

The digital divide is the gap between those with access to and benefiting from technology and those without access. The digital divide is a challenge and a consideration for using data and analytics in the public sector, as it can exacerbate existing inequalities and create new ones among citizens and regions. Therefore, it is important to ensure equitable access to technology and data literacy training for all citizens, especially the marginalised and disadvantaged groups, to enable them to participate in and benefit from the data-driven public sector. Building digital skills for all citizens is crucial for enhancing their empowerment, inclusion, and opportunities in the digital society [33].

In conclusion, data and analytics can bring many benefits and opportunities for the public sector, but they also entail many challenges and considerations that must be addressed. By ensuring data quality, ethical considerations, and the digital divide, the public sector can use data and analytics responsibly and effectively, improving its performance and efficiency and serving the public interest and the common good.

5.1 Challenges on the data analytics frontier

As public administration and management increasingly rely on data analytics, concerns about the privacy and security of citizen information come to the forefront. Latif et al. [34] highlight the challenge of balancing leveraging data for informed decision-making and safeguarding individuals' sensitive information. Citizens rightfully expect their data to be handled with the utmost care. Instances of data breaches or misuse can erode public trust and hinder the widespread acceptance of data analytics in governance. Stricter regulations and compliance standards must address these concerns and ensure data is ethically collected, stored, and analysed.

Another significant challenge in adopting data analytics in public administration is the shortage of skilled personnel. The complexities of data analytics require a workforce with expertise in data science, statistics, and information technology. However, many government agencies struggle to attract and retain professionals with these specialised skills. Furthermore, Kamara [35] underscores the importance of investing in the training and development of government employees to bridge the skills gap. Without a proficient workforce, the full potential of data analytics cannot be realised, hampering the effective implementation of data-driven decision-making processes.

6. Good governance and ethical behaviour in data-driven public administration

Embracing data analytics within public administration promises a more efficient, effective, and citizen-centric future. However, navigating this data-driven labyrinth

requires two guiding stars: good governance and ethical behaviour. These are not mere principles but the compass and sextant we must ensure our journey towards data-driven decision-making leads to a brighter, more equitable society.

6.1 Good governance

Good governance lays the foundation for responsible and trustworthy data use. It encompasses principles such as transparency, accountability, the rule of law, and participation [36]. When governments adhere to these principles, they create an environment where data is collected, analysed, and used to benefit all citizens, not just select groups. Transparency in data collection and algorithms builds trust with the public, while strong legal frameworks and oversight mechanisms help mitigate the risks of misuse and abuse [37]. Citizen participation ensures that data-driven decisions reflect the needs and aspirations of the communities they impact.

6.2 Ethical behaviour

Ethical behaviour takes good governance a step further, guiding the practical application of data analytics with moral considerations. It includes addressing privacy concerns, algorithmic bias, and the potential for discrimination [38]. Data privacy requires robust safeguards against unauthorised access and data breaches. Algorithms must be carefully scrutinised for potential biases that could lead to unfair or discriminatory outcomes, and steps must be taken to mitigate or eliminate these biases before deployment. Furthermore, governments must be vigilant in identifying and addressing situations where data-driven decisions could disproportionately impact vulnerable groups or exacerbate existing inequalities.

In data analytics, ethical considerations play a vital role in ensuring the responsible and fair use of data. As one source put it, "our students are part of the generation of data scientists that will address these issues and restore faith in data-driven applications" [39]. To do this, they need to see weighing ethical considerations as an integral part of the process of doing data science [40]. Ignoring these ethical considerations can transform data analytics from a tool for progress into a weapon of harm. Biased algorithms could perpetuate discriminatory practices in criminal justice, loan approvals, and social welfare programs. Lack of transparency can fuel public distrust and erode the legitimacy of government decisions. Failure to protect data privacy can expose individuals to identity theft, exploitation, and manipulation risks. Therefore, good governance and ethical behaviour are not optional accessories but essential components of data-driven public administration. By upholding these principles, public administrators should ensure that the transformative potential of data analytics is harnessed for good, building a society where data serves as a beacon of progress, not a source of inequality or injustice [41].

The focus on ethical considerations and good governance can form a strong foundation for the conclusion of your chapter. The government must ensure responsible and ethical data use through specific actions and initiatives, highlighting best practices and potential challenges. By emphasising the critical role of ethical behaviour in navigating the data-driven future, you can leave your readers with a sense of both cautious optimism and the responsibility to steer this new paradigm towards a just and equitable future. With its keen eye for patterns and hidden trends, data analytics can revolutionise resource allocation. For example, imagine infrastructure optimised through predictive maintenance, preventing costly breakdowns and

maximising service availability. Envision crime prevention tailored to high-risk areas, identified through geospatial analysis, instead of costly city-wide initiatives. These are not futuristic mirages but tangible possibilities within the grasp of data-driven governance.

Data does not simply illuminate inefficiencies; it empowers the public administration to craft policies that resonate with the lived experiences of citizens [42]. Analysing program data and feedback can expose shortcomings and pave the way for targeted interventions. Educational strategies informed by student performance metrics can yield higher graduation rates. Social programs precisely aimed at vulnerable populations, pinpointed through data-driven need assessments, can truly lift lives. In this way, data becomes the fuel that propels public policy towards meaningful impact.

Stemming the above, despite its relation to service delivery outcomes between government and citizens, often hinders effective policy-making. Data analytics bridges this gap, fostering transparency and open communication [43]. Interactive dashboards showcasing government spending and program outcomes equip citizens with the tools to hold their leaders accountable. Public feedback, incorporated through surveys and social media analysis, ensures that policies reflect the needs and aspirations of those they serve. This closed-loop system of data-driven engagement empowers citizens to participate in shaping their future, transforming them from passive subjects to active partners in progress.

Embracing data analytics within public administration is not merely a technological shift but a fundamental transformation in how we navigate the future of governance. With good governance and ethical behaviour as guiding stars, governments harness the power of data to build a more efficient, effective, and citizen-centric future [44]. The choice is to create a culture towards a data-driven future guided by ethical principles.

This chapter provides a starting point for exploring the intersection of data analytics, good governance, and ethical behaviour in public administration. Keeping good governance and ethical behaviour at the forefront of public administration decision-making will lead to a more equitable future for all citizens. The journey towards realising the full potential of data analytics in public administration is not without its challenges. Addressing concerns related to data privacy and the shortage of skilled personnel is crucial for fostering a conducive environment for data-driven decision-making. However, challenges are opportunities in disguise, and future directions in adopting data analytics offer a roadmap for overcoming these hurdles.

Investments in data literacy will empower government employees at all levels to navigate the complexities of data analytics confidently. Inter-agency collaboration will break down silos, enabling a more comprehensive understanding of societal challenges [45]. The development of ethical frameworks will ensure that the power of data analytics is wielded responsibly, prioritising the interests and privacy of citizens.

As governments worldwide navigate the data horizon, the commitment to responsible data analytics becomes paramount. By addressing challenges head-on and charting a course that prioritises transparency, accountability, and ethical considerations, public administration can harness the transformative potential of data analytics, ultimately creating a more informed, responsive, and effective governance landscape. In an era of rapid technological advancements, public administration stands at the crossroads of innovation and tradition. Traditional decision-making processes, often reliant on intuition and past experiences, are now being redefined by the infusion of data analytics.

The foundation of data-driven decision-making in public governance is rooted in the dynamic interplay between technological advancements, organisational culture,

and leadership commitment. As elucidated by Allwood and Salo [46], integrating data into decision-making processes promises to enhance the efficiency and effectiveness of public governance. To navigate this transformative journey successfully, public administrators must embrace technological innovation and address the cultural and organisational nuances that shape the landscape of data-driven governance [47]. By embracing the principles of public governance, we can evolve into a more responsive, transparent, and accountable entity, ultimately better equipped to meet the complex challenges of the modern era.

6.3 Enhancing operational efficiency

One of the primary advantages of data analytics in public administration is its ability to enhance operational efficiency. Through predictive modelling and performance analytics, agencies can optimise resource allocation, streamline processes, and proactively address emerging issues [48]. It improves service delivery and maximises the impact of public programs. In the dynamic landscape of public administration, integrating data analytics has emerged as a pivotal force in driving operational efficiency. This chapter explores the profound impact of data analytics on public governance, emphasising its role in optimising resource allocation, streamlining processes, and proactively addressing emerging challenges. Data analytics empowers public administrators to move beyond reactive decision-making towards proactive strategies. Through predictive modelling, agencies can harness historical data to forecast future trends and demands accurately. Public administrators can optimise resource allocation, ensuring limited resources are directed towards areas with the highest impact [49].

For example, a city's public transportation system could use predictive modelling to anticipate peak usage times, allowing for strategic deployment of vehicles and personnel. This enhances operational efficiency and improves the overall quality of public services. Performance analytics is a key aspect of data analytics that enables public administrators to gain insights into the effectiveness of various processes. By analysing performance metrics, agencies can identify bottlenecks, inefficiencies, and areas for improvement [50]. This data-driven approach allows the implementation of targeted interventions to streamline operations.

Consider a government healthcare agency that uses performance analytics to assess the efficiency of patient intake processes. By analysing data on waiting times, staff utilisation, and service delivery, administrators can implement changes to enhance the overall efficiency of healthcare services, ensuring that citizens receive timely and effective care. Data analytics equips public governance with the capability to identify and address emerging issues proactively [51]. By continuously monitoring and analysing data, agencies can detect patterns and trends that may indicate potential challenges before they escalate. This proactive stance enables administrators to implement preventive measures and respond swiftly to emerging issues [51].

Integrating data analytics into public administration represents a transformative step towards enhancing operational efficiency [52]. Predictive modelling, performance analytics, and proactive issue resolution empower public administrators to make informed decisions, allocate resources judiciously, and streamline processes effectively. As public governance embraces the power of data analytics, it improves its operational efficiency and fosters a culture of transparency and accountability. By harnessing the insights from data, public administrators can create more responsive, citizen-centric services, ultimately contributing to a more efficient and effective public governance paradigm [53].

6.4 Transparency and accountability in data analytics

Data analytics promote transparency by enabling governments to open their decision-making processes to scrutiny. Transparent governance, a cornerstone of modern democracies, is reinforced through data-driven insights that enable citizens to comprehend policy choices and their implications [54]. The use of data analytics in decision-making underscores a commitment to accountability. In the digital era, where information is abundant and technology is ubiquitous, data analytics and governance fusion have ushered in a new era of transparency. Transparent governance, characterised by openness, accessibility, and accountability, is crucial in modern democracies. This chapter investigates the transformative impact of data analytics in reinforcing accountable governance, highlighting how it opens decision-making processes to scrutiny and empowers citizens to comprehend policy choices and their implications.

6.5 The foundation of transparent governance

At the heart of a functioning democracy lies the principle of transparent governance. Citizens have the right to understand the decisions made by their elected representatives and public administrators. Transparency fosters trust, facilitates informed public discourse, and holds governmental entities accountable for their actions. Historically, achieving transparency has been a complex challenge, but the advent of data analytics has reshaped the landscape. There are various foundations of operationalised transparency in governance related to data navigation.

The first foundation is scrutinising the decision-making process. Data analytics gives governments powerful tools to open their decision-making processes to scrutiny. The ability to collect, process, and analyse vast amounts of data offers transparency [55]. As highlighted by Broomfield and Reutter [56], data-driven insights empower citizens to scrutinise policy choices, enabling them to trace the decision-making journey from inception to implementation.

For example, consider a municipality that uses data analytics to determine resource allocation for infrastructure projects. By making relevant data accessible to the public, citizens can track the decision-making process, understand the criteria used for prioritisation, and ensure that public resources are allocated in a manner aligned with community needs.

Second, comprehending policy choice is a fundamental principle in data analysis. Transparency goes hand in hand with citizen comprehension of policy choices. Data analytics not only makes information available but also renders it comprehensible. Through visualisations, dashboards, and user-friendly interfaces, complex data sets are transformed into accessible insights that citizens can readily grasp [57]. For instance, a government leveraging data analytics can comprehensively present health outcomes and expenditure data in health care. This transparency allows citizens to understand the impact of healthcare policies on their communities, thus fostering an informed public discourse on future healthcare initiatives.

Third, accountability relating to data analysis is imperative in this chapter. The use of data analytics in decision-making underscores a commitment to accountability. Accountability is not merely a reactive measure but an ongoing process facilitated by real-time insights into governance activities [58]. Data analytics acts as a sentinel, ensuring that decisions align with public interests and that governmental entities remain accountable for their actions.

Fourth, governments employing data analytics can establish and track performance metrics tied to key policy objectives. This approach allows continuous evaluation of the effectiveness of policies and programs. Through the lens of accountability, administrators can demonstrate tangible outcomes and make data-driven adjustments to strategies as needed. For instance, a national education department using data analytics might track student performance metrics to evaluate the effectiveness of an educational reform initiative. If the data indicate that certain aspects of the reform are not achieving the desired outcomes, officials can pivot and refine strategies to ensure accountability to students and the public.

7. Addressing risk factors

The question is how data analytics can address corrupt practices in the public sector. Data analytics is a powerful tool for preventing and addressing corruption, a fundamental threat to accountable governance. By scrutinising financial transactions, monitoring procurement processes, and identifying anomalies in data patterns, governments can detect potential corrupt practices. Gautam [59] highlights that data analytics enable a proactive stance against corruption by flagging irregularities and ensuring swift investigative action. This proactive approach not only safeguards public resources but also reinforces the accountability of public officials.

Furthermore, the synergy among data analytics, transparency, and accountability closes the loop of responsible governance. By providing citizens with the means to scrutinise decision-making processes and comprehend policy choices, governments foster an environment where accountability is not a distant promise but a daily practice. Transparent and accountable governance builds public trust—a cornerstone of any thriving democracy. When citizens witness their government making decisions based on data, tracking performance, and actively addressing issues, trust in governmental institutions is strengthened [60]. Trust is the building block of a well-functioning democratic society, promoting citizen engagement and participation through a democratic process [61].

The convergence of data analytics, transparency, and accountability creates opportunities for citizens to engage in governance actively. Public participation is no longer confined to the ballot box; citizens become co-creators of public policies, armed with accessible data and insights [62]. For instance, a city government that uses data analytics in urban planning can solicit input from residents on proposed developments. By presenting data on the potential impact of projects, citizens can contribute valuable perspectives, ensuring that urban planning decisions align with the community's diverse needs.

Data analytics is a catalyst for transformative change in the evolving governance landscape. The fusion of data analytics, transparency, and accountability reshapes the relationship between governments and citizens [63]. As elucidated by Galende-Sánchez and Sorman [64], this synergy opens decision-making processes to scrutiny, empowers citizens to comprehend policy choices, and reinforces accountability as a fundamental tenet of responsible governance. Governments globally are harnessing the power of data to build public trust, engage citizens, and create a more informed and participatory democracy. Navigating the digital age, the commitment to transparency and accountability remains essential, and data analytics stands as a beacon illuminating the path towards a more accountable and responsive governance paradigm. By leveraging data-driven governance, governments can make more informed

decisions, identify trends and patterns, and effectively allocate resources to address the needs and concerns of their constituents [65]. For example, several governments worldwide have embraced data analytics to bolster evidence-based decision-making. The city of Barcelona, for instance, implemented a comprehensive data analytics platform to monitor urban processes, leading to more effective resource management and improved quality of life for citizens [66]. Such case studies are beacons of success, illustrating the tangible benefits of incorporating data analytics into public administration.

8. Future directions and challenges

While adopting data analytics in public administration holds immense promise, data privacy concerns and the need for skilled personnel persist [67]. Future directions must involve investments in data literacy, inter-agency collaboration, and the development of ethical frameworks to guide the responsible use of data in decision-making.

Integrating data analytics into public administration represents a paradigm shift in decision-making processes, promising enhanced efficiency and informed governance. However, as with any transformative initiative, challenges abound. One of the major challenges in adopting data analytics in public administration is the concern over data privacy [68]. The access and use of data in public administration must navigate the delicate balance between utilising data for informed decision-making and protecting the privacy rights of individuals. Another challenge in implementing data analytics in public administration is the demand for skilled personnel. Organisations need professionals with technical expertise, domain knowledge, and analytical skills to analyse and interpret the data effectively using appropriate data analysis tools. Moreover, it outlines future directions, calling for investments in data literacy, inter-agency collaboration, and the development of ethical frameworks to guide the responsible use of data in decision-making.

Future directions must involve substantial investments in data literacy programs to address the challenges of a skilled workforce. It is essential to equip government employees with the knowledge and skills to interpret and leverage data effectively. From frontline staff to high-level decision-makers, fostering a culture of data literacy ensures that all levels of government can harness the power of data analytics. Training programs, workshops, and educational partnerships can be established to enhance the data literacy of government employees. Organisations can empower their workforce to make better decisions based on data-driven insights by demystifying data analytics and promoting a data-informed mindset.

Furthermore, the complex nature of societal challenges often requires collaboration among various government agencies. Siloed information and isolated datasets hinder the full potential of data analytics. Future directions must emphasise inter-agency collaboration to break down these barriers and create a more holistic approach to data-driven governance. Collaborative platforms and initiatives that facilitate the sharing of data and insights between agencies can lead to more comprehensive and nuanced decision-making. By fostering a culture of cooperation, government entities can leverage the collective intelligence embedded in diverse datasets to address complex issues more effectively.

Ethical considerations are paramount in the responsible use of data analytics. Future directions should involve developing and implementing robust ethical data

collection, storage, and analysis frameworks. Nassar and Kamal [69] emphasised establishing clear guidelines to ensure that data-driven decision-making prioritises privacy, fairness, and transparency. These ethical frameworks should be dynamic and evolve alongside technological advancements and societal expectations. By embedding ethical considerations in data analytics practices, governments can build and maintain public trust while harnessing the benefits of data-driven decision-making.

First, data privacy concerns are one of the biggest challenges the government will face when transforming from analogy to data analysis. As public administration increasingly relies on data analytics, concerns about the privacy and security of citizen information have come to the forefront. Griffin and Holcomb [70] highlighted the challenge of balancing leveraging data for informed decision-making and safeguarding individuals' sensitive information. Citizens rightfully expect their data to be handled with the utmost care. Instances of data breaches or misuse can erode public trust and hinder the widespread acceptance of data analytics in governance [71]. Stricter regulations and compliance standards must address these concerns and ensure data are ethically collected, stored, and analysed.

Second, there is a need to address the lack of skilled personnel. Another significant challenge in adopting data analytics in public administration is the shortage of skilled personnel. The complexities of data analytics require a workforce with expertise in data science, statistics, and information technology. However, many government agencies struggle to attract and retain professionals with these specialised skills. Afolabi et al. [72] underscore the importance of investing in the training and development of government employees to bridge the skills gap. Without a proficient workforce, the full potential of data analytics cannot be realised, hampering the effective implementation of data-driven decision-making processes.

Future directions must involve substantial investments in data literacy programs to address the challenges of a skilled workforce. It is essential to equip government employees with the knowledge and skills to interpret and leverage data effectively. From frontline staff to high-level decision-makers, fostering a culture of data literacy ensures that all levels of government can harness the power of data analytics. Training programs, workshops, and educational partnerships can be established to enhance the data literacy of government employees [73]. Public sector organisations empower their workforce to make informed decisions based on data-driven insights by demystifying data analytics and promoting a data-informed mindset.

The complex nature of societal challenges often requires collaboration among various government agencies [74]. Fragmented information and systems and isolated datasets hinder the full potential of data analytics. Future directions must emphasise inter-agency collaboration to break down these barriers and create a more holistic approach to data-driven governance. Collaborative platforms and initiatives that facilitate the sharing of data and insights between agencies can lead to more comprehensive and nuanced decision-making [75]. By fostering a culture of cooperation, government entities can leverage the collective intelligence embedded in diverse datasets to address complex issues more effectively.

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fairness, and transparency. These ethical frameworks should be dynamic and evolve alongside technological advancements and societal expectations. By embedding ethical considerations in data analytics practices, governments can build and maintain public trust while harnessing the benefits of data-driven decision-making.

9. Conclusion

It can be argued that the journey towards realising the full potential of data analytics in public administration is not without its challenges. Addressing concerns related to data privacy and the shortage of skilled personnel is crucial for fostering a conducive environment for data-driven decision-making. However, challenges are opportunities in disguise, and future directions are in adopting data analytics opportunities despite challenges. Investments in data literacy will empower government employees at all levels to navigate the complexities of data analytics. Inter-agency collaboration, as a solution to data analytics, can eliminate silos, enabling a more comprehensive understanding of societal challenges. The development of ethical frameworks geared to the power of data analytics is wielded responsibly, prioritising the interests and privacy of citizens.

As governments worldwide navigate the data horizon, the commitment to responsible data analytics becomes paramount. By addressing challenges and charting a course that prioritises transparency, accountability, and ethical considerations, public administration can harness the transformative potential of data analytics, ultimately creating a more informed, responsive, and effective governance landscape [38]. It can be concluded that integrating data analytics into public administration marks a paradigm shift in how governments make decisions. The evidence-based approach, empowered by data analytics, enhances efficiency and transparency and fosters more accountable and responsive governance. Overcoming challenges and embracing the potential of data analytics will be crucial for reshaping the evidence-based future of public administration.

Integrating data analytics into evidence-based decision-making facilitates a culture of continuous improvement in public service delivery. By monitoring key performance indicators, tracking citizen satisfaction, and analysing service delivery data, governments can identify areas for enhancement and innovation. This iterative process allows for the refinement of policies and programs, ensuring that they remain responsive to the evolving needs of the public.

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Chapter 4

An Ambiguous Relationship between Public Administration and AI

Aleksandra Puczko

Abstract

This chapter is an attempt to present how artificial intelligence (AI) impacts public administration and the basic ethical challenges it brings to this environment. The introduction shows the main model of relation between public administration and AI and also gives the main questions that will guide all argumentations. The second section sets up the framework for further analysis and it explains the rudimental for the whole analysis term of public administration and AI. In the second section, the fields of the use of AI in public administration are shown, including the decision-making process and other forms of public services. The third is dedicated to ethical issues that are inextricably linked with administration and AI usage.

Keywords: AI, public administration, innovations, public sector, ethics, technological transformation

1. Introduction

A constantly changing world affects every aspect of our lives. The most visible sign of the new time we live in is new technologies, which are increasingly present in our lives and become an unnoticeable and natural part of our existence. With the same impact, artificial intelligence (AI) impacts public administration, in which it becomes one of the tools enhancing governing an increasingly complex extra-legal reality. The general picture of this problem shows that relation between administration and new technologies is multi-faceted. On the one hand, public administration is the user of technological advances. On the other, it can be a regulator of new technologies, which plays the main role in deciding the direction of development in new technologies and the ways they can be introduced into our lives. All these lead to the basis for a multi-dimensional analysis of the subject. First of all, as the user of AI public administration can increase an impact on the lives of individuals, by making them more comfortable but also more controllable. Digitalization and automatization of administrative procedures, supporting realizations of smart city ideas, help with creating a more democratic, friendly, and effective administration. At the same time, even with the same tools, public authorities can become all-powerful decision-makers about our rights and responsibilities, which can breach the need for transparency, privacy, and

discrimination. Digitalization of governing bodies can end in making administration and algorithm, which will make social participation in governing illusionary, same and change the whole model of public administration.

The above issues open a new perspective for scientific analysis of possible relations between public administration and AI. It can be described and evaluated through an explanation of the following subjects:

a. how should we understand public administration and AI?

b. in which fields AI is used in public administration?

c. what kind of rules regulate the use of AI in actions of public administration?

d. is it possible to talk about the ethical code in an administration that regulates AI?

2. The meaning of public administration and the AI

To examine the relation between public administration and AI it is essential to explain what should be understood as these two parties of this relationship. Establishing it seems to be crucial for identifying possible relations and the impact these two would have on each other.

When it comes to public administration first intuitions usually connect this term with state and authorities, administrative bodies [1]. This approach sees it as an organization, which is built with central and local administration bodies that perform the will of the states. In this perspective, administration is every government at the central level and local authorities on the territorial, and local. We can call this approach subjective or static, which emphasizes systemic matters.

Administration is also perceived as a process or activity of government, government corporations, and specialized agencies [2]. This prospect can be seen as dynamic, in which administration is an action that provides welfare and social security services to individuals. It meets the contemporary vision of public administration in which it is performing the administration is connected with democratic citizenship, public interest, public policy, and services to society [3].

The combination of those two perspectives is visible in the definition of administration constructed by Nigro and Nigro in which it is a cooperative group effort in a public setting, which has an important role in the formulation of public policy and is a part of policy, differs from private administration, and provides services to community by covering executive, legislative, and judicial, and their interrelationships [4].

Thus, public administration is the organization that has a public character and is a part of government (or separate local) power that is dedicated to pursuing public interest through executive, legislative, and judicial actions [1, 4].

Similar to public administration also AI is an ambiguous term, which is mixed aspects of its: structure, behavior, capability, function, and principle [5, 6] of intelligent machines or software.

As a system, AI is defined as software that can achieve complex goals in complex environments and can process information and adapt to its environment with sufficient knowledge and resources [6, 7]. In this approach, AI mimics the human brain and its activities [6]. It can be named behavior because through the processing it adapts to goals in a range of environments and can be said to be intelligent and act

appropriately taking appropriate actions at the same time [8, 9]. Functioning like this, AI behaves like a human-like mind without demanding a human-like brain understood as a source of intelligence [6]. Capability is understood as a problem-solving skill, which is possible to achieve thanks to the cognitive functions of AI that are identified in the human mind. The principle of AI defines focus of group on fundamental principles of the usage of intelligence as a form of rationality. In this matter, the main issue is an explanation AI can make the best possible decision in various situations [6]. Therefore, it can be named as an intelligent system with perception, process, decision-making, learning, and adaption abilities supported by dedicated software or hardware [10] or "a cluster of digital technologies that enable machines to learn and solve cognitive problems autonomously without human intervention" [11].

Comparing these two actors in the relation it is visible how many common points they share. Both AI and public administration can be considered as systems that provide us with decisions in uncertain and often unique circumstances. This conclusion indicates the main connection between them, which makes AI useful for administration and its actions.

3. The public administration and AI: the main correlations

Although the adoption of AI solutions in various business sectors is dynamically emerging, it is still in its early stages in public administration, where it is still considered with suspicion. Therefore, it is hard to say it is a true game changer in the public sector. Especially, that with it comes not only technological change, but also transformation and innovation of culture, processes, and workforce [12]. Still, it is constantly changing with the approach determined by nowadays world where the most important are efficiency and cost savings, which makes the stage for AI solutions that provide both. This makes AI and its usage in the public sector not only novelty and fashionable but also necessary innovation to make the administration keep up with times and external reality [13]. It is called a "response to the growing complexity of the public sector, and a need to handle larger and more advanced forms of data" [14]. The diversity of AI software allows it to be applied in every action of public administration. Among others, AI helps to keep up with the standards and principles that characterize contemporary society.

Therefore, AI becomes more present in internal and external relations in which public administration is involved. With this, it changes both the system and the ways of performing administration, and the lives of citizens.

The application of AI in public administration can be done in each aspect of its activity, in (1) policymaking, (2) public service delivery, and (3) internal management of public organizations [15] in every field of public services that are covered by public administration: including healthcare, transportation, and education [16]. To achieve effects it is possible to use: (1) automated decision-making applications, (2) virtual agents or (AI) chatbots, and (3) applications related to public governance and public security [17].

The use of AI is especially significant in decision-making processes conducted in administration. It can play different roles. First, it can be the tool to gather the material needed to make a final judgment or it can be the tool of exact decision-making.

The biggest advantage of AI in public administration is its ability to enhance operational efficiency, even when it is not responsible for decision-making. AI systems can process vast amounts of data at unprecedented speeds, enabling quicker

decision-making and reducing the burden on human employees [18]. AI includes process automation, virtual agents and speech analytics, predictive analytics for decision-making, sentiment analysis, and document reviews [19].

For instance, AI-driven algorithms can analyze demographic data to predict and manage public service demands, such as healthcare or transportation needs, more effectively [20]. Moreover, AI can support decision-making processes by providing data-driven insights. Machine learning models can identify patterns and trends that may not be immediately apparent to human analysts [21]. This capability is particularly valuable in areas such as urban planning, where AI can help predict population growth, traffic patterns, and environmental impacts, thereby informing more strategic and sustainable development plans. Same as in car traffic.

What is the most significant is the automatization of the process of application of the law, in which slowly AI can replace the human factor. AI can enhance the efficiency of administrative processes. For example, automated systems can streamline tasks such as processing applications for permits or licenses, reducing wait times, and minimizing errors. In the healthcare sector, AI can assist in diagnosing diseases, managing patient records, and even predicting outbreaks of epidemics, thereby improving the overall quality and accessibility of public health services [17].

In the light of earlier conclusions, due to the technological revolution we can now it is possible to distinguish three forms of decision-making in public administration: (1) no decision automation, where humans keep full the decision authority without the use of algorithms; (2) semi-automated decisions, in which human is still the primary decision-makers, what he does aided by algorithms that present data, propose procedural actions, or offer a set of potential decisions; and (3) fully automated decisions, where algorithms hold the decision-making authority, operating without humans. AI-based decision-making is perceived as a techno-rational free from human impact, which is at the same time objective and neutral [22]. What is more, it increases the transparency of decisions and reduces the risk of corruption in public administration [23], because it gathers, analyzes, and leverages data to make automated decisions, with minimal human involvement [24].

One of the first examples of an automated public decision-making process is from Canada, which in 2014 began using automated decision-making in sorting and filtering. The reason to do so was the increasing number of applications that were to be engaging for "manual" operations [22]. AI makes all the processes faster and both impartial and fair. It leads to the conclusion, that the rudimental for such a proceeding was to ensure the ethical and fair use of AI. To do so, the Government of Canada published a White Paper on Responsible Artificial Intelligence on April 1, 2019, which ensures the transparency, accountability, legitimacy, and fairness of automated decision-making, and imposes certain requirements on the use of decision-making algorithms and systems by the government.

The White Paper is the first such act in history and has been in force since April 2020. The foundation for this regulation is algorithmic impact assessment which is the responsibility of the agencies before an automated decision-making system is set up or changed. To ensure proper use of AI in making decision processes, it includes questions such as whether customers belong to a vulnerable group, how complex the algorithm is, who collected the data used to create the system, whether the system replaces a human decision, and if necessary whether the system can justify its decisions, whether man can override the decisions, and whether the effects of the decision can be reversed. Managers are required to publish the results of their assessments online as open government data making them transparent and achievable for

everyone. Thanks to these conditions automated decision programs are intended to be comprehensive, publicly available overviews of existing [16]. What is more, automatization makes the whole process more predictable.

Predictability or stability is needed in the public sector, but decision-making models are not only based on algorithms, especially when it comes to discretion. It is undeniable that when the procedure is highly formalized and its effect is determined only totally with the content of the norm, as it is in declaratory decisions, determined only by clear and unconditional circumstances indicated in the regulation, AI can be helpful. Making decisions based not only the strict norms but also on the effects of interpretation of vague concepts or balancing values is impossible to do with machines and software. For that, we need humans with experience, sensitivity, and ethics. What is more, the decision-making process depends on the environment, which is in constant movement. Internal changes such as the implementation of new policies or external ones such as new legislation, a changed environment, epidemics, and so on impact public administration and should also impact the AI decision-making processes. They can impact the trajectory of the procedure and are responsible for making circumstances individual and unique. Therefore, artificial intelligence and machine learning are most valuable when used to support, and not replace human decision-making [22].

Besides the role of AI in administrative procedures, it can also be extremely helpful in generally understood public services. It undoubtedly improves the delivery of public services. Chatbots and virtual assistants, powered by natural language processing, are increasingly being employed to manage routine inquiries and provide information to citizens. These AI-driven tools can operate 24/7, offering timely assistance and freeing up human resources to focus on more complex tasks [25]. Their friendly interfaces and intuitive use make them reachable and easy to use. In the already cited Canadian White Paper [22, 26], AI brings significant gains in public services. As it is indicated: (1) smarter search: Natural language processing can advance the public sector's user interaction and then profile the services when the algorithms will learn patterns to better understand what citizens want when accessing government's services; (2) the use of chatbots, which can help filter routine questions away from human service agents so that they may focus on helping users through more complex or cases, which can rely on machine and software; and (3) automated decision support increasing quality of service by cutting wait times.

Still, they are not humans, which is why such experiments often meet mental barriers. However, some groups see AI as the best tool, which is more trustworthy than human service, because it is indifferent to race or gender which may lead to discrimination [27]. Still at the same time large group of respondents would have problems with trust when human services were replaced by chatbots [28].

It cannot be denied that the success of AI in public administration depends on citizens' perceptions of AI in public decision-making and other actions of administrative bodies. AI influences citizens' lives and whole societies, therefore so important are factors of trust and legitimization of its action. This is provided by giving society and individuals AI tools to take part in administration and monitoring. This gives AI the potential to enhance social participation, which refers to the involvement of individuals in community activities and decision-making processes, which is crucial for a healthy and democratic society. AI can play a significant role in increasing social participation by improving accessibility, fostering inclusivity, enhancing civic engagement, and facilitating better communication and coordination.

Civic engagement, which involves activities like voting, volunteering, and participating in public discussions, is another area where AI can make a significant impact. AI

tools can streamline the voting process by offering personalized reminders and information about elections, thereby increasing voter turnout. Furthermore, AI-powered platforms can facilitate public consultations and deliberations, enabling citizens to voice their opinions on various issues more conveniently. For example, AI chatbots can be deployed to collect feedback from residents about community projects, ensuring that decision-makers receive input from a broader segment of the population.

Furthermore, AI can enhance these aspects by providing tools that enable more efficient information sharing and collaboration. For instance, AI-powered project management software can help community organizations coordinate events and activities more effectively, ensuring that volunteers and participants are well-informed and engaged. Additionally, AI can be used to analyze social networks and identify key influencers, helping organizations target their outreach efforts more strategically.

Additionally, AI fosters inclusivity by identifying and mitigating biases that often exclude marginalized communities from social participation. Machine learning algorithms can analyze large datasets to uncover patterns of discrimination or under-representation, allowing organizations to address these issues more effectively. AI can support the development of more inclusive policies by providing data-driven insights into the needs and preferences of diverse populations. What is more, it is improving accessibility. AI-powered tools such as speech recognition software, screen readers, and automated translation services can break down barriers for individuals with disabilities and non-native speakers. For example, AI-driven voice assistants can help visually impaired individuals navigate digital spaces, while real-time translation apps enable seamless communication across different languages. By making information and services more accessible, AI ensures that a broader range of people can engage in social, cultural, and political activities. Such solutions are necessary in the globalized world and can help with dealing with contemporary crises like migration or war in Ukraine, which made people change their environment and move to other countries. Thanks to such tools they can start and lead an existence in new surroundings, which reduces the typical pressure connected with such changes.

Implementation of AI in public administration also holds the potential to promote transparency and accountability of administration. AI systems can monitor government activities and detect anomalies or signs of corruption more effectively than traditional methods. AI can identify irregularities and flag suspicious activities for further investigation. Furthermore, AI can enhance public engagement by making government data more accessible and understandable to citizens. Such methods are crowdfunding which is possible to conduct with AI and can be a huge input to policy development and decision-making.

Open data initiatives, supported by AI analytics, can empower citizens to scrutinize government performance and contribute to policy discussions, fostering a more inclusive and participatory governance model. Which, thanks to new technology administration become more open and approachable to citizens, changes the nature of the relationship between those two into more affiliate form.

4. Ethical issues

Despite its numerous benefits as cutting the cost of administration, transparency, and efficiency, the use of AI in public administration is not without challenges. The rapid and wide adoption of AI in governmental operations and decision-making

processes makes very visible the intersection of ethical challenges. The use of AI in public administration is directly connected with ethical tensions of fairness, transparency, privacy, and human rights [22]. In this perspective, ethics is not only a matter of public administration but also of the AI. It is possible to indicate the ethics of AI and the ethics of using AI in the actions of public administration.

How it sounds from earlier considerations AI can support ethics in public administration. It provides impartiality and transparency. Simultaneously itself and its use in public administration can be the biggest threat to ethics. Therefore, it is important to create ethical AI and ethical rules determining the use of it in public services. It starts with the design of algorithms to the implementation of them into policies and adopting regulations.

The significant concern is the issue of privacy, which is a right essential to human dignity but is also the most affected by the negative impact of AI [29]. The development of AI systems relies heavily on a huge amount of data, including personal data and private data [30]. Explaining this by acting for public safety thanks to AI solutions, public administration can synthesize data and estimate personal characteristics, such as gender, age, marital status, and occupation, from cell phone location data [29], thanks to scoring and public monitoring it helps to create facial databases [29]. Therefore, it is crucial to provide data privacy and security, to avoid misuse and malicious use [31] and the main role it should play in public administration.

From this emerges an obligation for governments to ensure that the data collected and processed by AI systems is protected against breaches and misuse. Additionally, there is the risk of bias in AI algorithms, which can lead to unfair or discriminatory outcomes. Public administrations must implement measures that ensure AI systems are transparent, accountable, and free from bias. They advocated for the development of policies to balance the benefits of AI against its potential risks, ensuring that advances in technology do not compromise democratic values and human rights.

The majority of AI literature views the government as a regulator and at the same time a significant user of AI [22]. It makes it the best source for ethical rules that can combine practice and expectation levels. As AI continues to evolve and integrate into various aspects of society, it brings forth a host of ethical considerations that necessitate robust legislative frameworks, which can be provided by public administration. To address ethical concerns connected with AI, governments and international bodies are developing and implementing laws and regulations aimed at guiding the ethical deployment of AI technologies. Through establishing clear guidelines and principles, these legislative frameworks aim to protect individual rights, promote fairness, and foster trust in AI systems. As AI continues to evolve, ongoing dialog and collaboration among stakeholders will be vital to creating a sustainable and ethical AI ecosystem.

To date, many acts with ethical guidelines for AI use have been published on international and state levels. Among others, they are for example EU's ethical guidelines (European Commission, 2019), Canada's Algorithmic Impact Assessment (Canada, 2020), UK's guidance (Gov. uk, 2019b). They all provide overall boundaries for the use of AI [31]; however, international rules that would be the standard ethical code for the use of AI are still not already created. As a prosthetic act of this nature, we can treat the law enforced by the European Union (EU) or Organization for Economic Cooperation and Development (OECD).

The European Union (EU) has been at the forefront of regulating AI ethics, primarily through the General Data Protection Regulation (GDPR) and the proposed AI Act. The GDPR, enacted in 2018, sets stringent guidelines on data protection and privacy, directly impacting AI systems that process personal data. Key principles

of the GDPR include data minimization, purpose limitation, and the right to be informed about automated decision-making. These principles ensure that AI systems are designed with privacy in mind, protecting individuals' data from misuse and unauthorized access. In addition to the GDPR, the EU has proposed the AI Act, which seeks to establish a comprehensive legal framework for AI. The AI Act categorizes AI applications into different risk levels (unacceptable, high, and minimal risk) and imposes corresponding regulatory requirements. High-risk AI systems, such as those used in healthcare, transportation, and employment, must meet stringent criteria related to transparency, accountability, and human oversight. By setting clear standards, the AI Act aims to mitigate the risks associated with AI while promoting innovation and trust.

Beyond national regulations, international organizations are also playing a crucial role in shaping AI ethics. UNESCO's Recommendation on the Ethics of Artificial Intelligence, adopted in 2021, provides a global framework for ethical AI. It emphasizes principles such as human rights, fairness, transparency, and accountability, urging member states to incorporate these principles into their national legislation and policies. By promoting international cooperation and harmonization, UNESCO aims to ensure that AI development respects human dignity and ethical standards worldwide.

The Organization for Economic Cooperation and Development (OECD) has also developed principles for AI ethics, which have been endorsed by its member countries. The OECD Principles on AI focus on ensuring AI systems are robust, safe, fair, and transparent. They call for inclusive growth, sustainable development, and well-being while emphasizing the importance of human-centered values and fairness in AI design and implementation.

The other ethical issue is the impact of AI on the administration itself. As elsewhere, it is possible in its organization potential displacement of jobs due to automatization. While AI can take over repetitive and mundane tasks as indicated before, it is essential to manage the transition for affected employees through reskilling and upskilling programs. Public administrations must strike a balance between leveraging AI for efficiency and ensuring a fair and equitable workforce transition. It is undeniable that this is a sign of reducing costs of public administration, but it also has a great impact on the citizen's lives and the existence level of people working in administration. The displacement of administrative job positions can lead to economic challenges for affected workers, including loss of income and job security. This can have broader economic implications, such as increased unemployment rates and reduced consumer spending.

Ethical considerations should guide the implementation of new technologies. Organizations should adopt responsible automation practices, ensuring that the deployment of technology does not disproportionately impact vulnerable workers. Transparent communication about technological changes and their implications can also help build trust and support among employees.

5. Conclusions

The utilization of artificial intelligence in public administration represents a transformative shift in how governments operate and serve their citizens. By enhancing efficiency, improving service delivery, and promoting transparency, AI has the potential to significantly improve the public sector on performance and organizational

levels. However, it is essential to address the associated challenges and ethical considerations to ensure that AI is implemented responsibly and equitably. As AI technology continues to evolve, its integration into public administration will undoubtedly play a pivotal role in shaping the future of governance and societies. Even now it is hard to differentiate its impact on administration from the impact on citizen's life.

Looking ahead, the role of AI in public administration is set to expand even further. Advances in AI technology, such as deep learning and predictive analytics, will enable more sophisticated applications in various public sectors. Governments will increasingly rely on AI to address complex societal challenges, from climate change to public safety. Therefore, it is important to perceive this matter from the global or international perspective. International legal regulations on AI, collaboration, and knowledge sharing will be critical in harnessing AI's full potential. Governments can learn from each other's experiences and best practices, fostering a global ecosystem of innovation in public administration [32].

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Chapter 5

E-Governance as a Panacea to Advance Local Development in Cameroon Post-COVID 19

Eric Kepeh Moh

Abstract

This chapter explores the importance of e-governance in enhancing local development in Cameroon post-Covid-19. It examines how local public authorities utilize ICT to improve public participation and achieve sustainable development. The chapter highlights the role of e-governance in promoting efficiency, transparency, accountability, and inclusivity in local development. Cameroon's digital landscape experienced positive changes after the implementation of the National ICT Strategic Plan 2020. However, the Covid-19 pandemic revealed weaknesses in the e-governance system, particularly in citizen-based service delivery and participatory local development. The study employed a combination of qualitative and quantitative approaches, using surveys with closed and open-ended questions to collect data from a diverse sample population. The findings demonstrate that e-governance can effectively support participatory local development in Cameroon. Municipal councils utilized social media platforms to stay connected with the community and monitor ongoing projects during the pandemic, taking advantage of government policies promoting ICT use. Overall, e-governance has great potential for driving local development in Cameroon, especially when leveraged by the government and supported by appropriate policies and initiatives.

Keywords: E-governance, E-government, E-state, local development, information communication technologies (ICT), Covid-19, recovery

1. Introduction

The unprecedented consequences of Covid-19 pandemic have shown the degree to which Countries may have to continue to rely on e-governance to deliver services to citizens across the globe. Mittal and Kaur [1] define e-governance as the use of Information, Communication, and Technologies (ICTs) to provide citizens and organizations with more convenient access to government services and information. Efficient utilization of e-governance systems enables governments to increase the amount and quality of information and services delivered to citizens by using ICTs in a simple, economical, and productive way, Attah Ullah et al. [2]. According to

UNESCO [3], access to information (ATI) plays a critical role in helping countries to emerge from the pandemic and in rebuilding communities and public institutions post-covid-19 era. The Republic of Cameroon recognizes the value of ATI in a decision-making process, however, the country has not adopted a specific law for public ATI despite the role AIT stands to play in the country's development post-Covid-19. Cameroon has been characterized as a close civic space, CIVITICUS [4] where the rights to access information, opinion, and freedom of expression are critically undermined.

Cameroon's digital landscape, however, took a positive shift in May 2016 with the development of the National ICT Strategic Plan 2020, which recognized the digital economy as a driver for development. Since then, the country has registered increased investments in telecommunication and ICT infrastructure, internet penetration, and growing connectivity, CIPESA [5]. The devolution of socio-economic development competencies to decentralized territorial collectivities in Cameroon creates opportunities and equally challenges the government to up-skill its ICT competencies (General Code of Regional and Local Authorities). Adapting recent governance trends and devolution of power to sub-national authorities depicts the political willingness and interest of the government to reduce existing distance with citizens with resulting promises to give better and swift public service delivery to the citizens.

However, despite the devolution of key socio-economic, environmental, and cultural competencies, government institutions often fail to provide public services in a fair, accountable, and transparent manner due to conflict of interests and continuous political interference. For fear of being held accountable by the constituency, local authorities often demonstrate unwillingness to adopt novel technological mechanisms that enhance effective and meaningful public participation in municipal activities. Even when efficient e-governance embodies the potential and might to address local challenges and bring citizens closer to government and local government institutions. The consequences of the pandemic on the country's economy further exposed the depth and breadth of governance weaknesses. Consequently, there is a need for an improved governance system that will help to drive cross-cutting global, regional, and national development goals in Cameroon. Lack of access in rural areas, limited digital literacy, poor connectivity of the local communities, inefficient societal e-readiness, and the absence of a comprehensive e-governance policy framework not only hinder citizens' inherent rights to access information guaranteed by the universal, regional, and Cameroon policies and laws but also compromise effectiveness, impact and sustainability of ICT-based mechanism and limit citizens' effective participation in community development.

Against this backdrop, the chapter has as objectives: to explore and understand the relationship that exists between e-governance and local development, to examine the significance of e-governance in fostering informed and participative local development in Cameroon, to examine local public authority's efforts to leverage ICT as a tool to improve public participation in local governance and development in Cameroon; and to identify and assess challenges, faced, and propose policies that underpin the significance of e-governance in enhancing local development in Cameroon. It interrogates the following: What is the nexus between e-governance and local development? To what extent is e-governance relevant for informed and participative local development in Cameroon? How effective have public authorities leveraged ICT as a tool to improve public participation in local governance and development in Cameroon? What are the challenges and how can e-governance improve local development in Cameroon post-Covid-19 era?

The chapter is anchored on the central idea that for Cameroon to effectively build resilience and maximize the impact of possible future global challenges, public institutions at different governance tiers need to upscale the use of ICT to foster open, accountable, transparent, and effective citizen's participation in local development. While interrogating generic questions, and for better comprehension, the study provides a brief literature review on e-governance, describes Cameroon's current digital ecosystem, and proffers robust policy recommendations that can be exploited by relevant local public stakeholders to enhance transparency, increase accountability, and improve the participation of the populace in local development.

2. Literature review

2.1 Understanding the concept of e-governance and local development

Of recent, the world has observed the systematic emergence of a widespread practice of placing the letter 'e' in front of words such as governance, government, democracy, commerce, business, politics, warfare, and so on. An important thought that comes to mind when prefixing any abstraction with 'e' is interrogating ICT's profound inherent ability to change and improve government or institutional processes in some fundamental way. E-governance also known as electronic governance is one of those tech-driven concepts with the prospect to provide a meaningful and durable remedy to educational, health, corporate, and democratic predicaments in Cameroon, Africa, and the world at large. For easy understanding of the concept, Banister and Connolly [6] depict that the first step in defining e-governance is to define governance. In its 2019 report, the African Peer Review Mechanism (APRM) defines governance as the exercise of economic, political, and administrative authority to manage a country's affairs at all levels. On the other hand, Dawes ([6], p. 4) defines e-governance as the use of ICTs to support public services, government administration, democratic process, and relationships among citizens, civil society, the private sector, and the state. Dawes's definition advances the idea that e-governance fosters collaborative governance and improves association between the state and the third sector. Such a collaborative relationship is vital in facilitating states' efforts to achieve sustainable development goals and other national and regional priorities in a more comprehensive manner.

Cameroon's current decentralized governance system offers space for the active involvement of citizens, civil society, and private sectors critical in fostering participatory local development. The concept of e-governance is often misconstrued or misrepresented as e-government, however, not only are both terms different they equally have some common characteristics in terms of the role they play in bringing timely and valuable information that helps inform citizen decision-making. Notwithstanding, the existing nuances and similarities are important for the understanding of the findings that will be highlighted in this chapter. First and foremost, it is relevant to underscore that e-governance goes beyond the use of ICT, to Norris [7], e-government is mainly informational and provides a few services, a few transactions, and limited interactive capabilities. This definition captures the descriptive essence of e-government–the availability of government-based information and services by web, without restriction as to place and time. While e-government is known as a one-way communication channel, e-governance is a two-way protocol. It involves "Government to Citizens (G2C) and Vice versa, government to business (G2B) and

vice versa, and Government to Government (G2G) and Government to an employee (G2E), Yadav& Singh [8]". It depends on four key pillars; internet connectivity, digital knowledge, databased, and capital.

The complex challenges faced by twenty-first-century nations and governments in promoting the ideal of governance, good governance, and democracy necessitate the continuous quest for a more sophisticated trajectory through which current and future political, socioeconomic, and corporate problems collectively address for mutual benefit. With the quantum rise and use of ICT, e-governance is increasingly seen as one of the most important mechanisms needed in realizing the ideal of good governance and fostering local development. African Union [9] refers to local development as the mobilization of local, national, and global human, economic, socio-cultural, political, and natural resources for the improvement and transformation of livelihood, communities, and territories at different local levels. Promoting inclusive development within Cameroon's 360 municipal councils in areas such as healthcare, education, and social welfare remains a priority agenda for the government and citizens.

2.2 Setting the context: Evolution of Cameroon digital ecosystem

Cameroon is a West and Central African Country that became an independent state in 1961, Fanso [10] after the reunification of French and British Southern Cameroon formerly administered by British and France as the United Nations (UN) Trust Territory. It has a population of about 26.8 million people who have intermittently experienced natural disasters, terrorist attacks, and internal armed struggle. With fast population growth, the percentage of the population living below the poverty line has decreased only slightly, from 40.2 percent in 2001 to 39.9 percent in 2007, and 37.5 percent in 2014 [11]. Having been connected to the Internet since 1997 Lange, [12] Cameroon has since been resolutely committed to being part and parcel of the information and communication society. Since then, internet use has continued to improve governance and human condition in Cameroon. Due to the bourgeoning and diversity of internet space, informed by the recurrent terrorist activities and venom-ous usage of internet space by disgruntled citizens, Cameroon Lawmakers [13] passed a cybersecurity and criminality law to create a safer space for internet usage. After more than a decade of internet presence in Cameroon.

Since the introduction of the internet and subsequent use of social media in Cameroon in early 2000, the percentage of individuals using the internet increased from 10 percent in 2013 to 23 percent in 2017. This puts Cameroon in a good position in Sub-Saharan Africa, comparable to Nigeria at 26 percent and above Kenya at 13 percent [14]. A decade after its independence as a Federal Republic, Cameroon changed to the United Republic of Cameroon after a 1972 constitutional reform called by President Ahmadou Ahidjo, which saw a 98.2% voter turnout voting 99.99% for a unitary constitution. Sightly 10 years after on 4 February 1984, president, Paul Biya, passed a decree changing the country's name from the United Republic of Cameroon to the Republic of Cameroon, Seta [15]. The country spent 40 years as a one-party state until democracy was restored through a free and fair election in 1992, under the supervision of the government. Increasing political tension, Anglophone armed struggle, climate change, and shrinking civic space, spontaneous Boko Haram heinous attacks are major impediments to the country's economic growth and democratic advancement. With the Anglophone armed separatist movement dominating the political scene. Politics have been fragmented and polarized within the domain of

three major political parties, the Cameroon Peoples' Democratic Movement (CPDM), the Social Democratic Front (SDF); and the leader of Cameroon Renaissance Movement (CRM) who continuously challenges the result of the 2018 presidential elections. In addition, patrimonial politics, personalized party systems, patron-client relationships, and the lack of trust and consensus have been key attributes of Cameroon's governance and political system.

The capacity of a governance system to act and the integrity of its actions are increasingly recognized as foundations of any society's advancement and development [16]. It is corroborated that poor governance contributes to conditions of poverty, economic stagnation, increased corruption, lack of political stability, confused priorities, chaos, and violations of human rights of citizens and noncitizens. In Cameroon, governance has consistently been a central concern for government, civil society, thought leaders, politically sensitive citizens, donor communities, and regional and international governmental bodies. Corruption has found a remarkably safe space in Cameroon in which to proliferate, despite the creation of an anti-corruption institution, Commission Nationale Anti-Corruption (CONAC) in 2016 to fight such ill practices. A former Minister of Posts and Telecommunications was one of the first top civil servants to serve a jail term for corruption, Nana & Tankeu [17]. Transparency International [18] ranked Cameroon 144 as the least corrupt nation out of 180 countries.

Driven by the deployment of 3G and 4G mobile broadband services, investment in terrestrial backbone networks, and diverse submarine fiber optic cables the Internet market is growing fast in Cameroon. The digital infrastructure in Cameroon has evolved considerably in the last decade with mobile technology emerging as the primary form of connectivity, as opposed to fixed broadband, which is associated with higher bandwidth. Despite this progress, reliable internet connectivity remains a considerable barrier. The International Telecommunications Union (ITU) 2017 ICT Development Index (IDI) ranked Cameroon at a relatively low 149 out of 176 countries [19]. In Africa, this equates to 18th out of 38 countries. The Global System for Mobile Communication Association's (GSMA's) 2019 Mobile Connectivity Index gives Cameroon a score of 44.1 out of 100 [20]. In comparison with other Sub-Saharan Africa, this is higher than Kenya ranked 116, Gabon 120, Nigeria 125, Congo 132, and the Democratic Republic of Congo 157. Digitalization is central to the government's Covid-19 recovery agenda. As espoused by Ajadi and Acland [21], ICT has been identified as a key driver of jobs and economic growth and a pathway for Cameroon to recover from the effects of the pandemic and transform the economy, even though reliable internet connectivity remains a considerable barrier.

3. Methodology

The study used a cross-sectional mixed research method approach. It combined qualitative and quantitative approaches in the research, analysis, and reporting in an integrative manner. Data was garnered from a heterogeneous sample population using surveys that integrate both closed and open-ended questions. The different methodological approaches were required to address the different objectives of the study. These methods were employed concurrently and heavily triangulated. Data was gathered from a small sample size of 52 respondents from whom valuable information was gathered for analysis, discussion, and deriving conclusions from the study. Our initial sample size of 100 respondents could not be achieved due to limited time for the research.

The survey was used to gather both quantitative and qualitative results. Questions triggered a better understanding of the extent to which respondents agreed (or not) to indicative statements geared towards addressing key research objectives. Some of the substantive close-ended questions had follow-up open-ended questions. The latter gave room for respondents to express elaborate responses which provided further explanations for the responses they opted for per the close-ended questions.

From the twenty substantive questions that were close-ended, thirteen had optional open-ended questions and one compulsory open-ended question that preceded. The observed response rate for both close-ended and open-ended questions was satisfactory. Fifty-two (52) responses were gathered from all the questions provided while, from the fourteen questions that gave respondents the option to provide elaborate responses, the minimum rate stood at 57 percent representing 8 responses. Between 8 and 27 respondents gave expanded views to substantiate their responses to the close-ended questions. All 52 respondents responded to one compulsory open-ended question that focused on garnering suggestions and insights that can enable municipal councils to develop more interest in consistently utilizing e-governance systems to facilitate communication with the public and improve service delivery.

The responses collated via the open-ended questions provided necessary data for the quantitative analyses. The data were analyzed using both thematic and content analysis approaches – which have the potential to capture essential meaning within existing data. This was done to ensure maximum capitalization of the valuable information garnered from respondents of the study. The qualitative analysis stage involved the coding of the data to identify key messages as were shared by respondents, and sorting of the coded data to ensure key responses that align with one another are clustered together. The data was further explored to identify connecting themes between the key messages shared by respondents and how these contribute to providing answers to the research objectives of the study.

Triangulating the qualitative and quantitative responses gathered in this study gave room for an in-depth understanding of the relevance of e-governance and the extent to which local public authorities leverage Information Communication and Technology (ICT) as a tool to improve public participation in sustainable local development in Cameroon.

4. Analysis of data and findings

This section presents key results gathered from the study. It points to the key results from which inferential analyses will later be attributed in the subsequent section of this chapter.

Data was collated from 52 respondents representing the diverse community development clusters in local constituencies in Cameroon. 18 of these representing 34.6% are female while 34, representing 65.4% are male. Interestingly, majority of respondents are young adults -persons between the ages of 20–39 years and middle adults -persons between the age of 40–64 years, predominately from the middle and working class. While 4 respondents representing 7.6% work directly with the council, for example, council workers and municipal counselors, 11(21.2%) are local citizens, and 35 (71.2%) respondents are individuals from the third sector (**Figure 1**).

However, it is significant to underscore that respondents are proactive local development practitioners from different community development clusters in Cameroon. While 35 (71.2%) respondents are from the third sector, implying they
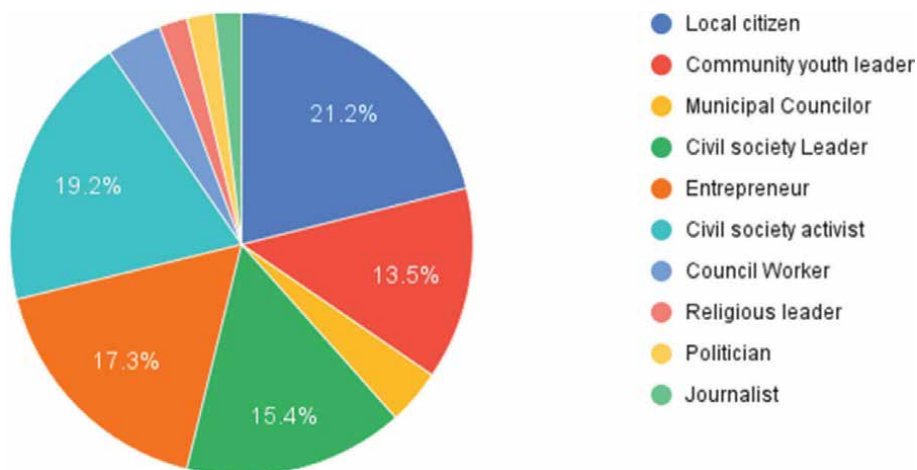
Figure 1.
Distribution of respondents per occupation. Author's construct, 2024.

are civil society leaders, civil society activists, journalists, community youth leaders, entrepreneurs, religious leaders, and politicians, 4 respondents representing 7.6% work directly with the council. Respondents are from eight of the ten geographic administrative regions of the country demonstrating the spread of the study. Even though respondents work in different administrative regions of Cameroon, they come from North West (71.2%), South West (7.7%), South (5.8%), Far North (3.8%), West (3.8%), Center (3.8%), Littoral (1.9%) and North (1.9%) regions of Cameroon.

Respondents have been active in Cameroon development space prior to and since 2019, the year the Covid-19 virus emerged. With more than 320 deaths and almost 15,000 officially confirmed cases of infections as of 6 July 2020 [22], Cameroon was among the topmost Covid-19-affected countries in sub-Saharan Africa. Robust measures were put in place in March 2020 and enforced accordingly despite some challenges. The measures in turn affected the development sector of Cameroon, from education, health, and business, limiting public participation in governance processes in the country and the diaspora. Hence, justifying the rationale and suitability of this study.

From the responses gathered it is evident that e-governance effectively employed has the potential to play a key role in facilitating the participation of citizens, institutions, and NGOs in the development process of Cameroon post-Covid-19. 44.2% of respondents strongly agreed with the latter, and 40.4% agreed, while 3.8% of respondents were neither in agreement nor disagreement with the latter. 9.6% did not agree that there exists a significant inseparable nexus between e-governance and local development with only 1.9% of the respondents expressing firm views that e-governance effectively applied or not has no impact on local development processes in Cameroon (**Figure 2**).

Also, from the responses gathered, 44(84.7%) of the 52 local development champions that responded to the survey were of the view that e-governance is relevant in fostering informed and participative local development post-Covid era. This leaves 8 (15.3%) respondents who either disagreed, or neither agreed nor disagreed with the assertion that e-governance provides an avenue where citizens and key development actors have access to information needed to foster municipal councils' development goals post-Covid era. It further gathered from the findings that e-governance helps in

4.) ICT(e-governance) effectively employed has the potential to play a key role in facilitating the participation of citizens, institutions, and NGOs...e development process of Cameroon post-COVID-19.

52 responses
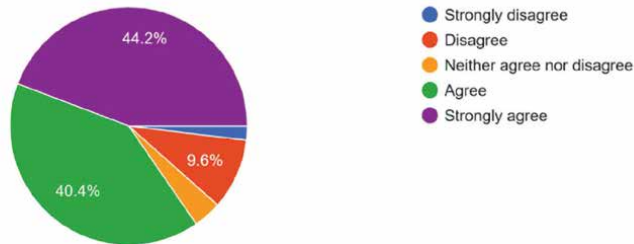
Figure 2.
E-governance and development. Author's construct, 2024.

enhancing transparency in government functioning, and interaction with the citizens & non-governmental organizations. As regards respondent opinion to the assertion that "the application of ICT in the processes of local council government governance helps in enhancing the transparency in government functioning, and interaction with the citizens & non-governmental organization", a significant majority of 38 respondents representing 46.2 and 26.9% of respondents agreed and strongly agreed respectively on this. On the other hand, a significant minority strongly disagree with this (3 respondents representing 5.8%) and 4 respondents disagree (representing 7.7%), while 7 respondents representing 13.5% neither agreed nor disagreed with the assertion that the application of ICT in the processes of local council government governance helps in enhancing transparency in government functioning, and interaction with the citizens & non-governmental organization (see **Figure 3**).

In terms of local authorities (municipal councils) leveraging varied traditional, and modern technological communication platforms to inform citizens on development processes within discrete local government municipalities, a substantial majority of 55 respondents representing 86.5% affirm councils' engagements through modern technological communication spaces, while a minority of 7 respondents representing 5.5% utilizes neither of the modern tech-driven platforms. According to respondents, 19.2% of municipal councils communicate using the institutional

7.) The application of ICT in the processes of local council government governance helps in enhancing the transparency in government functioning, and interaction with the citizens & businesses.
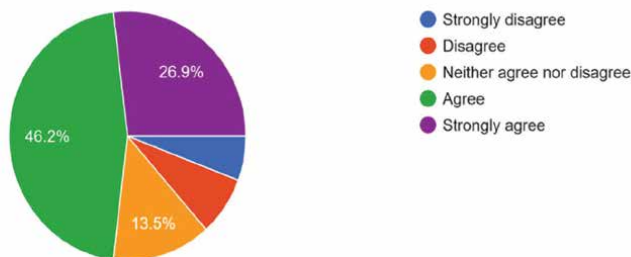
52 responses

Figure 3.
E-governance as a tool to foster informed and participative local development. Author's construct, 2024.

15.) Which of the following technological platforms do your municipal council use to inform, interact, and receives feedback from CSOs and the local population

52 responses
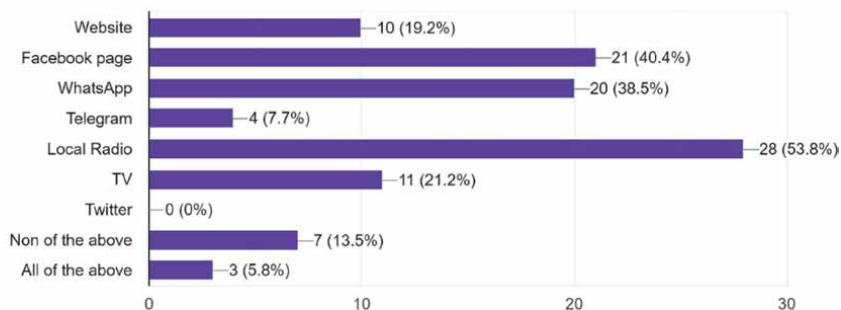
Figure 4.
Different communication platforms used by the council to communicate with the population. Author's construct, 2024.

website, 40.4% use municipal council Facebook page, 38.5% use community WhatsApp groups, 7.7% telegram, a significant majority of 53.8% use local radio stations, and 21.2% use Television. While none utilize Twitter (see **Figure 4**).

In contrast to respondents' response on the assertion "local population uses the following technological platforms to access information on local government development plans", 21.2% gets information on council development plans and processes on municipal council's website, 38.5% on municipal council's Facebook page, 32.7% community WhatsApp group, 9.6% telegram, 42.3% through local radio spaces and 26.2% using Television and 3.8% on Twitter. While 13.5% of respondents access information through all the modern technological platforms. This shows that there is a significant degree of communication and interaction between local citizens and non-government organizations through different social media and technology-driven spaces.

Despite the high propensity by respondents towards the relevance and usefulness of e-governance as a vehicle through which sustainable local development initiatives championed by local government polity in Cameroon could be more efficient, transparent, responsive, accountable, participative, and socially inclusive in a post-Covid-19 era, a good number of respondents expressed challenges face by local municipal authorities, citizens, civil society organizations and other local development actors in effectively leveraging frontier technologies in fostering development.

A majority of respondents observed that municipal authorities encounter significant levels of challenges in their efforts to leverage e-governance as a driver to foster local development in local constituencies in Cameroon. 30 respondents representing 57.7% out of 52 respondents pointed to the lack of awareness about the potential benefits of e-governance as one of the pitfalls to effective utilization of e-governance. While 31(59.6%) identify the absence of a comprehensive e-governance policy framework and poor connectivity as another drawback. Of the absolute number of respondents who took part in this study, 26.9% pointed to insufficient societal e-readiness, 55.8% to limited digital literacy, 46.2% lack of support from the central government, 36.5% to resistance to change, 44.2% to limited resources, 23.1% fear of cyber threat, 28.8% say lack of access to phone, internet and digital devices and 1.9% significant minority of respondents pointed to lack of expert to run the system (see **Figure 5**).

18.) From the list, below check the challenges faced by local councils to use ICT (E-governance) as a tool to advance local development

52 responses
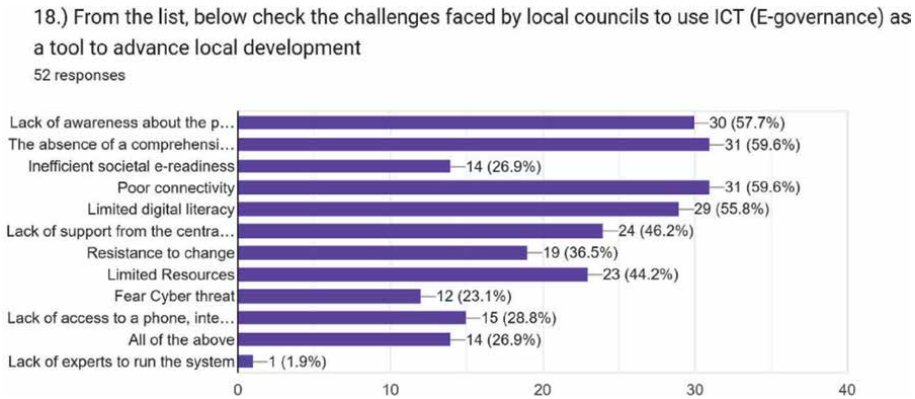
Figure 5.
Challenges hindering the employability of e-governance. Author's construct, 2024.

In the section that follows, further inferences and analyses will be made based on the results gathered during this research. These will be analyzed thematically with the intent of addressing research objectives. This will enable us to attempt a response to the overall research question, examine the relevance of e-governance, and to be able to determine the extent to which local public authorities leverage Information Communication and Technology (ICT) as a tool to improve public participation in sustainable local development in Cameroon.

5. Discussions

This section builds on the findings of this study to provide valuable information to respond to the key research questions of the study. It leverages perspectives shared by research participants and aligns these with views expressed in existing e-governance literature. Discussions center on the relationship that exists between e-governance and local development, the significance of e-governance in fostering informed and participative local development in Cameroon, ICT platforms used by municipal Councils to engage and communicate with the public, challenges and prospects of e-governance.

5.1 Relationship between e-governance and local development

During the Covid-19 pandemic, e-governance – a byproduct of ICT was capitalized upon to narrow the gap created by the inability of local authorities to assemble, access, engage, and sustain communication with the public as a measure to curb the spread of the deathly virus in Cameroon [23]. Given that the government's strategic intent to ensure that the constitutional and legal right of Cameroonians to freedom of expression and access to information is significantly not perturbed as a result of the pandemic. Efforts to ensure communication and economic activities were sustained taking into consideration the shattering consequence of the pandemic. In addition to the adoption of social distancing measures, restrictions placed on markets, shops, bars, urban transportation, restaurants, and entertainment spots, the use of electronic communications, digital tools, and

platforms was given preference. Yet, the pandemic adversely affected Cameroon's overall economy education, health, implementation of local development projects or programs, and governance processes. One of the most significant relationships between e-governance and participative local development is that it offers a new way forward, helping improve government processes, connect citizens, and build interactions with and within civil society. Primarily, it has the power of ICTs, which provide three basic change potentials for good governance for development: –automation, transformation, and information [24]. Making government operations and services more efficient and effective. Access to information fosters good governance by enhancing transparency, increasing accountability, and improving the participation of the populace in public affairs.

Given the leeway provided by the government to adopt alternative (electronic communication and digital tools) means of facilitating governance processes, it became incumbent for local municipalities, particularly city councils, communities, civil society organizations, and the public to leverage the prescribed mechanism and relatively sustain development processes. This shows the key role e-governance played in sustaining government efforts in delivering on the promises of Cameroon's 2035 economy emerging vision, agenda 2063 vision of the African Union, and the 2030 United Nations sustainable development goals (see **Figure 4**). This perception and conviction are best summarized by Odole-Adeyemi & Oni, who state that "Information technology (e-governance) and innovation play important roles in promoting the progress of Sustainable Development Goals (SDGs), particularly Goals 8, 9, and 13 by, improving access to knowledge, increasing industrialization, productivity, creation of new jobs and overall economic growth; promoting food security through sustainable agricultural systems and production, engaging energy renewing technologies to mitigate climate change while reducing energy consumption among others ([25], pp. 62–63). A respondent observed that "e-governance (ICT) is a veritable tool in this age of governance to facilitate decision making, feedback mechanisms and holding government accountable". With reference to a specific local community, another respondent further admitted that "with the adverse effect of Covid-19 and the current socio-political crisis, e-governance (ICT) being a solution to lapses faced in other sectors can play a recommendable role to facilitate the participation of the population likewise organizations in the developmental process of the nation.

Respondents therefore acknowledged the important convergence between e-governance and participative local development. "through e-governance (ICT) we were able to sustain activities planned before the outbreak of Covid-19 and do virtual follow-up of projects", a respondent said, "effective communication can be sustained and can reach a larger mass", added another. Respondents also admitted that e-governance can be leveraged "as a tool to organize credible local elections with minimal chances of fraud and corruption, tracking tool for local projects, monitor and evaluate progress of local projects and more". It is worth emphasizing that e-governance fosters inclusivity.

5.2 Relevance of e-governance in fostering informed and participative local development in Cameroon

Triggered by the COVID-19 pandemic, the administrative directives to leverage electronic communication and digital tools for administrative efficiency while reinforcing preventive measures to mitigate the spread of the coronavirus show the

relevance of e-governance in local development processes. From this study, 84.7% of respondents admitted that e-governance is relevant in fostering informed and participative local development post-Covid-19 era (see **Figure 3**). This leaves 8 (15.3%) respondents who either disagreed, or neither agreed nor disagreed with the assertion that e-governance provides an avenue where citizens and key development actors have access to information needed to foster municipal councils' development goals post-COVID era. This study reveals that the use of e-governance platforms improves transparency, increases trust between a service provider and citizens, and likewise has the potential to create open avenues for citizens and local organizations to become more aware and informed about council operations and functions. As a respondent noted, "It facilitates administration and reduces corruption". This goes in line with the thoughts of Oye, N. D. who underscores that one of the ways to combat corruption is by automating government-to-citizen (G2C) interactions that lie at the heart of e-Society. Oye, further explains that while mainstreaming ICT in governance processes eliminates many opportunities for corruption for those who do not understand the new technology fully, it opens up new corruption vistas for those who understand the new systems well enough to manipulate them. Mindful of this significance, proper safeguards are needed for greater dividends.

Wimmer, and Jacumeit, [26] point out that e-government makes a considerable display of the concept of the 'one-stop-shop'. They argue that the one-stop-shop or portal is attractive to citizens because this portal can act as a familiar point of interaction with the government in offering: online information, communication (through e-mail), online services (such as registration, vehicle registration, passport requests, and tax form completion) access to online publication, online payment systems, e-voting, e-democracy, e-participation and people networking. When asked whether municipal councils have set aside a percentage of its annual budget to improve staff capacity to effectively use ICT (e-municipal platform or Website) in Council development operations, 5(9.6%) respondents strongly agree, 12 (23.1%) agree, 22 (22.3%) neither agree nor disagree while 9 (17.3%), disagree and 4 (7.7%) strongly disagree (see **Figure 6**). From this, as represented in **Figure 6**, few councils have set aside a certain amount of their annual budget to invest in building interactive website and improving human resource tech-capacity. This shows the importance accorded to the role of ICT in enhancing inclusive local development. Some respondents further indicated that "council workers have been attending seminars" and that "the world is

12.) My municipal council has set aside a percentage of its annual budget to improve staff capacity to effectively use ICT in council development operations.
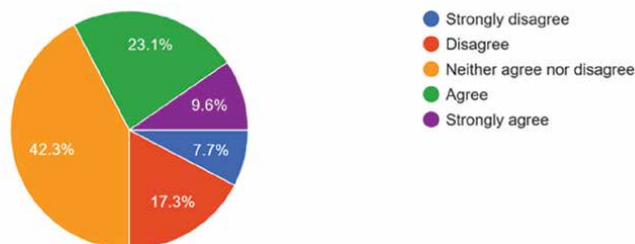52 responses

Figure 6.
Municipal councils with budget to invest in e-municipal platforms and capacity building. Author's construct, 2024.

going digital", however, "councils are still to effectively implement ICT in the functioning of their activities". According to Bosire and Omari ([27], p. 161) e-governance marks a paradigm shift in governance and offers enabling space for citizens and governments to interact well. Though few municipal councils are still at the information stage of e-governance (the development of websites), it has the potential to make its operation transparent and widely accessible; open avenues for citizens to become more aware and informed about the council's operations, and improve participation in local development initiatives.

Despite the fairly high awareness of the relevance of e-governance a significant minority of the participants indicate a low level of interaction because of low rates of internet coverage and connectivity coupled with poor networks, electrification of municipalities, and low ICT literacy rates.

5.3 Social media and traditional platforms used by council to engage and inform the population on municipal development processes

From the study, 86.5% of respondents admitted that municipal councils use both social media and traditional technological platforms to inform, interact, and receive feedback from CSOs and the local population. This digital innovative capitalization on social media and traditional spaces was prevalent at the peak of Covid-19 lockdown and movement restriction. The central government and the Ministry of Public Health used these platforms to keep the public informed of the latest developments in the fight against the pandemic in Cameroon. Since then Municipal authorities have turned to see these platforms, especially social media as crucial factors in informing and exchanging with the local populace, maintenance of personal relationships, working environments, and day-to-day activities. Traditional technological interfaces such as radio and television have always been very useful in the development process in Cameroon. As per the period of this research, Cameroon has close to 20 television and 60 radio stations which indicates local government's heavy reliance on traditional media platforms to engage and inform local citizens on councils' development processes. Also, it equally demonstrates evidence of existing spaces wherein citizens freely express their views on issues of national and municipal interest. As observed in **Figure 4**, majority of the respondents that is 28 (53.8%) show approval of the use of local radio while 11 (21.2%) approve of the use of Television platforms. The traditional platforms were widely utilized through a state-centric collaboration between the Ministry of Basic and Secondary Education to ensure the sustainability of the teaching-learning process during the Covid-19 pandemic in Cameroon.

In addition to about 20 television and 60 radio stations, some of the platforms utilized include Websites, Facebook, WhatsApp, and Telegram. This research reveals that Municipal councils use municipal social media accounts in a direct manner by sharing information with community members and allowing interactive communication relevant to the broader participation of citizens in municipal businesses. With consequential lessons from Covid-19 deadly pandemic, municipal authorities have had to shift online in part despite the online challenges. As observed by a respondent "most councils don't have an effective running website talk less of constant checking of the website to attend to issues raised", "most of the existing website and Facebook pages don't have up-to-date information", said another. The pandemic unearths diverse challenges faced by the government in its effort to adapt to the unknown and to respond effectively and sensibly to mounting concerns while fulfilling the everyday functions of government. A study of the use of social media by governments

in Organization for Economic Cooperation and Development countries notes that while social media use by governments has become more common, its use has not been particularly innovative. Government institutions largely use social media 'in a rather traditional communications sense', not taking full advantage of some of its benefits ([28], p. 62).

6. Factors hindering the effective utilization of e-governance for local development in Cameroon

From our findings due to the increasing relevance of e-governance in advancing good governance local public authorities are making efforts to leverage Information Communication and Technology (ICT) as a tool to improve public participation in sustainable local development in Cameroon. However, their efforts are being hindered by numerous problems and challenges, particularly given that local authorities only saw the importance of ICT during the Covid-19 lockdown period in Cameroon. Key to the challenges include the lack of awareness about the potential benefits of e-governance, absence of a comprehensive e-governance policy framework, poor internet connectivity and access, insufficient societal e-readiness, limited digital literacy, lack of support from the central government, resistance to change, limited resources, fear of cyber threat, lack of access to phone, internet and digital devices, and lack of experts to run the system.

6.1 Lack of awareness about the potential benefits of e-governance

The General unawareness of the significance of e-governance in Cameroon is one of the factors underpinned by respondents as a major challenge hindering the proper utilization of e-governance in Cameroon. Although we live in a world of continually evolving information and communications technology (ICT) and its enabling power, local authorities and a whooping majority of Cameroonians especially those in remote villages are not properly informed of the benefits of e-governance. According to one of our respondents, "a majority of Cameroonians are not versed with the utilization of ICT tools. And those with ideas are only limited to calls, Facebooking and WhatsApp". Recently, the Central government with the view to dematerializing consular services has taken steps to establish e-platforms like "E-legalis" and "E-Visa" G-C online platforms used by Cameroonians at home and in the diaspora to access different services and apply for visas under the Ministry of External Relations. Similarly, the government has also put in place an "e-procurement system" which dematerialized the system of awarding public contracts as well as simplifying related procedures within the Ministry of Public Works. The establishment of these platforms came a few years after a huge success registered with the e-passport digital platform "passcam" under the Delegation of National Security (DGSN). Through this digital platform, passports are produced by the DGSN within 48 hours in Cameroon. Despite the significant actions taken by the central government to decentralize specific services, zero or little effort has been taken by the central government to decentralize such services at the level of the subnational government. There is a general lack of awareness at the local and regional level of government regarding the benefits of existing e-governance structures as well as the process involved in establishing and implementing successful G-C, G-G, and G-B projects. While many have heard of the significance of the Internet there are still areas in Cameroon without an internet network. As a consequence, the

benefit of ICT revolution has not fully percolated into the everyday life of the common people, particularly those in rural areas.

6.2 Absence of a comprehensive e-governance policy framework

The majority of respondents 31 (59.6%) pointed to the absence of a comprehensive e-governance policy framework and poor connectivity as one of the challenges. This shows the severity of this hindrance to the progressive move from e-government (though not fully exploited) to e-governance. Despite Cameroon's recognition of the role of Information Communication and Technology (ICT) in fostering economic development limited steps have been taken by the government to develop a comprehensive e-governance policy framework aimed at demystifying the role of Government, simplifying procedures, bringing transparency, and accountability, and making timely information available to all citizens and at the same time providing all services at all level of government efficiently and cost-effectively. Currently, the government has put in place institutions, established legal and regulatory frameworks on the use of ICT, issued decrees, and developed strategic plans like the 2020 digital strategic plan that guides government operations towards achieving a digitalized Cameroon by 2035, however, all these fail to provide a common comprehensive purpose, goals and not based on principles of Citizen-centricity; accessibility and choice; trust, confidence, and security; better governance, collaboration and integrity, and accountability critical in the development of e-governance policy. The non-existence of a comprehensive e-governance policy framework that can serve as a cardinal point and a boaster further handicaps the efforts of municipal authorities, coupled with poor internet connectivity.

6.3 Poor internet connectivity and access

Internet connection and accessibility are one of the major constraints to the adoption and effective use of e-governance services in Cameroon. Cameroon has made some conscious efforts to introduce the use of ICT within a few government sectors to improve service delivery to citizens, however, the sustainability of such established e-governance services largely depends on citizen's participation, good internet connections, and accessibility. In addition to 28.8% of respondents who pointed to a lack of access to digital devices and poor internet connection as one of the challenges facing Cameroon, on April 24, 2023, Cameroon celebrities and influencers leveraged social media to denounce the poor quality of services provided by Orange and MTN Cameroon, two major telecom providers in Cameroon. The peaceful protest provoked by poor connectivity, high internet cost, and consistent internet cuts shows evidence of constraints faced by Cameroonians in the utilization of e-services. Many people are finding it difficult to cope with these price hikes amid the high cost of living in the country. Some respondents admitted that unstable networks weaken internet lines which slows down the access and interactions on a few existing councils' websites. As a respondent put it "despite the significance of e-governance, the level of interaction is low due to low rates of internet coverage and connectivity, coupled with poor networks and electrification of municipalities". The covid-19 pandemic further revealed the limitation of internet connectivity and access in Cameroon. Specifically, in the educational sector, institutions face mountainous difficulties utilizing e-learning systems to sustain the teaching-learning process.

The outcomes of our investigation indicate that e-governance serves as a crucial tool for the government across all levels to promote participatory local development in Cameroon. However, it is imperative to recognize potential limitations in our study, including the constraints posed by the sample size, time limitations for research, and data accessibility. The research involved 52 participants, and it is acknowledged that this sample may not fully represent the broader population. The initially intended sample size of 100 respondents could not be attained due to time constraints during the research process. Consequently, the generalizability of the findings to other demographics or contexts may be restricted. A more extensive and diverse sample would offer a more comprehensive understanding of the phenomenon under investigation. Despite the importance of a larger sample, the study was constrained by resource limitations and time constraints, necessitating the use of a smaller sample. Therefore, caution is advised when extrapolating the results to different populations.

7. Recommendation and conclusion

E-governance generally perceived as the effective use of ICTs to improve public services delivery, public administration, and relationships between the state, citizens, and the third sector can be adequately leveraged by the government of Cameroon to facilitate local development in post-Covid 19 and in time of global uncertainty if the following measures informed by the findings of the paper are taken into consideration.

7.1 To the government

- *The government via collaborative governance should develop and promulgate a law that guarantees citizens the right to access to information*. Every decision taken within a macroeconomic system depends on the quality of information citizens and all relevant development stakeholders operating within specific systems access to make informed decisions and take concrete development-oriented actions. Even though the Cameroon constitution in its preamble recognizes citizen's right to expression, it does not guarantee the right to ATI significant in a democracy. Constitutional recognition provides a strong foundation upon which a comprehensive legal structure can emerge. Once citizens can access or request and are provided with quality information, they can use that to advocate for more rights and participate in the country's development process based on the kind of relationship established with their government. In addition to e-governance fostering equitable ATI is critical for building trust and promoting accountable and transparent democratic governance. It also serves as a platform where the government can store relevant and declassified state documents that can be accessed by citizens, and local and international actors wishing to do business in Cameroon or wanting to collaborate in fostering health, education, and other development goals.

- *Develop a comprehensive national e-governance framework*. A mechanism that clearly identifies the goal of e-governance and spells out its core pillars, critical success factors, and roadmap that informs actions at the national, regional, and municipal levels of government. The government can leverage existing legal

frameworks and strategies to develop an e-governance policy framework that guides the efficient utilization of ICT in public administration across all levels of governance. Such a framework has the potential not only to revolutionize the way the central government, regional, and local authorities operate but can also enhance the relationship between Government and citizens (G2C), Government and Business Community (G2B), and within Government to Government departments (G-G). However, the development of such a policy instrument requires a new way of thinking and doing things. It requires focused political will, mind-shift at all levels of government and the entire citizenry, meaningful and strategic partnership with the private sector, civil society, academia, development partners, and participation of citizens as stakeholders. In addition, it will require a thorough examination of existing legal frameworks, existing government functions, and simplification and re-engineering of procedures.

- *Build capacities and provide resources needed at all levels*: Countries with strong governance frameworks including a clear division of responsibilities between the central government and decentralized territorial collectivities, adequate human, technical, and financial resources, and transparent budgets are best placed to develop capacities and mobilized the necessary finance needed to fund it e-governance projects and innovations. The provision of financial support to sub-national governments to invest in ICT may help the local authorities put in place e-governance that will help municipal councils provide quality e-learning, e-health, and e-environmental services to the local population.

- *Established new partnerships with e-governance advanced countries.* The government can foster new partnerships with countries like Estonia, which has been very successful in promoting itself around the world as an e-state. Such partnership could help the IT sectorial ministries in Cameroon draw good lessons from the Estonian Chamber of Commerce and Industry and the ICT Cluster Estonian Association of Information Technology and Telecommunication which has been very instrumental in making Estonia a respectable e-state in Europe. The ICT cluster's export portal (www.e-estoniax.com) shows an overview of the diverse e-governance services offered by the government of Estonia. For public sector, the cluster advises and provides solutions to legislation and policy, organizational changes, and the kind of IT-development necessary for a specific polity.

- *Improve internet connectivity and reduce cost.* Good internet connectivity is required to connect government, people, and business. Without strong and accessible connectivity e-governance can never be effective. This will require massive investment in solar energy, to address recurrent electricity cut that also hinders effective connectivity in Cameroon.

- In addition, the Ministry of Posts and Telecommunications should work in tandem with the *ministries of education* (basic, secondary, and tertiary) to upgrade the ICT curriculum which can be used to build the capacities of IT engineers who will efficiently handle e-governance systems at all level of government. Empowered engineers would also be able to address any security threat or prevent attacks from hackers. As well as established a database relevant to run the system.

7.2 To the subnational government

- *Set aside budget for e-governance investment:* Municipal Councils should set aside a percentage of their annual budget to build interactive websites through which they can interact with locals within their constituency. This would help local authorities improve service delivery to the population. One way municipal councils could improve operations is through the digitalization of services rendered to the population.

- *Change of Mindset.* Investment, development, and effective utilization of e-governance necessitate a change of mindset. Sub-national governments need to see e-governance and ICT as a gateway to access critical finances needed to fund critical development projects. Through e-governance, sub-national governments can create municipal crowdfunding websites where they can mobilize finances to achieve their mandates. Crowdfunding platforms are powerful tools that municipal councils can use to mobilize financial resources, drive sustainable, meaningful, and participative local development, as well as foster entrepreneurship. The platforms provide inclusive and accessible means of raising capital by connecting individuals with innovative projects, start-ups, and social enterprises. More importantly, these platforms present an exciting opportunity for local authorities to engage the diaspora and tap into their entrepreneurial spirit, creating a collaborative ecosystem that fuels economic growth and social impact in their local area.

- *Prioritized hard lesson learned from Covid-19 pandemic:* Bourgeoning use of ICT during Covid-19 provides evidence of how e-governance can change the way we live, work, and relate to one another.

8. Conclusion

This chapter reveals that e-governance is a significant tool that can be properly leveraged by the government at all levels to advance participative local development in Cameroon. Given that the government put in place policies that encourage the use of ICT during the Covid-19 pandemic, municipal councils took advantage of this and used different social media platforms to stay connected with the local population and to monitor and evaluate local government projects initiated prior to the Covid-19 breakout. The willingness to use ICT coupled with the demonstrated ability of the local government to use diverse social media platforms, and build websites to improve service delivery to the population during and post Covid-19 shows the opportunity e-governance presents as a key lever to enhance local development. Recognizing this, taking into consideration the different recommendations proffer by this study would ensure effective and meaningful utilization of e-governance to achieve key milestones within the framework of the 2035 vision of national development and sustainable development goals post-COVID-19.

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Unveiling Barriers for eGovernment Services: A Case Study Framework

Tanja Pavleska and Giovanni Paolo Sellitto

Abstract

In today's fast-paced digital age, eGovernment is at the forefront of change. Given the diversity of systems and stakeholders within eGovernment, its complexity defies a one-size-fits-all methodological approach in either integration or evaluation. This research explores the dynamic landscape of eGovernment services and proposes a practical framework to uncover and understand the hurdles preventing their smooth implementation. The proposed methodology is based on a case-study approach, combining qualitative and quantitative methods in a two-phase iterative cycle. Throughout the process, a strong emphasis on the context is maintained, seeking to understand the relationships and causal mechanisms at play to refine the conceptual description and research questions of interest. The approach is devised for practical use through a real-world deployment representing the case-study environment, illustrating the practical value of the framework. This allows for a nuanced understanding of the overall landscape, showcasing the interrelations among the separate actors and factors, as well as their implications on the public sector digital transformation. The objective is to achieve a holistic understanding of the challenges and opportunities in the innovation and digitalization process through a reusable approach that can be adopted and upgraded by other researchers, practitioners, and initiatives.

Keywords: eGovernment, barriers, framework, enablers, digitalization, case-study

1. Introduction

This study presents a framework for the detection and classification of barriers hindering the implementation and adoption of eGovernment services across European Union (EU) member states. It was developed in the context of the EU initiative Digital Europe for All (DE4A),[1] financed by the Horizon 2020 European Program, which involved 27 partners from 11 Member States and lasted from January 2020 to September 2023. The aim of DE4A was to straighten the path toward a completely working Digital Single Market, effectively enabling the cross-border exercise by citizens and businesses of their Single Market rights. In order to achieve its primary objective of fostering the digital transformation of the public sector in Europe, on

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[1] https://www.de4a.eu/.

both a national and cross-border scale, the project performed a preliminary study to explore the challenges and issues pertaining to the eGovernment landscape and to understand the reasons behind the different level of maturity of eGovernment in Europe. This study aims at gaining a comprehensive understanding of the implementation, challenges, and impact of digital government initiatives, exploring the potential value and benefits of emerging technologies for the public sector.

Although the researchers had identified a wide range of factors spanning technical, legal, social, and institutional dimensions as barriers or enablers, there was a lack of consensus about all of them, as each research considered only a limited number of factors and some of them did not agree about the relevance or the role of each factor. In addition, a critical gap emerged in both literature and practice concerning the methodological steps taken to investigate the barriers that hamper the introduction of these technologies.

Based on the results stemming from this analysis of the eGovernment landscape in Europe (presented in greater detail in Section 6), two challenges emerged:

1. The identification of barriers and enablers for innovation shall be considered a complex and hidden phenomenon, as those are deeply nested within a wide range of factors spanning technical, legal, social, and institutional dimensions and, moreover, they are often intertwined with patterns that are difficult to detect;

2. The practical objectives posed by the DE4A project required not only a clear overview of these factors and how to detect them, but also some practical directions and recipes to overcome the barriers and leverage the enablers.

The first element needed to deal with these challenges was a conceptual model that could be used as an epistemological tool to orient the research and practice throughout the project. Such models help to analyze and define an action plan for improvement or system modifications, helping to outline the processes or strategies useful to achieve the goal.

The conceptual space, which takes the form of a taxonomy, paves the way for the definition of an empirical framework that will enable the practical effectuation of the conceptual framework. Moreover, it enables a complete risk management cycle, by categorizing and analyzing the barriers and challenges in a systematic way, yielding concrete recommendations to overcome the barriers to the benefit of all stakeholders. This study employs a holistic approach that integrates surveys, interviews, and an exhaustive literature review to compare and integrate findings, thus providing a robust understanding of the barriers and enablers within the broader European context.

In its essence, the proposed approach performs a complete two-phase risk analysis and management cycle, based on a soft system methodology in order to devise a conceptual space for the extraction of a comprehensive list of factors that hinder or enable the digitalization of public services and using this epistemological tool to orient the real-world assessment cycle and to devise practical guidelines for the stakeholders.

The rest of this paper is organized as follows: Section 2 provides the theoretical background that helps understand the main concepts used in the paper. It is followed by a literature review of related works, presenting the relevant approaches for barriers analysis within the context of eGovernment. This establishes the basis for the

conceptual framework presented in Section 4, which is verified and applied through an empirical framework in Section 5. The practical viability of the overall approach is demonstrated through its application to a real-world use case in Section 6, yielding a comprehensive list of detected barriers for the digital transformation of the European eGovernment landscape, as well as a set of relevant policy recommendations as pertinent enablers to address the detected barriers. Finally, Section 7 gives conclusive remarks that reflect on the implications and contributions of our research and points to future research directions.

2. Theoretical background

Although we may intuitively understand the concepts of barriers and enablers, a clear definition of these terms is necessary to differentiate between them. In our context, a "barrier" and an "enabler" refer to two opposing factors that can either hinder or facilitate the achievement of a particular goal or outcome. For the purposes of this research, barriers are hindrances or challenges that impede progress, while enablers are supportive factors or resources that help facilitate progress toward a specific goal or outcome.

Closely related to the concept of *barrier* is the concept of *risk*. As defined by the international standard for risk management ISO 31000[2]: *risk is the effect of uncertainty on the objectives*. A risk management process, thus, consists of the following elements: *Communicating and consulting; Establishing the scope, context, and criteria; Risk assessment—recognizing and characterizing risks, and evaluating their significance to support decision-making; Risk treatment—selecting and implementing options for addressing risk; Monitoring and reviewing; Recording and reporting*. The general approach used in this work entirely adheres to these guidelines, acting as a risk management framework for the digital transformation of public services.

The emerging challenges of digitalization are deeply interconnected and shall not be considered in isolation. For example, the requirements for interoperability have a direct impact on both legal and technical complexities, which, in turn, affect data privacy and information security. These factors influence compliance with national and EU-level systems, creating a complex web of dependencies. Similarly, barriers often have multifaceted effects, serving as hurdles in one context and enablers in another. Regulatory and technological changes, for instance, may initially deter the adoption of a service, but eventually streamline procedures and interactions. This intricate interplay between causes and effects makes it challenging to distinguish them clearly.

As the detection and classification of barriers hindering digitalization or an innovation process is still unstructured, it requires a stable conceptual framework to understand the relevant dimensions that could drive the analysis. To address this, it is essential to develop a rigorous conceptual framework for understanding and identifying the barriers and enablers, establishing a first taxonomy of barriers and enablers. Such a taxonomy would represent a conceptual space to organize the identified barriers but also to ensure the repeatability of methodological steps. This approach will also facilitate the extraction of policy recommendations and practical guidelines for a wide range of stakeholders involved in the process.

In order to draft a first taxonomy, during the DE4A project we followed a soft system approach to define a conceptual model that describes the root definition of

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[2] https://www.iso.org/iso-31000-risk-management.html/.

the relevant factors for eGovernment [1]. The Soft Systems Methodology (SSM) was derived from numerous systems engineering processes, primarily from the fact traditional "hard" systems thinking is not able to account for larger organizational issues, with many complex relationships. SSM has a primary use in the analysis of these complex situations, where there are divergent views about the definition of the problem [2]. These complex situations are known as "soft problems." They are usually real-world problems where the goals and purposes of the problem are problematic themselves, such as: How to improve the delivery of health services? or How to manage homelessness of middle-aged people? Clearly, "How to improve digital transformation of public services?" belongs to this type of problem.

3. Related work

To understand the reasons for the complex and multifaceted landscape of eGovernment in Europe, it is essential to categorize and analyze the multitude of factors influencing the provision of digital public services. Many studies have explored the challenges and issues pertaining to the eGovernment landscape, and have also proposed approaches for improvement of the digital services offered to citizens. One such framework classifies these factors into five key categories: information and data, information technology, organizational and managerial, legal, institutional, and environmental [3]. While the first two categories primarily address data and technology availability and quality, the latter three extend beyond technological considerations, taking into account the broader organizational, legal, and institutional contexts that can either facilitate or hinder the provision of digital services. Another thorough literature overview detected critical planning and implementation issues with significant effects on the success of eGovernment initiatives [4]. The authors propose a conceptual framework to help the theoretical understanding of eGovernment initiatives' planning and implementation, focusing on the organizational and business aspects of the process. Their insights are aimed at informing the implementers of the initiatives on the success factors that influence the decision-making process. Thus, they account for a small subset of the stakeholders relevant to eGovernment. A study known as the e-GovQual model [5] investigates the ability of eGovernment services to cater to citizens' needs and devised a scale for measuring service quality of governmental sites where citizens seek either information or service along four dimensions: Reliability, Efficiency, Citizen Support, and Trust. It determines 21 evaluation criteria serving diagnostic purposes across the 4 dimensions and provides a list of 10 recommendations for improving service quality.

The variance in the progress toward digitalization across the EU Member States is documented in various studies [6–8]. Despite the presence of a common regulatory framework and the launch of large-scale cross-border projects, these reports consistently reveal stark differences in electronic identity (eID) adoption rates and the availability of cross-border public services. The electronic identity infrastructure is foundational to all eGovernment endeavors, making it crucial to gain insights into these disparities.

While these frameworks provide a foundational understanding of factors affecting eGovernment, specialized studies have delved deeper into specific domains [9–11]. Notably, these studies have identified unique challenges using the so-called Technology-Organization-Environment (TOE) framework. TOE examines three dimensions: technological, organizational, and environmental/contextual challenges.

These studies have consistently found that the primary challenges often stem from human and contextual issues. These include stakeholder behavior, leadership, training, resistance to change, and regulatory frameworks. The principles underpinning the TOE framework have been integrated into the organizational aspect of the conceptual framework in this study. However, it's important to note that the TOE framework, while valuable, is considered too generic for direct application in the specific context under investigation [12].

Beyond the TOE framework, other models have been developed to identify and elucidate success factors within organizations. The supply chain practice view (SCPV) framework explores the precursors for supply chain partners adopting inter-organizational digital procurement practices and the performance outcomes resulting from such adoption [9]. In a different vein, the Critical Success Factors (CSF) framework identifies relevant variables that should be part of a comprehensive CSF model [11]. In contrast to [10], the CSF framework places a greater emphasis on organization and management factors as the most critical category for achieving success in digitalization. Further research in the organizational domain has uncovered domain-specific studies [13, 14], though these tend to be narrowly focused and may not readily apply to broader contexts.

While studies have explored the potential of digital technologies in both private and public sectors, these investigations often focus on specific subsets of factors or employ particular methodologies. For instance, studies have delved into the role of digital technologies through interviews, literature reviews, or surveys but within specific contexts [15–17]. Yet, there remains a critical gap in the literature on understanding the barriers introduced by digital advancements within public services.

Finally, in the context of eGovernment, stakeholders play a pivotal role in shaping the landscape. Public sector organizations, in particular, are accountable to a multitude of stakeholders and are highly susceptible to political goals and tensions. Simultaneously, the modernization of public services is contingent upon the demands and willingness of both public and business sectors to adopt eGovernment services, rendering citizens, businesses, and their behaviors critical within the eGovernment landscape [18].

4. Conceptual framework

From the desk research outlined above, it becomes clear that it is essential to establish in first place a taxonomy of barriers and enablers to digitalization, as a conceptual framework for understanding and identifying them. Such a taxonomy would not only organize the identified barriers, but it will ensure the reproducibility of the methodological steps used to construct it. Ultimately, it will facilitate the extraction of recommendations and practical guidelines for a wide range of stakeholders involved in the process.

In order to draft a first taxonomy, we follow a soft systems approach to define the conceptual space that describes the root definition of the relevant eGovernment factors. As a first result, whether examining the provision of e-services, the adoption of information and communication technologies (ICTs), or the maturity of eGovernment initiatives, we are able to extract a consistent set of factors, emerging from existing frameworks. These factors are described in detail in Section 6.1 and encompass: technical, organizational, legal, business, political, and human determinants. Recognizing the stability and relevance of these dimensions across diverse

contexts, this study adopts them as the foundational structure for analyzing and discussing the barriers and enablers to digital transformation of the public sector. This strategic choice allows for systematic exploration, assessment, and the generation of valuable insights into the intricate network of influences on the eGovernment initiatives across Europe. Moreover, it establishes a framework for the integration of the relevant factors into a comprehensive approach for analyzing eGovernment landscapes.

Given the vast diversity of systems and stakeholders within the eGovernment landscape, its complexity defies a one-size-fits-all methodological approach. Experimental research, which establishes causal relationships through controlled interventions, may not be well-suited for the study of eGovernment initiatives, particularly those in progress, since controlled interventions may modify the state of the system. On the other hand, survey research can provide a broad quantitative perspective by gathering data from huge samples, but it may fall short in capturing the depth of understanding context-specific insights required for the complex eGovernment landscape. Quantitative analysis can offer valuable statistical insights, but the availability of extensive eGovernment datasets is rare. Furthermore, such data can often be incomplete and subjective, rendering the repeatability of analysis impossible. In contrast, qualitative analysis offers a wealth of insights, but it may lack the empirical evidence needed to facilitate actionable and practical results. Therefore, a mixed-method research combining qualitative with quantitative methods should be used to provide the needed comprehensive view. Such an approach is offered by case-study research, which is particularly useful for addressing operational research questions from multiple angles [19]. Despite being an extremely effective tool for developing theory out of practice, case-study research has also been proven as an evaluation method, with the ability to:

- Adapt to any context and governance structure;

- Yield useful results with small (even single) number of cases;

- Capture process and outcomes by causal logic model, providing useful feedback;

- Adapt to the availability of different types of evidence;

- Develop lessons generalizable to the major themes in a field.

Case-study research has widely been found "*appropriate and essential where either theory does not yet exist or is unlikely to, where theory exists but the environmental context is different, or where cause and effect are vague or involve time lags*" [20]. In its most general case, the process of conducting case-study research is shown in **Figure 1**. The entire process is a systematic and in-depth investigation of a particular case, whether it is an individual, organization, project, event, or phenomenon, within its real-life context. In fact, the distinguishing characteristic of the case study is that "*...it attempts to examine a phenomenon in its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident*" [21].

The process begins by defining the research questions and objectives, followed by the selection of appropriate cases that represent the phenomenon of interest. Relevant data is then gathered through various methods, such as interviews, observations, document analysis and surveys, focusing on capturing both qualitative and quantitative
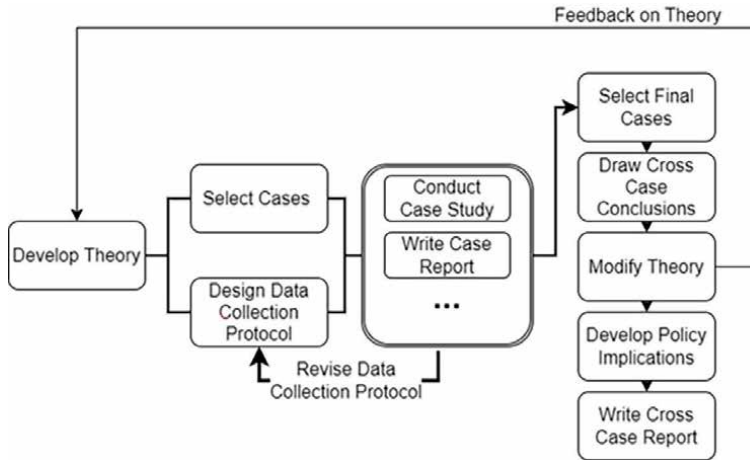
Figure 1.
Case study methodology.

information. Throughout the research process, a strong emphasis on the case's context is maintained, seeking to understand the relationships and causal mechanisms at play. The findings from the case study are presented and discussed comprehensively, through rich descriptions, observations, quotes, or illustrative examples, allowing for a nuanced understanding of the case and its implications.

5. Empirical framework

According to the conceptual framework, and as part of its multi-method approach, case-study research strongly encourages triangulation of findings for the purpose of building useful theory out of practice, which is precisely the requirement for our effort.

As eGovernment encompasses a broad range of activities, from digital service delivery to data sharing and governance, it is influenced by many factors. Thus, one may choose to focus on a particular effort for public services digitalization, analyzing the context, decision-making processes, and technological solutions involved. Alternatively, one could study the implementation, adoption, and impact of eID systems in different countries to compare strategies and outcomes. By examining such real-world cases, a set of barriers can be uncovered that yield more narrowly defined enablers, providing valuable insights for policymakers, practitioners, and scholars alike.

Performing case-study research in this context implies selecting specific projects, initiatives, and/or countries as cases and investigating them in-depth through the following types of analysis:

Comparative analysis, where multiple eGovernment cases in different countries are analyzed to identify patterns and differences in digitalization practices. This allows for pinpointing variations in adoption and outcomes and enables the crafting of a unifying strategy.

Longitudinal studies, to track eGovernment developments over time and assess evolution, impacts, and sustainability of digitalization efforts, allowing to understand the dynamic nature of the problem.
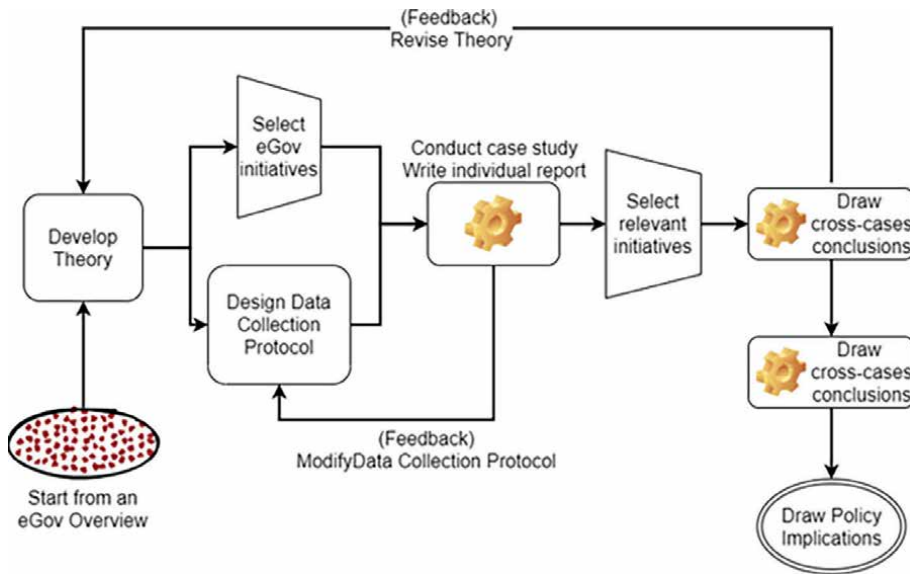
Figure 2.
Application of case-study research to eGovernment.

Action research, which includes: experts' interviews, stakeholders' consultation, and dedicated workshops to collaborate with practitioners and policy-makers to address real-world problems for actively improving eGovernment practices.

Survey research, to collect data from a diverse set of eGovernment stakeholders to analyze satisfaction, perceptions, behaviors, and hurdles. This provides direct feedback based on experiential data.

Content analysis, analyzes documents, reports, academic literature, and online content to identify policy trends, public sentiment, and correct framing of the problem.

Based on these principles, **Figure 2** shows a generic methodology for the analysis the eGovernment landscape.

In the next section, we describe how this approach can be practically applied to the case of analyzing the barriers to digital transformation in the European context. The reusability of the framework allows to introduce the use cases of each next project and to continue the evolution of the theory. This is especially useful for policymakers and practitioners, as it allows informed decision-making, wise resource allocation, improved service delivery, stimulated economic growth, and enhanced stakeholder engagement.

6. Use case: The digital Europe for all (DE4A)

In this section, we apply the presented approach to the real-world use case of the DE4A project, encompassing the detection and classification of barriers hindering the implementation and adoption of EU eGovernment services. We show how the empirical framework can complement the concept by gathering empirical evidence from country-specific nuances and broader perspectives on eGovernment digitalization.

The geographical scope of the research encompassed the 31 EU and EFTA countries. Responses were received from 18 countries (17 EU and 1 EFTA): Austria,

Belgium, Bulgaria, Croatia, Ireland, Italy, Latvia, Liechtenstein, Luxembourg, Malta, Netherlands, Portugal, Romania, Slovenia, Spain, Sweden, Hungary, and the Czech Republic—amounting to a representativeness of 58% of all countries, or 63% of the Member States. Once the scope of the analysis was defined, the work continued with a thorough and extensive analysis of the landscape. To do that, we delve into key areas relevant to the current landscape of eGovernment in Europe, namely: Electronic Identification, Authentication, and Trust Services (eIDAS), the Once-Only Principle (OOP), as well as the Single Digital Gateway Regulation (SDGR), all of which are intertwined in an intricate manner and aimed at fostering the digital transformation of the public sector in Europe. The SDGR strives to simplify online access to public services for both citizens and businesses by establishing a single point of access for all digital services. This is made possible through the implementation of eIDAS, which sets forth a unified framework for electronic identification and trust services. The success of EU digital services hinges on the effective implementation of the Once Only Principle Technical Systems (OOP TS), which aim to eliminate redundant data entry and information duplication. Throughout our analysis, Digital Service Infrastructures (DSIs) serve as the central thread connecting these topics.

This was partially reported in the related work, where it became clear that the detection and classification of barrier hindering the digital transformation of public services was still unstructured and lacking a stable conceptual framework. Moreover, there was no convergence in the definition of factors relevant to the eGovernment sector. For instance, researchers identified factors from multiple categories, including technical and legal aspects, as well as social and institutional [22], but there was no research covering all the factors at once. Furthermore, some studies emphasized the significance of managerial-organizational and political-institutional factors for the adoption of eGovernment services [23] while others explored the "outer" barriers stemming from wider environmental factors, like economic, social, and political conditions, and those rooted in "inner" factors, like organizational dynamics [24].

6.1 Overview of the relevant factors in the DE4A context

Based on the above considerations, the first step to creating a taxonomy of the barriers and enablers to digitalization relevant for DE4A is to devise the underlying dimensions in the form of key factors driving innovation and digitalization within the eGovernment context. In order to define an exhaustive set of factors, we draw not only upon relevant literature but also on focus groups, to define the relevance of each factor within the context of eGovernment. This provides systematization of the literature to yield and justify the choice of relevant factors.

Next, we define and describe each of the barriers composing the DE4A barriers' taxonomy relevant to the analysis of the eGovernment landscape.

6.1.1 Technological factors

Digitalization is intrinsically linked to machine-to-machine communication and the integration of physical, digital, and biological realms through digital technologies [25]. The transformative aspect of digitalization lies in the fact that networked machines can interact independently, eliminating the need for human intervention in favor of harnessing machine-to-machine interfaces. In the eGovernment context, technological factors are crucial due to the reliance on heterogeneous information types and sources, as well as varied organizational models. Technical issues, especially

those related to interoperability, are perceived as the most challenging hurdles of contemporary socio-technical systems, which can include multiple organizations and cross-border information systems [26]. Interoperability, the capability of organizations to interact with each other in order to achieve mutually beneficial goals, entails exchange of data between different organizations and their systems, which is a central component of the OOP technical system [27]. This semantic aspect is especially important in cross-border cooperation between different countries. In addition to interoperability, the OOP cross-border context introduces other relevant factors such as data quality, unique database or information systems characteristics, and the overall e-government architecture/infrastructures of participating countries. This involves compliance with legal and administrative requirements, ensuring secure data exchange between information systems, agreement on common data formats, and the development of vocabularies to enable communicating systems to interpret data in a consistent manner. In the EU, the European Interoperability Framework (EIF) [28] serves as the foundational model for the EU approach. Therefore, all its relevant factors are integrated into our conceptual framework.

6.1.2 Organizational factors

The organizational dimension is critical in accommodating the changes introduced by the implementation of regulatory and technical frameworks within organizational structures and workflows, requiring a high level of collaboration and coordination among diverse organizations [29]. Notable barriers observed in this regard at the national level include governmental silos and insufficient communication between government departments, the intricacy of altering organizational structures, work practices, and cultures, and the substantial costs associated with implementation [30]. Similarly, at a cross-border level, organizations encounter barriers such as adaptability, transformation capabilities, and innovation potential, influenced by elements like organizational structure and culture, which can also be regarded as human-oriented factors [31]. Moreover, an organization's financial and human resources are fundamental determinants for the adoption and successful execution of electronic services or the utilization of ICT infrastructures [32]. Reforms in this context have fostered improvements extending to both private and public sectors, enhancing efficiency, transparency, and accountability in governance, judicious utilization of public resources, and promoting balanced development and fair competition among companies [24, 33]. These achievements facilitate citizens' trust in public administration and democracy, enabling the government to pursue its political objectives in a rational, efficient, and transparent manner [34].

6.1.3 Legal factors

The third dimension of factors affecting digitalization (and automation) of eGovernment services pertains to legislative and institutional aspects. This dimension encompasses the rules, laws, and principles that may influence the development of the eGovernment landscape [3]. It is widely acknowledged that public sector organizations are heavily affected by factors external to their own operations, including the legal culture and administrative traditions of a given state. While these factors lie outside the control of individual organizations and are typically more stable or change at a slower pace, regulations can play a decisive role in driving change and fostering innovation. For instance, regulations may impose legal obligations on administrations

to adopt innovative practices [31]. Furthermore, despite the adoption of certain directives and regulations aimed at promoting interoperability at the EU level, such as the SDGR, the eIDAS, and the General Data Protection Regulation (GDPR), there remains a pressing need to establish a unified legal framework at both the national and EU levels.

6.1.4 Business factors

The business dimension, while closely intertwined with the organizational dimension in terms of its conceptual backbone, introduces its own unique factors. It encompasses private companies and their operational models, which predominantly involve the fusion of technology and human resources to sustain these models. In the context of eGovernment, businesses can serve as catalysts for innovation and technological advancements. They can also offer incentives for the adoption of eGovernment services. However, it is important to acknowledge that businesses can also introduce risks and pose challenges to digitalization, particularly in cases where their business models are disrupted. With the emergence of eGovernment platforms, many public sectors embarked on their journey of digital transformation. For instance, in the realm of e-procurement, there was a shift from traditional price-based and isolated procurement methods to data-driven approaches that leveraged e-procurement and digital process management during the initial stages of digitalization. Consequently, these digitalized systems began to operate and interact with data beyond their own environments, expanding the options available for making business decisions [11, 34].

6.1.5 Political factors

The political environment is another critical aspect, with factors like political stability exerting a positive influence on the advancement of eGovernment [35]. In the context of digital transformation, institutional and legal regulations play a pivotal role in delineating boundaries for data sharing and safeguarding personal data protection systems. For instance, the resolution of legal impediments and the establishment of a robust legal foundation rank are among the top strategic imperatives for OOP implementation [30]. Furthermore, transparency and accountability toward citizens and stakeholders serve as primary catalysts for the development of public e-procurement systems that operate within the constraints of laws, regulations, rules, and various oversight mechanisms. Fostering competition among public vendors can simplify procurement processes, reduce costs, and yield better outcomes. Finally, the role of intergovernmental and supranational institutions is pivotal. Whether they act as facilitators within national contexts or promoters of national practices on the international stage, governments can play a dual role as both enablers and inhibitors of the desired transformations.

6.1.6 Human factors

Humans are at the core of all systems, deeply interwoven into all other dimensions. Regulatory advancements driving Europe's digital agenda are inherently user-centric, relying heavily on citizens' inclusion and their openness to embrace new eGovernment services. Beyond apparent factors like user awareness and digital readiness for e-service adoption, the human factor exerts significant influence over organizational

changes, political will, and the choice of regulatory models supporting digitalization. However, our research reveals divergence between citizens' perceptions and actions and institutional interests, leading to disparate trajectories among citizens, businesses, and institutions. Efforts to enhance digital literacy among employees and cultivate capabilities and skills are crucial success factors in navigating technological changes and digitalization. Human resource management programs aimed at nurturing these competencies stand as paramount in achieving digital transformation success [36, 37]. Moreover, the availability of skilled human capital significantly correlates with a dynamic and open economy, shaping how (public) organizations manage digital transformation [38].

6.2 Applying the empirical framework to DE4A

As a next step, we apply the empirical framework to the particular context of the DE4A project. This process is depicted in **Figure 3**.

The *Theory under development* revolves around the main barriers to digital transformation in eGovernment. At the beginning of the project, the initial set of barriers is correlated with the four EIF interoperability layers: Legal, Organizational, Semantic, and Technical. These are investigated in the first phase of the data collection.

The *Data collection protocol* envisaged by the conceptual framework corresponds to the Survey Design on the figure (integrating the devised barriers), while the relevant cases for our purpose are: eIDAS, OOP, SDGR and DSIs. As part of the *data collection* and the *data modification* protocols, the empirical framework accounts for the insights from the comprehensive desk research, as well as from the internal and external expertise and stakeholder input. Thus, the theory modification (through the internal Feedback loop) is carried out several times between the 1st and 2nd phase of
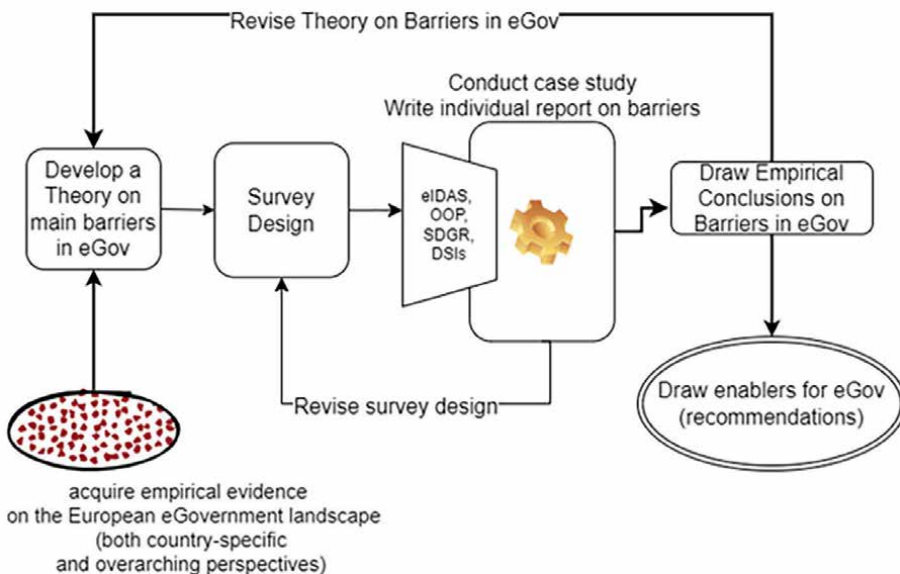

Figure 3.
Application of the conceptual framework to the DE4A scenario.

data collection. This helps to identify and revise the initial set of relevant barriers and theories, iteratively analyzing data obtained during project lifetime.

The analysis during and at the end of the project allows for the development of cross-case conclusions, which in turn lead to a set of recommendations (representing the Policy implications from the case-study research), proposed as enablers for eGovernment. At the end of the first phase, through the outer feedback loop, the theory of relevant barriers is revised, leading to a more granular set of barriers: Technical, Organizational, Legal, Business, Political, and Human. Furthermore, based on the insights from the *ModifyData* protocol, the barriers are analyzed for both their nature and their level of criticality.

6.2.1 Data collection

Following the mixed-method approach defined by the empirical framework, the study used the following data sources:

6.2.1.1 Survey

A dedicated survey[3] was designed, targeted at defining the current eGovernment advancement of European states regarding eIDAS, SDGR, DSIs, and OOP. The survey was distributed to the Chief Information Officers of the EU and EFTA countries. Data was collected in two phases: first, from 1.4.2020 to 2.4.2020, and second, from 31.3.2022 to 22.8.2022, providing insights into the state of eGovernment at the beginning and at the end of the project, respectively.

6.2.1.2 Desk research

The insights derived from the data are supplemented by the analysis of the existing literature, policies, and reports relevant to comprehension of the general eGovernment domain, as well as its advancements along the four topics of interest. These were all also guidelines for the initial choice of relevant barriers, as well as the adequate practice of survey design and analysis. While processing the survey feedback, data was also complemented and contextualized with insights from the relevant national strategies and legislative frameworks.

6.2.1.3 Semi-structured expert interviews

One of the distinguishing traits of this research is the ability to analyze eGovernment phenomena in their real-world context. In the specific case of DE4A, this information came from several sources: the DE4A piloting activities, the architecture implementation, the contextual know-how obtained from the shared experiences with related initiatives (TOOP, SEMPER, BRIS, mGov4EU, EBSI/ESSIF),[4] and the semi-structured experts' interviews with experts from DG DIGIT, DG GROW, DG CNECT, mGov4EU, TOOP, EBSI/ESSIF and The National Interoperability Framework

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[3] A preview of the survey can be found here: https://www.1ka.si/a/357089&preview=on.

[4] https://www.toop.eu, https://www.a-sit.at/en/semper/, https://ec.europa.eu/digital-building-blocks/ sites/pages/viewpage.action?pageId=533365899, https://www.mgov4.eu, https://decentralized-id.com/ government/europe/eu/ebsi-essif/.

Observatory (NIFO).[5] The study iteratively analyzed the eGovernment aspects in the relevant national contexts through the triangulation of data sources coming from: the semi-structured expert interviews, the desk research, and the dedicated survey. In addition, the desk research and the experts' interviews were also useful for the development of the survey.

6.2.2 Results and analysis

The results of the study prompted fundamental inquiries into the reasons behind the relatively low implementation levels of the OOP. The Human factor emerged as the most critical, with 40% of responding countries identifying it as such. Close behind were Legal barriers, deemed critical by 31%, and Organizational barriers, rated critical by 33% of the respondents. The distribution of barriers to the eIDAS implementation revealed that, while eIDAS implementation does not encounter highly critical barriers, substantial room for improvement exists, particularly at the national level. Although the technical system is mature enough to mitigate critical risks, enhancements, particularly in identity matching and harmonized data formats are recommended. When assessing the barriers to SDGR implementation, a notable observation was the elevated levels of criticality associated with these barriers, surpassing those related to other facets of eGovernment. These levels corresponded to the OOP case, indicating the deep interdependence between OOP and SDGR. However, differences arise in the significance accorded to the Human factor, deemed critical in 40% of OOP cases compared to only 14% for SDGR. Similar disparities were observed concerning Technical barriers, with 30% for SDGR compared to 17% for OOP. Finally, examining barriers related to Digital Service Infrastructures (DSIs), Legal and Human factors resulted as critical, albeit identified by only a small subset of respondent countries.

Table 1 reports the concrete barriers to digital transformation, as provided by respondents for all four cases. The table presents the state of affairs as provided by national representatives, allowing readers to draw their conclusions. The order of barriers does not imply prioritization or grading. Interdependence among these factors adds complexity to the analysis, as recommendations for addressing one barrier may impact others.

This data sheds light on the entrenched nature of OOP and data sharing in legislation across several jurisdictions. Concerns persist regarding data protection, often deferred to larger competent authorities for resolution. Overlapping national laws further complicates matters, with only a minority of cases (20%) not identifying Business and Political factors as barriers to OOP implementation.

Challenges related to data protection extend beyond national level, notably affecting SDGR procedures. Ensuring the legal basis for evidence transfer, particularly concerning personal data, emerges as a primary challenge, especially in light of recent regulatory emphasis on user-controlled data flows. The observed barriers not only hinder OOP system implementation, but also impede the adoption of the SDGR and the revised eIDAS, affecting the overall performance of cross-border public services. The challenge is exacerbated by low readiness for changes and data sharing across public and private entities and citizens. Furthermore, the impact of legal instruments on citizens' trust and public authorities' trust, shaped by varying laws and progress levels in implementing EU regulatory guidelines, remains critical.

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[5] https://ec.europa.eu/isa2/solutions/nifo_en/.

Factor	Description of barrier
OOP-related barriers	
Legal	1. GDPR (data protection) issues on identity matching; 2. The adoption of the regulation was delayed by a year. This is a critical issue, suggesting that the system will not be developed in the required timeline; 3. Legal certainty of security measures; 4. Some national laws overlap in their jurisdiction.
Organizational	5. No active implementation coordination mechanism yet; 6. Issues with available resources to use and support the OOP TS; 7. Scarce human resources; 8. Administrative procedures are too demanding for government bodies.
Technical	9. Lack of standardization; 10. Legacy technical resources; 11. Inconsistent technical platforms in use (no standardization), old technology, vendor lock.
Business	12. Scarce economic resources; 13. Lack of user involvement in the creation of IT services.
Political	14. Poor understanding of the importance of digitization; 15. Insufficient number of public servants involved in DSI; 16. Fluctuation of employees, lack of incentives, lack of IT skills.
Human factor	17. Lack of awareness of the existence of e-services; 18. Lack of awareness of the benefits of the e-services; 19. Data strategy has not been launched yet; 20. Some barriers are yet to be identified since both the technical system and the implementation strategy are in progress.
eIDAS related barriers	
Legal	21. Regulatory issues (e.g., private SPs cannot access eIDAS node); 22. Lack of technical standards for interoperability; 23. Lack of specific national legislation regarding the requirements for the private sector eID providers; 24. Regulation requires amendments; 25. Restrictions on sharing of national identifiers; 26. Lack of knowledge of the Regulation by legal experts; 27. Inconsistency of national law with the eIDAS Regulation during first 3 years of its implementation; 28. Technological eID development is not properly followed by regulation.
Organizational	29. Coordination structure does not fit into business requirements; 30. Many organizations are not aware of eIDAS regulation; 31. Lack of business model to offer solution and support for authentication to the private sector; 32. Relying parties are reluctant to recognize eIDs from other Member States, due to difficulties with identity matching; 33. Lack of awareness of the use and legal value of trust services; 34. Divided competence over the regulation.
Technical	35. The eIDAS node requires specific expertise and effort to be maintained; 36. eIDAS does not mandate countries to provide a unique and persistent id. 37. The eIDAS data set is too small and insufficient for service providers; 38. Systems often do not accept the use of digital signatures; 39. Insufficient interoperability rules for cross-border business eIDs.
Business	40. Lack of human resources; 41. Protracted public procurement process; 42. Too few attributes available through eIDAS authentication nodes; 43. Lack of prioritization of cross-border eGovernment services.
Political	None reported

Factor	Description of barrier
Human factor	44. Lack of specific expertise;
	45. IT expert scarcity due to non-competitive payments in the public sector;
	46. Lack of user awareness on availability and use of eGovernment services;
	47. Poor user experience with cross-border eIDAS authentication;

SDGR-related barriers

Factor	Description of barrier
Legal	48. Problems with OOTS legislative acts;
	49. Delay in accepting OOTS regulation implementation leads to loss of trust in the national capacities;
	50. Non-adjusted national legislation;
Organizational	51. Lack of clarity in the scope of the procedures for public administrations;
	52. Lack of cooperation between competent authorities;
	53. No implementation coordination mechanisms, leading to issues with available resources to use and support the OOTS;
	54. OOTS is considered as a low priority;
	55. Lack of resources;
	56. Reluctance to change management;
Technical	57. Delay in adopting the implementation act;
	58. Technical specification documents are not finalized;
	59. Problems in reconciling different systems, even within same environment;
	60. Not all services are connected to the national OOP infrastructure;
	61. OOTS or services are not integrated to the desirable extent;
	62. Lack of technical personnel;
	63. Poor national implementation strategy.
Business	64. Low awareness of user-centricity in services;
	65. Difficulty in contracting proper means for cross-border payment;
	66. Some OOP aspects constrain the use of digital public services.
Political	67. Non-existing digital strategy for public inclusion in the digital transformation.
Human factor	68. Insufficiently qualified resources for use of new technologies;
	69. Lack of human resources;
	70. Low user awareness and acceptance of new services;
	71. Scarce technical expertise on SDG.

DSI-related barriers

Factor	Description of barrier
Legal	72. Impossible to follow what is allowed to be exchanged from what is actually being exchanged as information;
	73. Improper implementation of Data Protection Laws;
	74. Lack of legislation to enable data sharing between agencies;
	75. Lack of technical specifications crystallized in laws;
	76. Blockchain cannot be used for electronic identity means;
	77. Constraints with data location and use of cloud services related to GDPR application in the international transfer of personal data;
	78. Poor implementation of the eIDAS regulation;
	79. Some national laws overlap in their jurisdiction.
Organizational	80. Lack of incentives for data exchange;
	81. Complex bureaucratic procedures required for exchanging data;
	82. Not all administrative authorities are digitally-enabled;
	83. Lack of resources;
	84. Administrative procedures are too demanding for government bodies.
Technical	85. Lack of common framework for DSIs;
	86. Lack of legacy infrastructures;
	87. Lack of interoperability, cross-border and cross-domain;
	88. Lack of standardization, old technology, vendor lock-in.

Factor	Description of barrier
Business	89. Data protectionism in the business models of the public sector hinders wider data exchanges; 90. Old business models for public services constrain the use of digital media; 91. Lack of resources; 92. Lack of user involvement in the (co)creation of IT services.
Political	93. Lack of collaboration at a national level; 94. Lack of campaigns to improve the use of digital services by citizens to understand the importance of digitalization.
Human factor	95. Lack of interest in available e-services and their use; 96. Lack of qualified resources for the use of new technologies; 97. Poor digital literacy; 98. Insufficient number of public servants involved in DSI: fluctuation of employees, lack of IT skills.

Table 1.
Inventory of barriers to digital transformation.

6.3 Discussion

The analysis presented above uncovered a range of barriers affecting both national and cross-border digitalization, each classified based on its significance in hindering or propelling eGovernment progress. These barriers were identified across all relevant dimensions: Legal, Organizational, Technical, Business, Political, and Human. Additionally, each barrier type was examined within the context of the cases covered by the DE4A Survey: eIDAS, OOP and data strategy, SDGR, and DSIs.

A relatively uniform distribution of barriers can be observed across cases, which is somewhat anticipated, given the high degree of interdependence among all cases. Examination of barrier types reveals Organizational and Legal barriers as the most prevalent, constituting nearly half of the responses. They are followed by the Human factor, which, despite its lower quantitative representation, emerges as the most critical aspect across all eGovernment dimensions. The human factor's significance lies in its inherent connection to all other factors, as humans are pivotal in driving digital transformation and fostering willingness to embrace necessary changes. Finally, while political barriers are perceived as least impactful, this does not discount their critical role as enablers of change, as evidenced in highly federated states where political factors significantly influence digital service implementation and adoption.

While primarily qualitative, the analysis lays a robust groundwork for further exploration of each barrier, revealing a plethora of barriers significantly impeding progress in the European eGovernment landscape and its digital evolution. The sheer volume and severity of identified barriers underscore the absence of a functional governance structure for overseeing and ensuring interoperability.

Given the low levels of OOP implementation and the challenges of cross-border integration, it is evident that cross-border services are not a top priority for many European governments, highlighting the need for additional incentives and coordinated efforts at various governance levels. Organizational inertia and resource constraints signal the necessity for support in addressing ongoing, substantial, and resource-intensive challenges. Several factors contribute to this reluctance, including limited cross-border interactions, a lack of urgency in prioritizing cross-border services, and a misunderstanding of the importance of citizen inclusion. Furthermore,

Factor	Recommendations
Legal	1. Align policy and practice, especially in terms of implementation timelines of the efforts;
	2. Make incremental amendments to national laws following the state of technological advancement, independent of the pace of revising Union Laws;
	3. Detect all interdependencies between SDGR, GDPR, eIDAS to enable better coordination through federated registry of authorities' competencies;
	4. Increase focus on legal policies to accept digital evidence;
	5. Guarantee data protection in the SDGR by legal means;
	6. Ensure legal basis for reuse of consent implemented by development of standardized notification mechanisms with the option for revocation of the given consent;
	7. Ensure legal basis and easy access for users to revoke consent;
	8. Provide means for implementation of standardized evidence.
Organizational	9. Increase accountability and transparency through (self)monitoring and (self)evaluation mechanisms, including auditability of the data exchanges;
	10. Establish coordination networks of initiatives with consistent objectives to prevent information and resource silos;
	11. Ensure that interoperability frameworks provide productive feedback allowing revision of the principles and requirements for future efforts;
	12. Reconsider the scope of implementation to minimize operational risks and ensure effective change management;
	13. Ensure cross-border digitization builds upon national digitalization efforts;
	14. Enable implementation of interrupted procedure;
	15. Ensure legal value of data retrieved from authoritative data sources;
	16. Reduce cross-border transaction fees for public data;
	17. Implement governance structures to support components and services lifecycle management and better specifications of interfaces and processes;
	18. Determine and implement measures and standards to monitor and manage data quality;
	19. Ensure alignment of policies and deployment of frameworks with focus on cross-border interoperability;
	20. Reuse digital infrastructures to reduce implementation and operational costs;
	21. Establish open data repositories with documented good practices, lessons learned, and recommendations to explicate and mitigate different barriers.
Technical	22. Ensure reuse and implementation of architecture building blocks;
	23. Improve resilience and increase availability of ICT resources;
	24. Increase the use of building blocks, standards, and generic infrastructure services under cross-sector governance;
	25. Implement standardized generic cross-border infrastructure services;
	26. Interconnect national infrastructures with standard interfaces to enable cross-border transactions for national systems;
	27. Develop solutions with clear responsibility roles and user-friendly interfaces;
	28. Establish a transitional model for revising national eID means that supports current mobile solutions, but complies with the eIDAS revision;
	29. Provide a system to match criteria to evidences, and data services to data sources;
	30. Ensure a common data format for structured and unstructured documents;
	31. Use canonical forms or common data models based on European Core Vocabularies;
	32. Enable mapping between domain-agnostic vocab. and sector ontologies;
	33. Ensure that data requests contain sufficient verified information to match the citizen identity and facilitate "real-time" identity matching;
	34. Implement functional and available payment solutions.
Business	35. Incentivize eGovernment initiatives to strive for a positive return on invest.;
	36. Enable inclusion of the private sector in both national and cross-border implementation and developments;
	37. Invest in new technology and infrastructure to lower operational costs and the resources for non-digital (physical) support;
	38. Craft strategies for change management that do not interrupt business models;
	39. Determine perceived risks that inhibit the process of digital transformation and cause isolated design of proprietary digital solutions.

Factor	Recommendations
Political	40. Shape new models for public services without constraining the use of digital public services;
	41. Enable multi-stakeholder dialog that is timely and inclusive;
	42. Encourage active cooperation between all levels of government;
	43. Promote and adopt policies supporting this process at a transnational level.
Human factor	44. Establish coherent dissemination efforts to raise user awareness of available e-services to improve service adoption;
	45. Setting both national and cross-border digitalization issues as a common interest and goal for public and private sectors to increase trust;
	46. Organize trainings and campaigns to inform and support the digital readiness of administrative workers and the general public;
	47. Establish incentive schemes within organizations to ensure that digital expertise is not a scarce resource;
	48. Provide guidelines to build human capital as an investment in digital future.

Table 2.
Recommendations for enablers per barrier type.

abandoning the traditional bottom-up approach is imperative to prevent data and service silos and to tackle domain-specific issues effectively. Although this shift carries inherent risks, maintaining the status quo may pose even greater risks, jeopardizing the local support crucial for a successful implementation.

The gap between the ambitions of European initiatives and the actual implementation levels across EU countries raises the question: Can the formulation and negotiation of new initiatives yield more favorable outcomes through a multi-stakeholder and interdisciplinary approach? While this aspect falls beyond the scope of this study, further research is warranted to devise methods for bridging this gap to all stakeholders' benefit.

6.4 Recommendations for addressing the barriers

The analysis presented here, while drawn from a limited dataset, offers insights from various experts and draws upon diverse data sources to establish a robust methodological framework. Consequently, it highlights the need to address urgent and current challenges in eGovernment's digital transformation. Based on the discussions and findings outlined earlier, **Table 2** consolidates recommendations for each identified barrier, which serve as actionable points for stakeholders to drive meaningful change.

An important caveat to consider is the context-specific nature of the topics explored in this study and the intricate relationships among different types of facilitators, which preclude the formulation of universal conclusions and recommendations for applying a specific facilitator to address a particular barrier. Consequently, while the use of the presented approach by other initiatives or projects would involve the same procedural steps, the outcomes and the lessons gleaned will hinge on the specific context of their implementation and will be aligned with the objectives unique to that particular context.

7. Conclusion and future work

This study delved into the European eGovernment landscape, with the aim of establishing a generic framework for assessing barriers and extracting enablers and

recommendations for digital transformation. We adopted a soft systems approach that allowed us to encompass both the theory and the practice of the eGovernment landscape. As part of the approach, an extensive exploration of the eGovernment landscape was carried out, enabling the design of a conceptual framework consisting of six layers pertaining to the relevant factors for digital transformation: legal, technical, organizational, business, political, and human. Based on the conceptual framework, an empirical framework was devised to capture the contextual and cultural nuances of the analyzed eGovernment sectors and countries, from both national and cross-border perspectives and to provide practical directions for the stakeholders. This process relied on case-study principles as part of the overall soft systems methodology.

To demonstrate the practical viability of the proposed approach, the methodology was applied to a real-world use case represented by the Digital Europe for All project. In the DE4A context, the framework proved effective in detecting and delineating a total of 98 barriers spanning the 6 conceptual layers. For each type of barrier, a collection of enablers in the form of policy recommendations was compiled, resulting in 48 enablers aimed at various eGovernment stakeholders. The results showed that the prevailing types of barriers encountered by EU countries in the digital transformation of public services are of legal and organizational nature. However, the most critical barrier demanding immediate attention is the human factor. Organizational hurdles were exemplified by resource scarcity and a lack of expertise, while legal challenges centered on non-harmonized legislation. The findings also highlight significant issues related to the lack of awareness regarding the availability of services and reluctance to embrace change and adoption.

As a future work, the authors will explore the potential formalization of the proposed framework into a semi-automatic model for barrier identification and enabler proposition, through an AI-driven approach. Such a model would be instrumental for architects and policy analysts in crafting suitable models and policies, facilitating productive dialog on the common challenges that arise during digital transformation.

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De-Governmentalizing Public Management: The Case of Platforms for Local Development in Cabo Verde

José Maria Gomes Lopes

Abstract

This paper introduces and explains the process of de-governmentalization of public policy, by focusing on a specific case, the Platforms for Local Development in Cabo Verde. The argument is that inclusive and integrated collaborative governance (ICG) structures enhance the government's ability to trigger endogenous development and prosperity for all, as they engender synergies, resources, and a collective commitment among the collaborative actors to deliver quality public services. Thus, government is not the sole public manager of public policy, but simply a partner, along with non-government actors, including civil society organizations, the private sector, and international organizations, in a formal processes of policymaking and service delivery. The paper relies on qualitative data collected through official reports by government and international organizations based in Cabo Verde, legislations, and interviews with local governance stakeholders.

Keywords: de-governmentalization, public policy, public management, platforms for public management, local development

1. Introduction

Governments' ultimate role, whether democratically elected or not, is to govern. This entails drafting and "enforcing rules", and delivering services for the well-being of their citizens. Governments' ability, however, to carry out such endeavors, has been the central issue of debates and research on public policy and public management. How can governments be efficient and effective? In other words, how can governments make intelligent use of available resources to deliver public services with success? Authoritative governments seek to achieve that goal by mounting rigid and hierarchically top-down bureaucratic machines, with policy decisions flowing from a nucleus-centralized and powerful political structure to lower-level administrative bureaus. On the other hand, democratic governments, due to the polyarchic nature of power, are more predisposed to include market and civil society actors in the policy decisions and implementation processes. Therefore, their policy bureaucratic machines, to some extent, are more inclusive.

What type of government is more successful, with regard to efficiency and effectiveness? History abounds of failed democratic states, but also of successful authoritative states, as well as successful democratic states, and failed authoritative ones. These cases occur because the central concern of any state is its governance, or its "ability to make and enforce rules and to deliver services, regardless of whether [its] government is democratic or not" ([1], p. 3). Any government, whether democratic or autocratic, develops and implements a set of administrative practices to achieve efficiency and efficacy in public policy management. How to achieve this goal is, however, a matter of debate among policymakers and policy researchers. Building on collaborative governance approach, this chapter focuses on the concept de-governmentalization of policymaking and public management process, understood here as a formal transfer of government power or responsibility to non-government actors, including market and civil society organizations, aiming at achieving efficiency and efficacy in policymaking and implementation. The analysis focuses on a case study of de-governmentalization of public policymaking and management in Cabo Verde, dissecting a specific government program to promote sustainable development in the country: Platforms for Local Development (PDL) in Cabo Verde, a collaborative governance project implemented from 2017 through 2020. The main objective of the chapter is to examine how this project contributed, first to the de-governmentalization process, and then, how, and the extent to which it led to local policy efficiency and efficacy. The analysis relies on qualitative data collected through official reports on the PDL by the government and international organizations based in Cabo Verde, legislations, and interviews with local governance stakeholders.

The chapter is organized into six sections. After this introduction, the second section presents the theoretical framework of de-governmentalization of public policies in the context of collaborative governance. Section 3 is about the homeostasis of Cabo Verde Public administration, describing its emergence and development over the years up to the present days. Section 4 approaches the power decentralization and de-governmentalization of public policies in Cabo Verde, by focusing on a specific case of collaborative governance project—the PDL. Part five explores the new trend of power decentralization and de-governmentalization in Cabo Verde. The last section concludes the chapter and makes recommendations.

2. De-governmentalization in collaborative governance process

In public policy process, collaborative governance refers to engagement of "public and private stakeholders" in a "consensus-oriented decision-making" process ([2], p. 1) of public policymaking and public service delivery. Market and civil society actors engage in "collective forums" with public agencies to elaborate and implement policies for the matter of policy inclusiveness [3], efficiency, and efficacy [4, 5]. As they work together, the diverse array of actors builds "synergistic relationships" [6] to foster their constituencies' inclusivity and ownership, mutual "trust," "commitment," "understanding," and their "shared motivation" [7], forming an institutional linking social capital, in collective problem-solving. This network of relationship of actors bounded together through collaborative institutional linkages, adds value to the public policymaking and implementation process [8].

The idea of collaborative governance is not new, however. States have always used some sort of human "private" organizations, either coercively or through institutionalized partnerships, to govern. Colonial states, for instance, collaborated with the

church and traders to implement slavery trade policies across colonies or implemented other exclusive economic, racial, religious, and other sorts of policies. In the years following WW II, collaborative governance reemerged with big and centralized governments that cooperated with charity institutions and others to implement their expanding social welfare policies. However, a new concept of collaborative governance reemerged in the 1980s and 1990s, with the neoliberal rise to power in England and the United States of America, initiating the collapse of the socialist "big government" that had been reigning since the end of World War II. The central theme of the neoliberal credo was, and continues to be the "minimalist state", famously characterized by its retrenchment on social policies. Such a move was not peaceful, however, as the announced welfare state retrenchment, for instance in England and the USA [9], ignited social unrests and "class" struggle in these two countries. Margaret Thatcher and Ronal Reagan in England and the USA, respectively, defended that the central issue of governance now is how to give the government back to the people, as they began a privatization campaign of public services, either to profit business and to charitable institutions.

In the aftermath of the aforementioned political changes, new ideas and practices of public administration resembling market logic and efficiency started being tried, as attempts to de-governmentalize the business of public policies, as a strategy to seek government efficiency and efficacy in the public service delivery. Neoliberal idealists saw the "big government" inherited from the socialist regimes as obstruction of voluntary and private initiatives. Thus, the term "governmentalization" refers to the government power concentration and widespread control over all the spheres of life. Government is the "liberty-violator but also a benefactor, permission-granter, employer, landlord, customer, creditor, educator, transporter, access-granter, grant-maker, prestige conferrer, agenda-setter, organizer, law-enforcer, prison-keeper, record-keeper, librarian, museum curator, park ranger, and owner of myriad massive properties and resources within the polity" ([10], p. 1). The concept of de-governmentalization of policy management refers exactly to the opposite of the government's encompassing control over political, economic, cultural, and social affairs. It is about "giving the government back to the people", a quote so much often cited by American political leaders.

De-governmentalization refers to both processes of collaborative political decision and the policy implementation. Policy decision process, though oriented by governments, is not solely, nor thoroughly controlled by them. Market and civil society actors engage with governments in genuine and institutionalized forums of policy agenda-setting and formulation processes. With regard to policy implementation, de-governmentalization of public management focuses on the institutional designs that allow non-government actors to produce and deliver public services, whether funded or not by public budget. De-governmentalization, therefore, is about government opening to the inclusion of non-government actors—private and civil society actors, in the policymaking and implementation processes, giving space for more governance and less government [11].

One theory of public administration that emerged and was widely spread to give corpse to the neoliberal creed is the New Public Management (NPM). The "big" socialists government, which was struggling with low economic growth in the late seventies due to cyclical phenomenon of fuel crises, had been too centralized, bureaucratic, "overloaded", and rather ineffective [11]. To break up with this administrative status quo, the NPM was conceived on the belief that the practices, methods, and principles used in private sector management are superior and more efficient to those

used in public sector management [12–14]. Rather than seeking to annihilate government's role in the policymaking and implementation process, NPM enhances its ability to reach efficiency and efficacy. This is because managers are granted freedom to manage and not simply following narrowing political and administrative orientations on what to do or not to do. "Politicians exist to set goals but then get out of the way [and then] come back in when it comes to the final judgment of the performance of managers against the goals that have been set" ([8], p. 46). The inclusion of market and civil society actors adds expertise, innovation, and resources to policy administrative bodies which government alone may not be capable to provide.

NPM spread quickly with the waves of democratization in the 1990s, gained adherence across the Western countries, and then exported to the rest of the world through the mechanism of structural adjustments programs of the IMF and the WB in the developing countries. The new public management philosophy, oriented to performance rather than control, and the inclusion of market and civil society actors in policymaking and implementation processes soon became widely acknowledged as intrinsic elements of democratic consolidation. The same could be said in the global south countries, where non-state actors, though not often engaged through formal collaborative structures with governments, carry important work in complementing and supplementing government insufficiency and/or absence of service delivery. NPM's advocators become over the years, not only neoliberal parties and governments, but also, actors of all political spectrum, including socialist governments [8, 12, 15].

Despite its success in de-governmentalizing public policy by employing market principles on public management for the concern of efficiency of policy delivery, NPM became also an object of waves of criticisms. Major criticisms focus on its over-proximity and submission to the logic of market and private business utilitarianism, due to its excessive concern with efficiency. Stoker [8] argues that "governing is not the same as shopping or more broadly buying and selling goods in a market economy" (p. 46). He proposes instead the Public Value Management (PVM) paradigm of public administration, which draws from the concept of network governance to advocate for the involvement of all relevant stakeholders in decision-making and policy implementation processes [8]. The major contribution this paradigm introduces is the "net benefit" the actions of public managers generate to the larger society. Rather than the "profit" logic of NPM, PVM stresses the society's overall benefits gained with public policymaking process and implementation. It is believed that when all stakeholders in a political community engage in the governance structure, generating a social capital stock in the form of "trust," "commitment," "understanding," and "shared motivation" [7], which impacts positively the policy outcomes [8]. The next section examines one case of de-governmentalization of public policies, inspiring in the paradigm of PVM.

3. The homeostasis of Cabo Verde PA

Cabo Verde is a volcanic archipelago comprising ten islands and eight islets located around 550 kilometers off the coast of Senegal on the northwestern African coast. It has a population of about 0.5 million people (INE-Census 2021), spread across nine inhabited islands. Despite covering 4033 km^2, only 10% of the land is arable and much remains undeveloped owing to rainfall constraints. After its discovery in 1420s by Chinese travelers [16] and then its claim by the Portuguese expansionists in 1460s, Cabo Verde, probably named after its green landscape encountered by Portuguese settlers), soon became a reference and a mandatory stopover during the transatlantic

slavery trade. The colonial centralized and rigid administrative machinery implemented until the independence in 1975 would mold the country's administrative ethos up to the present day. Despite the innumerous reforms implemented since the independence, some radicals, but others with mere incremental and/or aesthetical touches, public management in Cabo Verde faces the dilemma of leaving behind the burdens of its colonial past, while attempting modernizing practices. PA still conserves vestiges of its colonial past with regard to its centralization, extreme politicization, and political patronage. However, it also embraces modern practices like digital services, where any citizen, whether living in Cabo Verde or abroad, can request for a public service like a birth certificate and receive it instantaneously from the comfort of his couch.

Cabo Verde's successful development path has in fact been largely attributed to its "good administration" erected and initiated in the colonial years, whose vestiges endure up to the present days. Cabo Verde's geostrategic localization in the northern Atlantic Sea and its importance for the slavery and transatlantic trades, required an efficient PA, with "capable human resources [17] to design policies and deliver services to respond to slavery trade market demands. The colonialist developed in fact a "training hub" of public servants in Cabo Verde, who would be deployed to other colonies across Africa.

After its independence in 1975, Cabo Verde initiated an "endogenous" good governance [18] process rooted on mass democracy and a moral compromise of the new leaders with the people, swearing to make the country economically and viable despite the lack of resources. The newly independent administrative machinery becomes now a "tool", not to serve the thirst of the Kings and colonialist for the "transfer" of growth dividend to the metropole [19], but to produce goods to satisfy the country and its population's own needs. Therefore, the highly hierarchized and exclusive PA and bureaucracy inherited was transformed into a more inclusive machinery to serve the national interests. Nevertheless, despite the change in the policy goals, its design and administration were still centralized, as the single ruling party becomes the sole political force that "leads the society and the State" (Constitution, 1980). The implanted socialist and planned economy was the major challenges for a democratic and genuine collaborative governance. However, "despite its socialist rhetoric" the ruling party PAIGC was in fact "pragmatic in policy", as it opened to political and economic liberalism, and to international policy ([18], p. 136). Such pragmatism was even verified through the collaborative practices of community hearings and the widespread use of "civic associations" to implement small-scale policies across the country [20]. The single-party regime pragmatism on policymaking and implementation, rather than ideological pragmatism, and its sensitiveness to the domestic and international changing conditions ([21], p. 158), convinced the PAICV leaders to rapidly abandon the one-party state and called for legislative elections for January 1991 and a presidential election for February in the same year ([18], p. 136). These embryonic collaborative practices would grow, over the years, into a more institutionalized collaborative governance in Cabo Verde in 1990s and forward.

Cabo Verde's transition to democracy in 1991 inaugurated a new approach to policymaking and public management processes. Its opening to market economy, and the imposition of structural adjustment by the International Monetary Fund and the World Bank, reframed the institutional and economic practices, reducing the State's intervention in the economic planning and social development inherited from the single-party regime. It is against this backdrop that the Cabo Verdean public administration was reoriented to the "panorama of values and principles for NPM", in

seeking to improve efficiency, results, performance, and control of expenses ([22], p. 87). This new trend of PA was pursued along with the decentralization process from central to local government structures.

At the central level, the new constitution approved in 1992 formally included non-state actors in the policy process, as it rules in favor of the engagement of civic organizations, trade unions, and business associations in formal forums of social concertation and other policy platforms. The government adopted a package of legislative measures and a program for the emergence of civil society organizations, and a framework of public/private partnerships for the management of some economic and social welfare services like education, health, environment, culture, among others ([17], p. 35). Trade unions, for instance, are granted the rights to participate in social consultation bodies, in the definition of the policy of social security institutions and other institutions aimed at protecting and defending the interests of workers, and to draft labor legislation (Constitution 1992, Art. 66). The wave of privatization of State-Owned Enterprises inaugurated the transition from a socialist centrally planned economy into a capitalist and market economy in Cabo Verde, in force until the present days. Major companies in the sector of electricity, telecommunications, and banking were privatized. Civil society organizations became agents of market bargaining as they were being contracted as partners with the government to implement policies [23]. The digitalization process of PA initiated in the 2000s has been an important "opening mechanism" for the de-governmentalization, generating therefore values to the users.

4. The local government de-governmentalization process in Cabo Verde: the case of Platform of Local Development

The first local government elections in Cabo Verde were held in 1991, and it became the turning point for the democratic policy decentralization, as policy administration would become more territorially localized, directly managed by local elected officials. The decentralization of policy implementation in the post-independence period resembled to a certain extent, the hierarchical and unidimensional line of the colonial period, but with the single ruling party dictating policies now. The government delegations instituted in the islands were a vehicle of the single-party regime control of policy implementation across the dispersed territories. Local policy formulation initiatives emerged with the elections of local councils from 1991 onwards. However, to what extent these new governments are free, and have the capacity to formulate and implement their own policies? Alternatively, are they simply mere extensions of the central power?

It is undoubtedly true that central power decentralization to local government structures has been an important step toward de-governmentalization. However, policy power transfer to local government levels in Cabo Verde is often restricted to management roles, despite their financial and planning independence. Local council is somehow perceived as bureaucratic, lacking "intra-organizational management and transversal focus", focusing almost exclusively "on the implementation of policies and not on products or results", and "organizationally distant" from policymakers ([22], p. 101). Power and policy decentralization from the central government to local government structures is still governmentalization by other means, as local public officials, who are linked and accountable to the government and their supporting parties, while keeping the policy process distant from local stakeholders. The implementation of PLD aimed to change this policymaking status quo.

In 2017, the newly elected government in 2016, supported by the same party that had had a landslide victory in both legislative and municipal elections (Movement for Democracy- MPD), introduced an innovative approach to promote local governance in Cabo Verde, as part of its strategy to achieve inclusive and sustainable development goals (SDGs). This new governance approach, named Platform for Local Development (PLD), was implemented across 20 out of the 22 municipalities with technical assistance of UNDP and financed by the Luxembourg Development Cooperation Agency. Despite the focus is the de-governmentalisation at the municipality level (council), PDL is also de-governmentalization at the central level, as it increases councils' capacity to trigger their own policies, rather than being mere implementers of central government policies. The PDL was conceived to be an institutional breakthrough of policy democratization at the local levels by engaging the residents in the councils' policy and project planning.

The PDL's focuses on the policy decentralization from the councils, as it takes an "all-of society approach" to governance, engaging all the key municipal stakeholders in the local policymaking and implementation processes. These stakeholders include local private businesses, decentralized government services, community associations, professional associations, civil society organizations (CSOs), international organizations, and the councils, which lead organizations of the PDL operationalization, crystalized the Municipal Strategic Plan for Sustainable Development (PEMDS). The PDL project was financed almost in its entirety by the Luxembourg Cooperation Development, in the ambit of "Decentralization fund", and other smaller foreign partners mobilized the councils themselves (**Figure 1**). The UNDP office in Cabo Verde led and coordinated all the implementation process of the PLD in close articulation with the government, through the Municipal Coordination Unit. PLD is therefore a local policy forum where local stakeholders and communities raise and bring issues to the fore, as well as discuss solutions. All these interlinkages make PDL
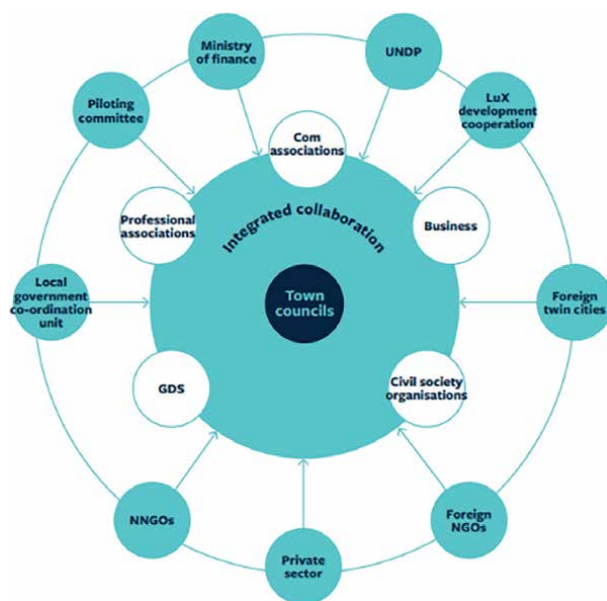

Figure 1.
Visual repesentation of PDL. Source: Ref. [3].

an "ecosystem for Local Development" as the network created favors the planning and implementation process of policies, harnessing on the resources and expertise of the wide variety of stakeholders involved. The council still holds greater control over the policy process, the novelty of the PDL is that all voices count, as long as the needs of the communities are the major criteria for policy choices.

PDL is then a true attempt to de-governmentalize local policymaking, including the agenda setting, formulation, and implementation of projects (Look at **Box 1** for a picture of how actors work together). Local companies, for example, are being incentivized and given contracts to implement projects, despite accusations of political favoritism and other criticism of corruption. Actors like community association participated in the hearing meetings with Mayors and councilors to give their opinions about what needs to be done in their communities. Their concerns are then included in the "Plano de Atividades e Orçamento", which should contribute to the implementation of the Municipal Strategic Plan for Sustainable Development (PEMDS). Local associations and business may get contracted to carry projects targeted specifically to tackle the issues that come out during the hearing sessions.

For example, the design and implementation of one project by the Council of Mosteiros, entitled: "Integrated Project to Promote Socioeconomic Resilience of Vulnerable Families in Mosteiros", all conception and implementation process is described as follow:

> *The preparation of the project involved the participation of technical staff from the City Council and the Mosteiros PLD. These staff obtained inputs from direct beneficiaries, namely directors of the Mosteiros Fishing Operators Association (AOPM), representatives of community associations and, during the execution of the last tranche, members of the Local Opinion Councils, and consultative bodies of the Municipal Council of Mosteiros (Fundo de Descentralização, w/d)*

All actors are engaged in mainstreaming the SDGs across all policies or projects developed and implemented in the municipalities. Reports indicate that implementation of PLD from 2017 to 2020 contributes enormously to the country "national and local capacities for the mobilization, coordination and efficient management of partnerships and funding for development, including south-south, triangular, and decentralized cooperation"[1]. The PLD outcomes are observed across four major fields:

Institutional capacity strengthening and ownership: PLD improved the capacities of the municipalities to mobilize the resources of their engaging partners in their development process. The Municipal Strategic Plan for Sustainable Development provides the municipalities a sense of autonomy and ownership and a guide to trigger their own development path, rather than being mere administrative agents of central government ministries.

Social and economic welfare: The PDL implementation is very much performance-oriented, focused on practical outcomes on social and economic development of the municipalities. The "impact projects" financed and implemented during the execution of the PLD benefited directly more than 10,000 people with jobs, creation of generating income activities, training, and capacity development initiatives.

Policy governance: The inclusiveness of policy process introduced in the PLD provides not only transparency but also more accountability to all the engaging partners.

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[1] See Ref. [24].

Actors understand how the process works, and they are expected to accomplish the process to achieve the desired policy outcomes.

Social capital: The network created with the interlinkage among the actors engaged with the local governments in the policy process increases the level of trust among them, which keep them together in search for the solutions for the sustainable development of their.

Boa Vista is one of the nine inhabited Cabo Verdean islands, located at the north-eastern side of the archipelago. It is also one the most tourist island along with Sal. Therefore, developing business activities related with tourism is one of the main focuses of the Boa Vista Council.

The council has taken a collaborative governance approach to developing entrepreneurship. The council, with the support of the Municipal Financing Fund, created an Entrepreneurship Office, called the Income Generating Activities Financing Fund - FAAGER, with the aim of facilitating young people's access to rapid financing mechanisms to develop their business. This office emerged with the growing tourism activity on the island since the opening of the international airport in 2007. In this sense, the municipality identified not only an investment opportunity, but also an opportunity to create institutional mechanism to support young people and sectors of the population that were excluded from the economic circuit or in conditions of underemployment. Therefore, in partnership with local associations, banks, and Pro-Empresa, the council created FAAGER, a collaborative and specialized office to promote private business development on the island. FAAGER organizes training sessions aimed at project promoters, particularly in the areas of preparation, monitoring and evaluation, entrepreneurship, and small business management. Nevertheless, financing requests are made directly to banks, who have all the liberty to carry out their own assessment of the projects submitted. The City Council monitors all the FAAGER activities, including income-generating activities generated by their supported projects. In other words, this practice is not limited to providing financing, but monitors the monthly development of activities, taking into account the impact they have on the promoters' individual or collective income. Throughout the year the office develops a series of activities in partnership with Highschool of da Boa Vista, local associations and Pro-Empresa (a State-Owned Enterprise with the mission to support private business initiatives), and other stakeholders on a genuine and continuous dialogue.

According to a report named "Catálogo de Boas Práticas de Desenvolvimento Local em Cabo Verde" by 2020, there were 37 direct beneficiaries of the FAAGER activities, 35 of whom are individuals and two small companies (a poultry farm and an electricity company). Among the beneficiaries are students from Escola Secundária da Boa Vista, young people who wanted to expand or have their own business, thus accessing the job market, women heads of families, the Boa Vista City Council itself, and one local bank agency that is partner of the project.

By promoting and supporting local employment initiatives and encouraging self-employment, FAAGER contributed to the promotion of the economic and social integration of unemployed people, at the same time revitalizing various sectors of the economy, showing how collaborative local governance solution can untangle barriers and boost local development. In this sense, PDL is giving its added-value contribution.

Source: Guide of Good Practices of Local Governance (XXXXX).

Box 1.
The local partners engagement on entrepreneurship promotion in Boa Vista Island.

5. Shortcomings and the new decision for the social concertation projects

The PDL experience during the 4 years of its implementation, despite its contribution to governance indicators across the 20 municipalities where they were implemented, still faces challenges. The first challenge to overcome is the local policy-making path-dependence itself. Local councils enjoy the democratic and institutional legitimacy to make and implement policies. Local governments are designed to "be mayor-centered", as he is the only one "who decides which personal competences might be delegated to other executive board members" ([25], p. 869). This practice has become a governance habitus, since the enactment of Statutes of Municipalities in 1995. The councils themselves, individually or through the associative body, the National Association of Municipalities of Cabo Verde, often claim more power and resource

decentralization from the central government. Nevertheless, they are extremely reluctant to decentralize their own power and resource to other local governance structures. As the lead technical advisor of PDL in Cabo Verde, Mr. Cristino Pedraza argues that changing "the way of working" and the "mindsets takes time".[2]

The second challenge is the technical unpreparedness of local associations to engage qualitatively in the policy and project-making and implementation processes. These organizations, in general, lack financial and human resources, and the technical capabilities that allow them to intervene substantively and with vigor. Their participation is often restricted to the hearing committees, where their leaders voice their communities' concern and agreed on the councils' agenda, but they lack the argumentative and the bargaining capacity to advocate firmly for their own issues unto the agenda.

A third challenge is overcoming the politicization and political exploitation of community and other civic associations. Leaders of these organizations are often co-opted or conditioned by the ruling parties, limiting therefore their capacities to freely and genuinely engage in the collaborative governance.

The fourth one is the challenge of institutionalizing PDL, to avoid their use at the discretion of the mayors. Despite the technical tools made available to the municipalities throughout the PDL activities, their success depends on the leadership of the councils, who may decide to continue or not with an open process of dialogue with the actors in the territory. As the PDL lacks an independent governance structure, all the operations are monopolized and controlled by the council, and the mayor himself. As the lead technical coordinator affirms, "continuity always depends on the degree of maturity that a council has to continue with an open space" of dialogue with private sector and civic organizations, and the "logic of good governance" (idem), which is behind the platforms.

6. Lessons from PDL to strengthen de-governmentalization in Cabo Verde

The policy de-governmentalization process with PDL initiated in 2017 through 2020 set the ground for some key reforms of public management in Cabo Verde, both at the national and local levels. In June 2022, the government approved the National Decentralization Strategy (Resolution n° 73/2022, 30 June 2022), with focus on two main aspects: central administrative decentralization and the creation of Municipal Social Concertation.

The administrative decentralization foresees the transfer of competencies of policy implementation to local councils, private business, and civil society organizations, creating therefore a "third-party government" structure [26] as the government political strategy to improve policy efficiency and efficacy at reduced costs. That is because these local agents are closer to the population, and therefore, they know much better their needs and the ways to address them.

On the other hand, the "Municipal Social Concertation" resembles the PDL in many aspects. It is a governance institutional structure that brings together the "multiplicity of actors" and "their cultural diversity, their interests, and priorities". The entity is a space for "a permanent dialogue between civil society structures and subnational authorities as a necessary condition for building a broad consensus on

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[2] https://expressodasilhas.cv/pais/2019/12/15/programa-de-plataformas-para-o-desenvolvimento-local-o-longo-processo-de-mudar-as-mentalidades/67072.

the trajectory of municipal development" (Resolution n° 73/2022, 30 June 2022). "Municipal Social Concertation" allows for a bottom-up governance, enabling the resolution of conflicts through dialogue and the construction of consensus around policy municipal policy issues.

Along with the National Decentralization Strategy, the government also adopted the National Strategy for Regional and Local Development (Resolution n° 87/2022). The main goal of this strategy is to combat inter- and intra-regional economic asymmetries, creating equitable development opportunities across all the regions, islands, and municipalities. To accomplish this overarching goal, the resolution foresees the creation of two subnational-level public entities, regional development agencies, and municipal and inter-municipal technical offices for local development.

The Regional Development Agency shall be installed across different administrative (to be defined according to government's own administrative criteria, knowing that the regionalization bill in Cabo Verde has been kept in the drawer since it was rejected in the parliament in 2017). The agency is an independent body, but publicly funded, with the main function of promoting economic development at regional levels, in coordination with central government and local/regional entities.

The municipal and inter-municipal technical offices for local development, on the other hand, are more of the initiative of the local governments (councils) and their representative bodies. Nevertheless, with the support of central government. These offices should be responsible for developing, at municipal and inter-municipal level, policies for business promotion, employment and attraction of new investments, as well as licensing and local business, commercial, and tourist promotion. While regional development agencies are broader, and more central government directed, municipal, and inter-municipal offices are bottom-up created and operationalized by the partner municipalities. **Figure 2** below illustrates how these two entities are placed within the policy decentralization flow from the central government to regional, municipal, and civil society entities.

The figure demonstrates clearly that government public management decentralization is a tout court top-down process. The central government delegates

Figure 2.
Flowchart of policy transfer within the ambit of decentralization. Source: (copied and adapted from the Resolution n° 73/2022, 30 June de 2022, p. 1564).

administrative competencies (with resources) either to municipal governments or to civil society organization (including business) to execute policies. The municipal governments can also delegate competencies to civil society organizations. The red arrows show that both central and local government can delegate policy implementation powers to regional administrative bodies when they are set up. These bodies are also expected to collaborate with civil society organizations in the policy implementations. The green rectangles and arrows were added to the original diagram from the National Strategy of Decentralization, to include two public bodies foreseen in the document: the regional development agencies and the municipal social concertation. The former like the regional administrative bodies are directly under the tutelage of central government, even though they are depicted as independent. The municipal social concertation bodies shall function very much like the PDL. It is a policy dialogue forum where issues are addressed and consensus built at the municipal level, but with no implementation competencies.

The collaborative governance embedded in the government decentralization process sought by the government is based on the value of linking social capital (XXXX) to promote policy efficiency and efficacy. Nevertheless, the de-governmentalization through the decentralization process, focused primarily on the territorialization of public management, may not be enough to guarantee policy efficiency and effectiveness, if the territorial governance structures are not fully and meaningfully engaged in the policymaking process they are required to implement.

7. Conclusion

In July 2025, Cabo Verde will celebrate its 50th anniversary as an independent state. As a young and archipelagic state, added to its limited natural and financial resources, Cabo Verde has over the years, faced the challenge of designing and implementing a public administration machine that caters for the needs and interests of all segments of population across the territory. Power and administrative centralization in the capital city in Praia, has been and continues to be criticised by local political elites in other islands, as the key factor for the country's development asymmetry. Movements of political regionalization of the islands carried out intense public campaigns between 2010 and 2017, to advocate for the state's administrative reform and power decentralization. They see power decentralization as the way to increase local governance and the harmonious development across all the islands. As the political regionalization failed to be implemented, other governance attempts are tried. The PLD described in this chapter provides a clear example of that attempt. As a local governance ecosystem, PDL caters for an inclusive policymaking process, as the PA blueprint to promote economic and social developments of communities. The inclusive entrepreneurship project design and implementation in Boa Vista highlighted in **Box 1** provides a clear example of how the PDL ecosystem works in practice. Local governments, the Town Councils, "trigger" the collaborative governance process as they are "likely to have larger potential to contribute to system's innovation" ([27], pp. 1734-1735). They engage local, national, and even international stakeholders as partners and vehicles for resource mobilization for their policy or project implementation. The potential success of PDL to deliver public services is widely recognized by the "Decentralization Fund" established in 2019, and sponsored by the Luxembourg Development Cooperation Agency. The fund just announced a new financial package to support the refinement and the continuation of local governance program in Governo de Cabo Verde [28].

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Chapter 8

Reviewing the Role of Subnational Governance in Rural Development Planning: The Case of Zimbabwe

Wonder Mafuta and Joseph Kamuzhanje

Abstract

The capacity of governments, partners, and clients (population) to deliver services is shaped by many factors, including policies, politics, funds, calamities, history, and geopolitical characterisation. A Systematic Literature Review with the support of Preferred Reporting Items (PRI) guidelines was adopted. Legislation that governs the formation and functionality of developmental structures spanning 1980 when Zimbabwe gained independence was reviewed. The authors also examined fifty-nine journals and books published between 2018 and 2024. The reviewed journals and books provided summaries and promulgated how subnational governance promotes rural development in African and Asian countries. Results showed that the state functions of public administration systems depend on the policies, and strategies and institutional and legislative frameworks referred to as state writs and web of legalities. Catastrophes affect governments' planning and use of resources beyond fiscal budgets' limits. When such happens, the coffers meant for other service delivery are emptied, thus diverging from the original intent. There have been spontaneous words without action where governments were called to action as a culmination of economic and political pressures that challenge the customary public administration models. Zimbabwe has connoted and implemented many public administration advances. There is a need to research further why some do not garner enough traction.

Keywords: constitution, development frameworks, devolution, polarisation, resilience

1. Introduction

The planning and delivery of rural social services is a fundamental domain of public administration that keeps evolving. The capacity of Governments, partners and the clients (population) to deliver services is shaped by many factors, which include policies, politics, funds, calamities, history and geopolitical characterisation. The 4th edition of the Public Administration Handbook [1] categorises critical these as the drivers of public administration. Countries like the United Kingdom (UK), the United States of America and France transfer policies because they have similar economic status, ideology and history. The state and functions of the public

administration systems depend on the policies, strategies, institutional and legislative frameworks referred to as state writs and web of legalities [2].

The COVID-19 emergency ushered in a significant change in the public administration of national governments to deal with the catastrophy, and there was a drastic shift in the way of doing business. The virus caused an economic depression worse than the Second World War. Within the first four months of its spread, China's industrial production had reduced by 13,5% [3], and the world's 3,2 billion workforce was severely affected (ILO [4]). The emergence of catastrophes, typhoons, droughts and cyclones affects how governments prioritise and operationalise resource use and service delivery. Catastrophes affect governments' planning and use of resources beyond fiscal budgets' limits. When such happens, the coffers meant for other service delivery are emptied, thus diverging from the original intent.

There have been spontaneous words without action, such as Brexit, where governments were called to action as a culmination of economic and political pressures that challenge the customary public administration models. There were insufficient funds after the 2016 UK Brexit exit [5]. For a whilst, the population did not trust the politicians since the UK population was unsure if the politicians were anti or pro-leavers—the public distrust and fear of the unknown stalled planning and the delivery of public administration of services [6]. China–Africa relations are a networked governance model currently shaping public administration and foreign affairs in both the West and East. There is an emergence of theoretical frameworks and complexity theories, such as the BRICS, which also affect how different governments provide services to the population. Three public administration models in Southeast Asia are colonial-bureaucratic, postcolonial-developmental and current "new public management". These models, borrowed from Western nations, are at different stages of evolution based on each country's geopolitical and economic status [7]. Whereas considerable work has been undertaken in the developed countries, much is desired for developing countries, particularly in sub-Saharan Africa.

Phillips & Seifer [8] opined planning is a form of agency establishment. They defined agency as the capacity to intervene by influencing a process or the state of affairs. Thus, planning what communities want can be referred to as agency. Chambers [9] noted that for an agency to be created, the following factors are needed: relationships, structure, power, shared meaning, communication for change, motivations for decision-making and integration of these disparate concerns and paradoxes within the field. [10] further argued that understanding conceptual underpinnings and power balances goes a long way in understanding how planning can be conducted. In his book Contemporary Strategy Analysis, Grant [11] cited that planning is only successful if it necessitates a strategy that can respond to events positively or negatively with flexibility and clarity of direction. Phillips *et al*. [8] argued that planning at subnational levels should provide an opportunity to interface systems and methodologies that lead to consensus building and implementing projects and programmes to address the Community's felt needs. The purpose of the development framework is to promote community participation in development interventions. The argument is that this would increase ownership, sustainability and accountability levels. This book chapter aims to provide an entry point into understanding governance underpinnings at subnational levels in Zimbabwe and other developing countries.

2. Conceptualising subnational governance

For this chapter, subnational governance is understood in the context of devolution and decentralisation. According to UNICEF [12], decentralisation is a process in

which authority for planning, management and resource allocation is transferred from the central Government to regional or local government departments. There are three types of decentralisation: devolution is the transfer of authority to local Government; delegation is the transfer of authority to semi-autonomous public authorities (e.g., housing authorities); and de-concentration is the transfer of authority to ministry departments at the subnational level. The way local decisions are made and implemented is referred to as local governance [12]. This includes decisions regarding the mobilisation, prioritisation, allocation and utilisation of public resources. Local governance is shaped by policies and informal interactions and the relationships among various levels of government and local actors [13]. Whilst decentralisation is intended to formalise local governance, local governance takes place in both centralised and decentralised contexts. The term' local government' includes all levels of Government below the national level (or state level, in federal contexts). Local Government exists in contexts that are rural (e.g., districts, communes) and urban (e.g., towns, municipalities). Local Government includes institutions with varying mandates and powers, for example, mayor or governor (appointed or elected); local councillors or assembly members (appointed or elected); technical and administrative units that deliver services assigned to local Government (e.g., education department, social affairs department); and local offices of semi-autonomous government agencies (e.g., water authority). Local governments usually play a prominent role in local governance.

3. Methodology

The authors adopted a Systematic Literature Review with the support of PRI guidelines. Legislation that governs the formation and functionality of developmental structures spanning 1980 when Zimbabwe gained independence was reviewed. These include the Prime Minister's directive on decentralisation of 1984, the Provincial Councils Act of 1985, the Rural Councils Act of 1988, the Traditional Leaders Act of 2000, 13 principles of decentralisation, Statutory Instrument 15 of 2000 and the 2013 Constitution of Zimbabwe. Integrated rural development remains fundamental to the growth and success of developing countries in Africa and Asia [14]. The authors reviewed fifty-nine journals and books published between 2018 and 2024. The reviewed journals and books provided summaries and promulgated how subnational governance promotes rural development in African and Asian countries. The authors synthesised the summaries to ascertain how the subnational governance promotes public administration models in Zimbabwe, Africa and Asia.

4. Results

By 1984, Zimbabwe's developmental planning aimed to ensure that the underprivileged, marginalised and vulnerable communities participated in processes to understand challenges and propose solutions within their context [15]. In 1984, the then Prime Minister issued the Prime Minister's Directive on Decentralisation, which provided the basis for a hierarchy of representative bodies popular participation in development planning at the village, ward, district and provincial levels [16]. The Prime Minister's Directive was followed by the enactment of the Provincial Councils Act in 1985. The Act assigned the provincial governor to chair the Provincial Council (PC). The PC was the highest policy-making body in the province, and its mandate was to guide the development

processes. The PC was supposed to get technical assistance from the Provincial Development Committee (PDC). The PDC comprised all the heads of government ministries and departments, the private sector and Non-Governmental organisations (NGOs).

Subsequently, the Rural District Councils Act (1988), Traditional Leaders Act (2000) and Statutory Instrument 15 of 2000 were enacted. The Rural District Councils Act was a culmination of a process meant to create a single local authority system in the rural areas, which previously had rural councils responsible for large-scale commercial farming areas and district councils communal areas. The Traditional Leaders Act attempted to redress the historical situation where successive colonial governments disenfranchised the traditional leadership in Zimbabwe. There was a realisation that depending on the political processes without the traditional norms and values would somewhat result in hollow development. On another level, the Traditional Leaders Act strengthened grassroots participation in development. Statutory Instrument 15 of 2000 provided legal support for the lower level structures such as the Village Development Committees (VIDCO), which are the bedrock for any rural development processes.

The preamble to the Constitution posits that the purpose of the Constitution is to "...... entrench democracy, good, transparent and accountable governance". There can only be democratic, reasonable, transparent and accountable governance if all the citizens are involved. Section 13(2) of the Constitution posits that the state should "involve the people in the formulation and implementation of development plans and programmes that affect them". Section 13(4) states that the Government "must ensure that local communities benefit from the resources in their areas". The importance of community planning, equity, democratic participation and national unity is further provided under Chapter 14 of the Constitution.

The 2013 constitution emphasises the devolution of power and responsibilities to lower tiers of Government in Zimbabwe [17]. According to section 264 of the Constitution, devolution gives local governance capabilities, promotes accountability, preserves national unity, respects the rights of communities, ensures equity and encourages capacity transfer. The Constitution provided the structures that should lead in the devolution process.

The Government's 13 Principles of Decentralisation in the 1990s brought about devolution. Devolution was associated with "secessionism", particularly in the country's southern parts, because people felt marginalised on political grounds. As a result, there was a transfer of functions and not fiscal support. After the 2013 constitution, the Government generated interest in the devolution agenda by convening provincial and district consultative meetings and disbursing funds to local authorities. Section 301(3) stipulates, "Not less than five per cent of the national revenues raised in any financial year must be allocated to the provinces and local authorities as their share in that year". The Government has disbursed devolution funds to US$846 million and US$1,446 billion for 2019 and 2020, respectively. Despite the commitment and disbursements of devolution funds, the local government legislation (Rural District Councils Act, the Urban Councils Act, the Provincial Councils and Administration Act, the Traditional Leaders Act and the attendant statutory instruments) are not aligned to reflect the provisions of the new Constitution.

5. Synthesis

The Constitution's provisions pose several ideological, systemic and structural challenges related to subnational governance. In the 2013 constitution, the makeup

functions of the PC changed and became more representative socioeconomically and politically. The parliament members and senators who are also part of the Provincial Committee came from different political parties. The new Constitution broadens the membership to include duly elected members from all political parties. However, with the polarisation that had dominated Zimbabwean politics, it is still difficult to see thePCs functioning and focused on inclusive development. Suppose the business conduct in the Zimbabwean national legislature is anything to go by, where there is more heckling of members from opposing parties than focusing on real national development issues. In that case, there is little hope for the subnational-level structures. The polarised environment has been blamed for the delays in realigning the current acts of Parliament to the new Constitution, the apathy surrounding the general elections and the active participation of communities in development programmes.

The mismatch between the Constitution and the Acts somehow destroyed the communities' enthusiasm and commitment to contribute to the development of their areas. The legislation before 2013 provided for community participation at the subnational levels but did not go far enough to improve governance at that level. The 2013 Constitution, for the first time, referred to local governance at that level. It provides for expanded structures and a clear road map to devolution. However, there had been slow progress in addressing the challenges that pre-2013 legislation presented. The existing pre-2013 legislation is still not aligned with the Constitution, and the structures referred to in the Constitution have not been set up. There are severe challenges of apathy at the community level due to the experiences that they have had with development structures. However, provisions in the 2013 constitution are a testament to the willingness and commitment of the Government to ensure community-based planning using subnational governance structures.

What is often referred to as universal knowledge in public administration is Eurocentric, and little is associated with the realities of Africa and Southeast Asia [7]. The rural development frameworks ensured that communities participate in planning depending on known priorities. Once the village plans were agreed upon, the Government would provide the implementation resources through screening. The system worked in the early years as the Government could call upon development partners to fund some projects. However, with the political and socio-economic challenges that the country faced since 1996, support was no longer forthcoming. The Public Sector Investment Programme (PSIP), which the Government used as a rural development vehicle, became inefficient. In a study by Kamuzhanje [18], only 3% of the projects implemented in Matabeleland South between 2006–2007 were funded by the provincial investment plan. This meant the province's development priorities were set at the national level, not the village level. This mismatch between the planning and budgeting process would result in planning fatigue at all levels. Local and subnational approaches to public administration increased around 2010. This resonated with the Indian situation when the Ashoka administrative empire of India was split into provinces and districts. Service delivery improved due to reduced bureaucracy. Using e-government improved the monitoring and implementation of activities and, subsequently, accountability and transparency. Interestingly, in empires such as the Mauryan, which are loyal to the king, the public administration models are similar to those in the West [19].

Lipton, in 2023, found that India's agricultural investment is increasing because the Government encourages extra food stocks to replace investment in food imports. If any government in Asia or Africa keeps importing food, the funds that could be further invested in mechanisation and value addition would not accumulate.

The World Bank, the International Monetary Fund (IMF), and Western donors developed and advocated for Structural Adjustment Programmes [20], which emphasised macroeconomic stabilisation, privatisation and free-market development [21]. In Zimbabwe, the effects of Economic Structural Adjustment Programmes (ESAP) were felt from 1991 when the Government, on the advice of the Bretton Woods institutions, liberalised the economy and allowed market forces to take over. The Government was advised to reduce its investment in non-productive sectors. This meant that the Government could no longer support the PSIP, which was used to channel resources towards rural development. This further eroded progress in promoting Community and civic participation in rural development activities. One mantra for improved public administration is to reengineer and improve institutions. However, Elaine et al., argued the need to invest in designing and testing emerging institutional models to establish the financial and operational tradeoffs.

In 1987, the two biggest revolutionary political parties, PF ZAPU and ZANU PF, signed a unity agreement to contain the country's insurgency. By 1999, the Zimbabwe Congress of Trade Unions and other civil society organisations joined the Movement for Democratic Change (MDC), providing the most vital test to the ruling party, ZANU PF. Before the MDC's emergence, political polarisation was driven more by factionalism within the ruling party. When the MDC was formed, ZANU PF dealt with the polarisation more decisively. Participation in development interventions became very partisan. This means that some of the Community's voices were no longer being heard. ZANU PF had a firm hold on the rural areas in Zimbabwe, making it difficult for the other political parties to make any meaningful inroads in their development agendas.

Africa performs better than Asia in terms of press freedom, voice and accountability indicators. Corruption perception index, government size, voice and accountability, regulatory quality and economic wealth [2] significantly positively affect government effectiveness. Press freedom negatively impacts government effectiveness, suggesting that freedom is necessary but not sufficient if there are political actors whose actions undermine freedom [2]. Similarly, as reflected by checks and balances, the political constraint index is essential but insufficient to enhance government effectiveness, especially in Asia [2]. South Korea's developmental assistance to the DRC faced efficiency challenges, including tribalism, tribal conflict, incomplete administrative organisation at the local level, shortage of agricultural technology, agricultural market openings and unrealistic project goals [22]. The results suggest the need for comprehensive research on the local area and preliminary feasibility studies to secure sufficient time to plan the project and design suitable initiatives for recipient countries and target sites [22]. An exhaustive monitoring and development plan and systematic conflict management and resolution were recommended.

There is a need to articulate power relations and cultural, ethical, religious, social and artistic beliefs when climate change affects countries [23–27]. In 2000, Cyclone Eline struck Zimbabwe, resulting in 136 fatalities and destruction to 59 184 houses and huts, 14 999 toilets, 538 schools and 54 clinics [28]. The 2002 drought left about 8 million people in acute need of food assistance [28]. In 2007–2008, the cholera and typhoid outbreak resulted in over 100,000 positive cases and 5,000 deaths [29]. All these catastrophes resulted in Government and NGOs intervening and providing relief services. Most of these services were targeted at the poorest of the poor and were free. Whilst the intentions for providing free goods and services were noble initially, they have become an entitlement, resulting in dependency. The communities no longer see the importance of participative planning because they know there is

always external support. Consequently, this has harmed the usefulness and impact of the legislative and institutional frameworks.

Nemeth [30] defines ideology as "a social tool capable of changing what is into what can be". Socialist-communist ideologies from Russia and the Eastern Bloc dominated Zimbabwe's early years of independence. Asian countries perform better on international procurement indicators since they comply with international or Western standards [31]. The success of Asian countries (Indonesia and Malaysia) is based on the exportation of industrialised goods and pro-poor agriculture, and poor agriculture should be the focus of African countries (Nigeria and Kenya). The notion of planning and working together was more pronounced, hence the initial success of utilising governance structures [32]. However, with the interventions of the Bretton Woods institutions, in 1991, the country embarked on ESAP, which included the liberalisation of the economy and put the country on a capitalist trajectory. Zimbabwe has pursued communist and socialist ideologies, resulting in mixed and conflicting messages on how the communities should implement development interventions. Africa's rural agriculture development follows the Asia pathways. The fundamental underpinnings include adopting or fusing technology and research, securing property land rights, improved ICTs, investments in human capital, training and launching high-value agriculture and value addition [33]. Market-oriented agriculture development may reduce poverty and increase marginalisation in Laos and Rwanda. Gender, ethnicity, partiality of land rights and security further and domestic politics worsen marginalisation as some access services at the expense of others [34].

In the 1980s, the subnational governance structures were successful because the government institutions were fully functional and funded well enough to provide the communities' necessary support. Due to the economic meltdown, the capacity to respond to the communities' needs was reduced. Salvo et al., 2022 agree that poverty reduction is possible in third-world countries by creating employment opportunities, undertaking economic and institutional reforms, revitalising systematic microfinance programmes and incentivising the private sector [35]. The country lost over 500,000 civil servants between 2000 and 2004 due to poor working conditions. Due to institutional incapacitation, the NGOs emerged as a support mechanism. The NGOs had the resources to support the communities and government departments [23, 24, 36]. The NGOs created parallel structures to the VIDCOs and WADCOs, resulting in parallel planning processes. The Government planning and budgeting calendar ran from January to December of each year, but some NGOs had different planning cycles. Investing in technical vocational training to build capacity is necessary so that the population does not depend solely on government projects [37].

The taxation system should be revised since the national Government raises revenue from taxes, yet subnational structures such as local authorities also raise revenues from fees and rates. There is a chance of double taxation for some individuals and business enterprises, resulting in tax evasion as people and businesses seek to protect their investments and earnings. Due to the economic meltdown over the past two decades, the tax base has been shrinking. Resultantly, funds allocated to the devolution fund will be reduced over time. The tax issue partly derailed the devolution process in the 1990s when the central Government was not ready to hand over some taxable areas to the local authorities. Parallel political systems have also been formed to function along with the development structures, resulting in them remaining in name only. For example, ZANU (PF) has arrangements starting at the village level, known as "cells". It is more advantageous to be associated with the cell than the VIDCO due to the party's political influence. Whilst resettlement and land

redistribution seem essential, investing massively in research to understand the socio-economic, political and historical realities is vital to not harm the noble cause [38]. Agricultural growth remains the cornerstone for Africa's development and transformation if growth is based on production rather than area expansion.

6. Conclusions

The concept of subnational structures and governance does not operate in a vacuum. The impression has been created that it is a question of either or. This is quite far from the truth. Devolution and decentralisation, in various forms, can only truly work if the central Government is strong enough to provide technical and policy support to the lower levels. Just as important is that the citizenry must be convinced that their agency is critical in shaping local governance at their level. The challenges that have bedevilled subnational governance structures in Zimbabwe have been caused in the main by the reluctance of the Central Government to commit fully to the provisions of the 2013 Constitution, just as much as there was no political will to implement the 1996 Decentralisation programme. This, complemented by a polarised political environment and a disempowered citizenry, has made it possible for the process of rationalising the Acts in line with the provisions of the Constitution to take the amount of time it has taken.

It is also important to note that many interventions have been implemented by the central Government that have failed to garner enough traction. Some of them have made it difficult for the people to retain interest and confidence in the processes and any other initiatives by the Government. The key one already discussed is the ESAP. Whilst the programme opened up the economy and set the stage for the liberalisation of the economy, the fact that it led to the loss of livelihoods for many households meant that its benefits were largely lost. In addition, the loss in income for the households also meant that they could not pay for some of the services they were receiving, thereby compromising the ability of the local authorities to provide these services. So, all of a sudden, an action taken by a higher level of Government affects the lower levels. The same argument could be made about the land reform programme of 2000. In principle, the programme was meant to benefit land-starved rural communities. However, it ended up benefitting already well-to-do and connected party activists. In what was mainly seen as a political gimmick, in July 2013, the Government, through the Ministry of Local Government and Rural Development, issued a circular to all local authorities to cancel all debts by ratepayers. Whilst this was celebrated as a good move by the residents, it led to the near collapse of most local authorities, who had to find resources elsewhere to meet the costs of the services they were providing.

There is a need for the Government to make a deliberate attempt to strengthen subnational structures [39–42]. Currently, structures such as VIDCOs and WADCOs only exist in name. Their functionality has been impeded by the lack of a financial framework that allows them to meet their development aspirations. There is now an apathy at these lower levels to participate actively in the development discourse [42–45].

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Professionalising South African Public Service: A Narrative of Reforming for Ethic(s) of Accountability

Khali Mofuoa

Abstract

It is no secret that deficit (or rather dearth) of accountability bedevils the South African Public Service. It is a cancer-like tumour that led to the demise of the apartheid South African Public Service in 1994. Now, like a slow poison, it is back steadily eating away the moral fabric of the new democratic South African Public Service. Its eye-catching, cancerous demeanour in the South African Public Service has not gone unnoticed as, on October 25, 2022, the South African Government released the National Framework Towards Professionalisation of the Public Sector to address it. Essentially, the Professionalisation Framework sets a deliberate reform agenda for professionalising the South African Public Service towards building a capable, ethical, and developmental state. The chapter explores the reform agenda for professionalising the South African Public Service as a narrative of reforming for ethic(s) of accountability (EoA). It argues that the reform agenda for professionalising the South African Public Service beams the searchlight of accountable governance into South African Public Sector, which is both timely and essential in fostering accountability in government practices. It is based on analysing and synthesising secondary data from relevant available literature sources in terms of a qualitative desktop research methodology.

Keywords: South Africa, public sector reform, public service, professionalisation, ethic(s) of accountability

1. Introduction

Can the South African Public Service really be professionalised? This was the question posed at the seminar held on 03 March 2023 in Pretoria, Republic of South Africa [1]. It was asked in the context of the release of the long-awaited National Framework Towards Professionalisation of the Public Sector by the South African Government on 25 October 2022 [2]. The question raised public interest from scores of commentators and analysts alike for mostly political rhetoric [3]. However,

for most of South Africans, the question is imperative and requires a great deal of soul-searching. This is so given South Africans' reforming experience with the previously initiated post-apartheid South African administrative reforms since 1994 ([4], p. 121–142; [5], p. vii), whose results can best be described as a mixed bag ([4], p. 127). Driven by the spirit of New Public Management (NPM) to restructure the South African Public Service in the image of business management ([4], p. 123), some of the post-apartheid administrative reforms succeeded for a while [4, 6] but eventually collapsed amid governance scandals [7, 8]. The spectacular short lividness of the successful reforms within South African Public Service can be attributed to the dearth of good ethic(s) of accountability that has heightened an "ethical atmosphere" entirely unconducive to such reforms to date.

Despite a myriad of post-apartheid public service rules and regulations enacted since 1994 to enforce the good ethic(s) of accountability, they have not taken root in the South African Public Service. This is the case notwithstanding additional animated and repeated calls for good ethic(s) of accountability within the South African Public Service in the form of *Batho Pele* – People First [9] and *Thuma Mina* – Send Me [10], for instance. As a result, good ethic(s) of accountability remains elusive in the South African Public Service. Instead, erosion (or rather) degradation of ethic(s) of accountability [11] is entrenched in the South African Public Service in the form of blatant "disregard for ethical standards [and] lack of consideration for or disdain for ethics in the administration of public affairs" ([12], p. 120). As a consequence, the moral fabric of the new democratic South African Public Service has steadily disintegrated since 1994 [13, 14], prompting increased public outcry for professionalising South African Public Service through a lens of accountability-centred ethics [15–17]. In light of these developments, it has become necessary for the South African Government to raise the morality and accountability bar for the South African Public Service. It is in this regard that the professionalisation reform of the South African Public Service is seen as an attempt by government to effectively get it back on an ethics and accountability trajectory towards building a capable, ethical, and developmental state.

It is the recognition of the seriousness and urgency of this reform that prompted the writing of this chapter. In the main, the chapter explores professionalisation reform of the South African Public Service through a lens of accountability-centred ethics [15–17]. In doing so, the chapter deposits that the recent professionalisation effort at reforming South African Public Service is a clarion call for ethic(s) of accountability [12, 18, 19]. It further reiterates calls for higher standards for ethics and accountability for the South African Public Service [20] that have been made numerous times in various public settings since 1994 – see works of ([5], p. 22–26; [15], p. 302–324; [17], p. 61–73) in this regard. The chapter argues that at the heart of these ethics and accountability calls has been a need for reform to address the ever-increasing "decadence of governance failures in South African Public Service" [21]. Here, the chapter notes that a myriad of South African Public Service governance failures have been well documented recently in [21–23], demonstrating repeatedly what can be dubbed the problem of accountability in South African Public Service [24]. In fact, according to [25, 26], there is a public perception that South African Public Service is facing an accountability crisis that needs urgent addressing. Hence, the chapter regards the South African Government recent quest for professionalising public service as a noble attempt to embrace considerations of ethics and accountability in government practice "for accountable, efficient and effective public service" [27].

The purpose of this chapter is to argue the case that professionalising South African Public Service is a narrative of reforming for ethic(s) of accountability (EoA). It argues that the South African reform agenda for professionalising the public service beams the searchlight of ethical and accountable governance into South Africa's public sector, which is both timely and essential in fostering ethics and accountability in government practices [27–29]. It is based on analysing and synthesising secondary data from relevant available literature sources in terms of a qualitative desktop research methodology. It is divided into five sections, of which Section 1 introduces the chapter. Section 2 generally discusses the impetus for the establishment of the South African National Framework Towards Professionalisation of the Public Sector to inject ethics and accountability at the heart of the public service. Section 3 presents an overview of the South African National Framework Towards Professionalisation of the Public Sector as a plausible instrument for reforming the country's public service. Section 4 makes a case for professionalising South African Public Service as a narrative of reforming the ethic(s) of accountability (EoA). Section 5 concludes the chapter.

2. Framework for professionalising South African Public Service: impetus

Historically, South African Public Service has "a complex policy [and legislative] framework underpinning [its] professionalism" ([30], p. 25). Transitioning from apartheid administration to a post-1994 democratic administration, South Africa needed a well-intended plethora of "salient policies and frameworks to professionalise the public service" ([30], p. 28). In this regard, professionalisation of the South African Public Service immediately started under Mandela's administration in post-apartheid South Africa [30]. It started in 1994 with the Reconstruction and Development Programme (RDP) as a policy framework. One of the key policy tenets of the RDP was "the professionalisation of the public service" ([30], p. 29). With human resource development focus, the professionalisation of the public service under the RDP sought to establish a people-centric public service for democratic South Africa. Thus, the RDP-initiated professionalisation of the South African Public Service saw "the need for a professional, non-discriminatory public service that addresses the historical legacy of apartheid" ([30], p. 29) as a priority for the newly established democratic South Africa. Hence, it could be said that the primary goal of the RDP was essentially to reconstruct and develop the professional character of the South African Public Service.

Building from RDP in terms of professionalising the South African Public Service, the White Paper on the Transformation of the Public Service (WPTPS) was introduced in 1995 [30, 31]. With its vision of the "new public service" [30], the WPTPS sought to create a professional South African Public Service "committed to the provision of services of excellent quality to all South Africans in an unbiased and impartial manner" ([30], p. 30). It further sought to drive for "creation of a people-centred and people-driven public service which is characterized by ethos of service and a strong code of ethics" ([30], p. 30). Towards this end, the WPTPS "identified the need for a code of conduct in South Africa as an essential element to enhance high standards of ethics and professionalism" ([31], p. 411). Essentially, the WPTPS called "for a professional work ethos, integrity and the promotion of ethical capabilities that must be developed through ongoing training" ([30], p. 30) to create a professional South African Public Service that is "transparent, honest and accountable, respectful to the rule of law, faithful to the Constitution and loyal to the government of the day" ([30], p. 30).

Hard on heels of the WPTPS, the introduction of the Constitution of the Republic of South Africa under Mandela Administration in 1996 reaffirmed the importance of the need for professionalising the South African public service. The Constitution effectively became a springboard for the professionalisation of the South African Publix service [30, 31]. In Chapter 10, the Constitution unequivocally makes professionalism the guiding norm for South African Public Service. Here, a professionalised South African Public Service is seen as key towards building a capable, ethical, and developmental state. It is for this reason that South Africa's Constitution requires that "the public service be institutionalised as a profession" [32] and "a high standard of professional ethics must be promoted and maintained" [30]. In this regard, the Constitution requires public service to maintain a high level of professionalism by imploring "public servants to be professional, accountable, and development-oriented" ([30], p. 24). It further obligates "The government to devise strategies to encourage the professionalization of public service" ([31], p. 33). In this regard, Section 195 of the Constitution underscores the need for a professional public administration underpinned by values of honesty and integrity [33].

In 1997, the White Paper on Transforming Public Service Delivery (WPTPSD), known as the Batho Pele Policy, followed the Constitution as an additional policy framework for professionalising the South African Public Service [30, 34]. The WPTPSD contains the Batho Pele (People First) principles, which are "consultation, standards, redress, access, courtesy, information, openness and transparency, as well as value for money" [30, 34]. The principles are developed by the South African Government "to embrace them as a charter for public service to ensure a reliable and customer-oriented public service" ([34], p. 35). They are also developed "to encourage public officials to become more service and citizen-centric, as well as to continue to strive for service delivery excellence and improvement" ([35], p. 421). In the main, the Batho Pele principles underscore that "public servants have a role to play in the rendering of professional and sustained public services to the people of South Africa" [35]. The Batho Pele principles were also introduced to promote ethical conduct and professionalism in public service to enhance service delivery. To this end, the principles required "public institutions to ensure that citizens' needs become the main focus of public service delivery and that all citizens have equal access to public services of the same high quality" [36].

In 2012, the National Development Plan Vision (NDP): 2030 was adopted as an additional framework for professionalising South African Public Service. Overall, it reiterated the Constitution's call for South African "public servants to be professional, accountable and development-oriented" ([30], p. 25). To this end, the government adopted the Medium-Term Strategic Framework (MTSF) for the 2014–2019 period as the first programme to implement the NDP in 2014. One of the key action interventions of the MTSF towards implementation of the NDP focussed on establishing "an efficient, effective and development oriented public service" [37]. Additionally, the current MTSF for the 2019–2024 period takes the professional journey further from its predecessor by "foreground[ing] the government's strategic commitment to build a capable, ethical, and developmental state" ([38], p. 6). To achieve this, the current MTSF reiterates government's commitment to the establishment of the "professional, meritocratic and ethical public [service]" ([38], p. 6). In this context, the NDP is hailed as having "brought professionalisation [of the South African Public Service] into sharp focus [since] the inception of the democratic system of government in 1994" ([38], p. 5). It is further acknowledged as having been the backbone "of the broader project of strengthening the capacity of the

post-apartheid state and transforming the public sector" ([38], p. 5). Unequivocally, the NDP states that a capable South African developmental state needs a professionalised public service.

To reinforce professionalism in the South African Public Service, the government further introduced the Public Service Charter in 2013. Essentially, the Charter was aimed at "improv[ing] the standards of public service" [39]. In the main, "The charter calls for public servants to, among other things, serve the public in an unbiased and impartial manner, provide timely services [and] not engage in any transaction that is in conflict with the execution of official duties" [40]. In addition, "It further calls on public servants to act on fraud and corruption, nepotism, maladministration or other acts which offend or are prejudicial to the public interest" [40]. Here, public servants are called to "demonstrate professionalism, competency, excellence, transparency and impartiality in the performance of official duties" [40]. In the words of the Minister of Public Service and Administration, then, "The charter outlines the services offered by the state as well as the service standard that underpins those services" [41]. It further restated the South African Government's "expectation from public servants is for all to embrace discipline in implementation of our priorities, compliance with norms, standards and statutes, compassion for all employees and the public we serve, and efficiency in performance" [40].

Right on the heels of Public Service Charter in 2013, the South African Government adopted Public Service Integrity Management Framework (PSIMF) in the same year to professionalise the public service. In the main, PSIMF was instituted primarily to achieve the following: first, to support the management of ethics, integrity and disciplinary matters relating to misconduct in public administration. Second, to outline and strengthen measures and standards regulating ethical conduct in public service. Third, an ethics infrastructure should be established to institutionalise ethics in public service. To give PSIMF much needed teeth, it was integrated into the Public Service Regulations, 2016, to strengthen ethics in the public service [39]. One of the PSIMF flagship programmes in strengthening ethics in the public service is "the institutionalisation of the Ethics Officer Function to foster a proactive and preventive ethics culture within government departments" [39]. In the continuous efforts to professionalise, "The Institutionalization of the Ethics Officer Function marks a significant step towards building a capable and ethical Public Service" [39].

Poised for professionalism in the public service, the South African Government introduced the revised Batho Pele Revitalisation Strategy in 2022. On its unveiling on 16 September 2022, the strategy was hailed as "a service delivery framework that seeks to reignite the culture of servitude within the public service and inspire public servants to uphold the principles of Batho Pele" [42]. The strategy was further seen as a revised framework "to reignite and re-inforce the Batho Pele principles and the Public Service Charter to public servants to be service-oriented, strive for excellence in service delivery, and commit to continuous service delivery improvement" [42]. It was "adopted in an endeavour to bring a re-engineered Batho Pele Programme back to the public domain to secure maximum benefits for the citizens in line with its original goal" [42]. Towards this end, "the revised strategy is centred on developing, implementing and reporting on the Batho Pele standards in the public service; build social compact with society in order to rebuild public trust; enhance the Batho Pele learning and institutional development; and improve redress to citizens" [42]. In the main, "These include self-introspection, open and transparent response to critical issues like professionalism, ethical conduct, commitment and patriotism and corporate ethos and values of Batho Pele by Putting People First" [42].

The above-discussed frameworks paved the way for the adoption of the South African National Framework towards the Professionalisation of the Public Sector in 2022, as discussed in Section 3. In the main, the framework "moots the belief that professionalising public [service] is one of the key requirements for building state capacity" ([43], p. 364). It seeks to give effect to the belief that "An efficient and effective public service may positively impact the state's development agenda" ([43], p. 364). In the words of one commentator, "Th[e] framework is aligned with [South Africa's] National Development Plan, which includes policy guidelines aimed at delivering a 'capable, ethical, and developmental state'" [44]. It is in this regard that the framework has received public acclaim as "professionalism infrastructure" [30] towards creating a truly South African "competent, dedicated and professional public service" [45]. Hence, professionalising the public service [46] is seen as a precondition for building a capable, ethical, and developmental state in democratic South Africa.

3. National Framework Towards Professionalisation of the Public Sector

In the aftermath of the demise of apartheid public administration in 1994, democratic South Africa needed "a professional and efficient public service that meets the needs and expectations of South Africans" [47]. This need for a professionalised South African Public Service became manifest with state capture [41, 48, 49]. In response to the need, the South African Government adopted the National Framework Towards Professionalisation of the Public Sector in 0ctober 2022, hereafter called "the professionalisation framework". On its adoption, the professionalisation framework has hailed as a "long-awaited framework for professionalising South Africa's Public Service" [44]. Here, the professionalisation framework sees professionalisation of South African Public Service as a" necessary for stability in the Public Service" ([38], p. 5) and "one of the key imperatives for building state capacity" ([38], p. 5) for service delivery to the public.

In the above regard, the professionalisation framework thus recognises the need to professionalise the public service to fulfil the South African Government's long-standing commitment to bolster the public service [47]. Thus, instituting a new professionalisation framework for the public service [44] is seen as essential to addressing the problem of "lack of professionalism which affects all aspects of the Public Service" ([38], p. 21). This problem is manifest in instances of "poor levels of accountability, low staff morale, and growing levels of corruption" [44]. To address "professionalism problem" in the public service, "government [is] now implementing the Professionalisation Framework" [44], prompting [50] to comment that "South Africa has a plan to make its public service professional". In the main, "the framework is aligned with [the] country's National Development Plan, which includes policy guidelines aimed at delivering a 'capable, ethical, and developmental state'" [44] for South Africa.

The new professionalisation framework sets out a series of fundamental public sector reforms [38, 44]. These include (i) stabilising the political-administrative interface by establishing a Head of Public Administration (HOPA) who shall play an active part in appointing and managing heads of departments, (ii) strengthening and institutionalising merit-based recruitment and selection, (iii) reviewing all public sector legislation governing professionalisation and amending and harmonising it in accordance with the framework, (iv) strengthening consequence management policy frameworks, and (v) developing guidelines on utilising distinguished former public

servants as mentors and coaches [38, 44]. The framework envisages that the reforms would fast-track the professionalisation agenda of the public service as envisioned. In this context, the framework sees the reforms as essential from two standpoints ([38], p. 18): First, to enable public servants to perform their duties competently, efficiently, and masterly (professionally). Second, to strengthen skills, enhance morale, clarify lines of accountability, and build an ethos for the public service. To professionalise the public sector through these reforms is important for the transformation of the public service "to deliver a capable, ethical, and developmental state as envisaged in the NDP" ([38], p. 19).

To professionalise the public service, the South African Government is informed by its "broader state reform and transformation agenda project" ([38], p. 19), whose bedrock is the NDP, as highlighted earlier. Here, the NDP provides "the context for repositioning South Africa as a developmental state" ([38], p. 20), whose success rests with the professionalisation of the public service as envisioned in the profession-alisation framework. In other words, the goal of the professionalisation framework is to build a capable, professional, and ethical South African Public Service. One of the policy instruments of the professionalisation framework in this direction is to "Strengthen and enable the legal and policy instruments to professionalise categories of occupations in the public service" ([38], p. 24). In this regard, the professionalisa-tion framework sees the South African Public Service "a profession with professions" ([38], p. 25), implying that it is expected to inherently exhibit the qualities of profes-sionalism ([38], p. 27). Here, the professionalisation framework uses development-oriented lenses to describe South African Public Service professionalism. In the view of the professionalisation framework, professionalism in the South African case is about building a public service that is professional, ethical, and driven by merit and service. Thus, "For the South African Public Service, being professional means embodying the basic values and principles of public administration as espoused in the Constitution, Public Service Charter and Batho Pele" ([38], p. 28).

As a blueprint for enhancing professionalism in the public service, the profes-sionalism framework "embodies a total-game approach to building human capital throughout the public service and is based on five pillars" [44]. These are "pre-entry, recruitment, and selection; induction and onboarding; planning and performance management; continuing learning and professional development; and career progres-sion and career incidents" [44]. **Figure 1** depicts these fundamental pillars of the professionalisation value chain as envisioned by the professionalisation framework. In practice, the professionalisation Framework is envisaged to be "foregrounded in a value chain for professionalising the public service" ([38], p. 64). This is the case to provide the professionalisation framework that is much needed for strategic and tactical implementation rigour in practice.

In the main, the pillars of the professionalisation value chain have specific objec-tives, yet these are interrelated, forming a formidable necessary building block for each other. In this regard, the first pillar seeks to bring in the right people in the pub-lic service as "public professionals" [51] in terms of their values, attitude, experience, and qualifications. Here, the new professionalisation framework introduces pre-entry integrity assessments for would-be public professionals to help build an ethical public service. The second pillar envisions a seamless professional onboarding of public professionals into the public service. Here, the new professionalisation frame-work recognises the role of professional bodies as "communities of practice" could play in facilitating professional onboarding new public professional recruits. The third pillar "builds on induction and on-boarding towards an effective performance

Figure 1.
Pillars of the South African professionalisation value chain. Source: ([38], p. 64]).

management system" ([38], p. 75). To this end, it seeks to align and integrate individual and organisational performance, and "create a practical measure to validate and align the individual performance results with the organisational performance outcome [with professional bodies playing a role in the performance management assessments of the respective public professionals for their continuous professional development]" ([38], p. 75). The fourth pillar envisages the continuing learning and professional development of public professionals "in which they gain certification with professional bodies" ([38], p. 78). Finally, pillar five visualises career progression and career incidents for public professionals. It states that a professionalised South African Public Service "must ensure a fully defined career management function [for its employees] and be able to provide extensive career management services to its employees" ([38], p. 88).

In its pursuit of professionalising the public service, the South African Government is cognisant of the fact that building a capable, professional, and ethical public service is a momentous task [52]. However, the government has convinced itself that it is an important task to take for building a capable, professional, and ethical government for South Africa. Here, the mainstay of a capable, professional, and ethical government is the continuing learning and professional development of public professionals "to increase the professionalism of their public services" ([53], p. 410). However, "the main challenge of such an undertaking is finding a balance between narrow professionalism, i.e., technical expertise and knowledge and broad professionalism, i.e., acting proficiently and ethically" ([53], p. 410). Whatever the case, nonetheless, with professionalism framework one can see that professionalisation is a significant development in South African Public Service reform for ethic (s) of accountability (EoA).

4. Professionalising public service as a narrative of reforming for ethic(s) of felt accountability: case of South Africa

That accountability is essential for building a capable, professional, and ethical South African Public Service cannot be overstated. For ([54], p. 385), professionalism in the South African context should be understood as "the quest for effective, efficient, accountable, and responsive public service". In fact, in the context of the South African Public Service ([51], p. 77–101), it sees "Accountability as a constitutional imperative". In this regard, ([51], p. 77) states that "Accountability is an

inherent requirement for maintaining democratic and accountable government that particular attention should be devoted to [it]". Here, ([51], p. 79) provides a taxonomy of accountability types in government that professionalised South African Public Service must always execute. The first type of accountability in government is legal accountability, which is the responsibility for obeying laws. The second accountability type is fiscal accountability, that is, responsibility for public funds. The third is procedural accountability, that is, responsibility for implementing procedures. The fourth is programme accountability, that is, responsibility for carrying out all programmes. The fifth, which is the last, is outcome accountability, that is, responsibility to ensure effective results. According to [51], all these accountability types in government are intended to maintain an effective and efficient public administration and a high standard of professional ethics in the public service, which operates in webs of accountability.

In the South African Public Service context, "accountability refers to the obligation of public professionals to account for their activities, provide information about decisions and actions, explain and justify decisions, accept responsibility for them, and to disclose the results in a transparent manner" ([55], p. 2). Thus, through accountability, South African public professionals "are expected to be answerable for their actions, and most importantly that there should be consequences when duties and commitments are unmet" ([55], p. 2). Here, according to [56], the functions of accountability in the South African context include but are not limited to the following: (i) To enhance the integrity of public governance to safeguard government against corruption, nepotism, abuse of power and other forms of inappropriate behaviour. (ii) As an institutional arrangement to effect democratic control. (iii) To improve performance, which will foster institutional learning and service delivery. (iv) In regard to transparency, responsiveness, and answerability, to assure public confidence in government and bridge the gap between the governed and the government and ensure public confidence in government. (v) To enable the public to judge the performance of the government by the government giving account in public. These functions are intended to promote governance in the public service that enhances accountability in government.

Indeed, recent "accountability deficiencies" manifest in South African state capture [41, 48, 49] "have starkly [heightened] the need to address professional ethics and standards in the public service [to enhance accountability]" [57]. In fact, the Zondo Commission report [58] "paints a grim picture of accountability regressions in [the public service in South Africa]" [57]. In this regard, [57] views professionalising South African Public Service as about fostering accountability in government. Here, the new South African Professionalisation Framework is thus seen as making a clarion call for public professionals to bear the responsibility of ensuring accountability in government. Hence, the South African Government's strive towards a professionalised public service is therefore perceived as a deliberate reform to "integrating felt accountability in public administration" ([59], p. 14). Here, felt accountability in public administration is understood as broadly asking questions of "(1) who is accountable, (2) to whom, and (3) about what?" ([60], p. 14). Thus, for ([59], p. 12), "accountability mechanisms can function properly only when [public professionals] as individuals believe that they will be held accountable in the future".

Thus, from the South African context, the notion of felt accountability in public administration presupposes that "Only when [public professionals as] agents have a mental imprint of (future) accountability, they are able to anticipate appropriately

towards the accountability mechanism" ([59], p. 12). In this regard, "felt account-
ability forms an important cog in the micro-foundations of accountability and its
effects on individual behaviour [of public professionals] in public administration"
([59], p. 14). Thus, a public professional's accountability environment in public
administration is a function of "a better understanding of the consequences of
accountability mechanisms for behaviours and decisions by account givers in the
public service" ([59], p. 13). In fact ([59], p. 12) argues that "the context of account-
ability in public organisations requires us to integrate knowledge about (1) the
diverse professional roles of public service employees, (2) the saliency and author-
ity of various and multiple account holders, and (3) the substance of the account-
ability demands".

In the above regard, the South African Professionalisation Framework thus
recognises the challenge of creating a culture of an ethic(s) of accountability
(EoA) in the public service. Its focus on professionalising the public service is a
direct response to widespread evidence of weakening and declining ethic(s) of
accountability in government. Thus, the importance of introducing the ethical
principle of accountability in the South African professionalisation of the public
service reform cannot be overemphasised. South African Public Service has an
accountability problem [41, 48, 49] and doubling down on ethics can help create
new ethic (s) of accountability [10] for the public service. Professionalism reform
agenda in the context of South African Public Sector calls for "new ways of practis-
ing or performing 'accountability'" ([60], p. 2) for public professionals. The call
is premised on "developing an ethic of accountability" [61] that "shift[s] account-
ability from its role as an instrument of policy to its place in more general ethical
concerns" ([60], p. 10). In fact, South African professionalisation reform agenda of
the public service "acknowledge[s] the need for accountability" ([60], p. 14), and
that public professionals in government "cannot avoid the ethics of accountability"
([60], p. 14). Fundamentally, the South African Professionalisation Framework
thus seeks "to reimagine the possibilities of a new ethic of accountability attuned
to [building a capable, ethical, and developmental state]" [62]. The profession-
alisation framework "is implicated throughout an ethic of accountability" ([63],
p. 8). In fact, the purpose of the professionalisation framework "is predicated on
an ethic of accountability" ([63], p. 8).

In the context of the South African professionalisation of the public service, "An
ethic of accountability is grounded in the realisation that the [public professionals
have] an obligation to act responsibly" ([63], p. 8). In this sense, ([63], p. 8) states
that "Accountability refers to the operationalization of an ethic of accountability".
Here, "operationalisation of an ethic of accountability" ([63], p. 8) in public admin-
istration is understood as "embracing accountability for a more ethical future [that]
promote[s] a culture of ethics and a sense of responsibility". In this regard, an ethic of
accountability for public professionals could be defined as a commitment to recog-
nising "the duty to give an account of one's actions" ([63], p. 5). This commitment
to accountability requires that public professionals recognise their role in profes-
sionalising public service. This ethic(s) of accountability implies an obligation on the
part of public professionals to help build a professionalised ethical and accountable
public service. Thus, from an ethic(s) of accountability standpoint, the South African
Professionalisation Framework's goal of professionalising public service undoubtedly
puts forward an ethical commitment to the practice of accountability towards insti-
tutionalisation of accountable, ethical, and transparent government in established
democratic societies like South Africa.

5. Conclusions

The goal of this chapter is to explore the reform agenda for professionalising the South African Public Service as a narrative of reforming for ethic(s) of accountability (EoA). To this end, the chapter has started with the narrative of the need for an ethic(s) of accountability that recognise the practice of accountability in democratic public service in South Africa. In this regard, it was argued that the reform agenda for professionalising the South African Public Service beams the searchlight for ethical commitment to the practice of accountability in South Africa's public sector, which is both timely and essential in fostering accountability in government. Here, the chapter highlighted the crisis of accountability in the South African public sector, stating that professionalisation reform of the South African Public Service should be conducted through lenses of accountability-centred ethics to promote an "ethical atmosphere" entirely conducive to it.

The chapter then generally discussed the impetus for the establishment of the South African National Framework Towards Professionalisation of the Public Sector to inject ethics and accountability at the heart of the public service. Here, the chapter enumerated by way of discussion many decisive interventions in the professionalisation of the public service in the nearly 30 years of democratic public service in South Africa. In this regard, the chapter on the interventions paved the way for the adoption of the South African Professionalisation Framework in 2022, which mooted the belief that professionalising public service is one of the key requirements for building a South African capable, ethical, and developmental state.

The chapter further presented an overview of the South African National Framework Towards Professionalisation of the Public Sector as a plausible instrument for reforming the South African public service. The chapter highlighted the nuts and bolts of professionalisation framework towards enhancing professionalisation of the public service. Here, the chapter acknowledged the strategic role played by the sixth administration towards professionalisation of the public service by setting the bar far higher than simply achieving clean audit outcomes.

The chapter finally made a case for professionalising South African Public Service as a narrative of reforming the ethic(s) of accountability (EoA). Here, the chapter highlighted the important role an ethic(s) of accountability (EoA) can play in the operationalisation of accountability towards institutionalisation of accountable, ethical, and transparent public service in established democratic societies like South Africa. The chapter noted that the absence of ethic(s) of accountability (EoA) in public service erodes the moral fabric of society.

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Conflict of interest

The author declares no conflict of interest.

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Navigating Data Governance: A Critical Analysis of European Regulatory Framework for Artificial Intelligence

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Abstract

The European regulation of artificial intelligence (AI) underscores the pivotal role of data governance. This abstract delves into the multifaceted aspects of data governance within the European framework. Emphasizing transparency, accountability, and fairness the regulation establishes guidelines for AI systems reliant on data. Striking a delicate balance between innovation and protection of fundamental rights, it navigates challenges posed by vast datasets. The abstract explores how the regulatory landscape acknowledges the dynamic nature of AI technologies, requiring adaptive data governance structures. As Europe shapes the future of AI, the interplay between effective data governance and ethical considerations emerges as a linchpin, influencing the trajectory of technological advancements while safeguarding individuals and societal values.

Keywords: artificial intelligence, European regulation, data governance, transparency, accountability, fairness, ethical considerations, technological advancements, regulatory framework

1. Introduction

The data lies at the heart of artificial intelligence (AI). It is the data that enables the thinking, construction, definition, shaping, evolution, and testing of the reliability of artificial intelligence. While data governance does not exhaust the issues of AI regulation, it fundamentally contributes to defining it. The characteristics of an autonomous system can, thus, be largely understood in light of the data used for its development, whether it be training, input, validation, or test data. Data governance aims to ensure that data is available, sufficient, reliable, and of quality. Data must also be processed and annotated to be exploitable, allowing for their use, reuse, and cross-referencing. Finally, they must be stored and kept securely. The concept of data governance allows for capturing the entire value chain of data. This intrinsic link between AI and data is evident in European digital policy.

European policy seeks to regulate the entire process from data governance to trust in a single digital market where AI systems must be able to circulate freely. This

relationship between AI and data governance is also highlighted in other contexts, such as the 2018 Villani Report, which already emphasized the importance of promoting access, circulation, and sharing of data to support AI development.

On the economic and industrial front, access to data is considered a prerequisite for AI development, while on the political and legal front, data quality and representativeness are crucial to ensuring AI reliability and respecting fundamental rights. This approach is closely linked to the digital trust issues pursued by European institutions, which shape the behavior of European consumers.

The question of data governance underscores the interconnection of all the issues of European AI regulation: political, legal, economic, and social. The regulation currently being adopted, such as the AI Act, is based on a dual legal foundation aiming to balance AI development objectives with the protection of personal data and user trust. As seen, data is inseparable from AI development; this link between data and AI concerns access to data, data integrity, and finally, data transparency.

2. Data access for AI development

2.1 European open data policy

The European institutions recognize that they have largely been marginalized from the collection of personal data conducted by major digital conglomerates. Consequently, they have opted to refocus their endeavors toward nonpersonal, open, and industrial data, which they deem indispensable for the advancement of artificial intelligence (AI).

Within the context of the Digital Single Market, the operational dynamics of the internal market have inadvertently fostered significant barriers to entry for nascent entities within digital markets. Foremost among these impediments is the aggregation of data. To foster data openness, it has become apparent that legislative intervention was imperative to prevent large digital platforms, possessing substantial data reservoirs, from monopolizing this data and constraining its reutilization.

The open data policy initially rested upon the bedrock principles of unimpeded circulation within the internal market. Thus, the facilitation and reuse of public data constitute fundamental tenets for AI development. The directive pertaining to the reuse of public sector information has progressively institutionalized this open data paradigm [1].

The regulation governing nonpersonal [2] data aims to ensure the unencumbered flow of data, excluding personal data, throughout the union by instituting regulations concerning data localization prerequisites, data accessibility for competent authorities, and data portability for professional users. In promulgating this legislation, the European legislator was cognizant of the fact that the rapid proliferation of the data economy and cutting-edge technologies, such as artificial intelligence and autonomous systems, engender novel legal quandaries concerning data access and reutilization [3].

The regulation focalizes on "data processing," construed as the linchpin of the "data value chain" encompassing data creation and aggregation, data processing, data analysis, commercialization, distribution, as well as data utilization and reuse [4]. The regulation expansively delineates data processing as "any operation or set of operations performed, irrespective of whether automated, on data or sets of data in electronic format, including collection, recording, organization, structuring, storage, adaptation, alteration, retrieval, consultation, use, communication by transmission, dissemination, or any other form of provision, alignment, combination,

restriction, erasure, or destruction" [5]. Consequently, the regulation extends to data processing in its broadest connotation, regardless of the computational infrastructure employed, whether on premises or outsourced to service providers. It encompasses data processing across various tiers of intensity, ranging from data storage (infrastructure as a service) to platform-based data processing (platform as a service) or application-based data processing (software as a service) [6].

Thus, the European legislator has deemed that the efficacious and efficient operation of data processing, coupled with the burgeoning data economy in the union, have been stymied by two categories of impediments to data mobility and the internal market: data localization requisites enforced by Member State authorities and practices that engender reliance on private sector suppliers. Predicated on the premise that data localization requisites pose a barrier to the unfettered provision of data processing services across the union and the internal market, and the regulation proscribes such requisites unless warranted by considerations of public security.

However, the exigencies surrounding the circulation of nonpersonal data held by private entities transcend the scope of matters addressed by this regulation. These exigencies also present legal complexities as rights, such as intellectual property rights, trade secrets, and commercially sensitive information, may impede the circulation of said data. In tandem with the adoption of this legislation, other European policies have been concurrently pursued.

Market regulation also involves a competition policy that is cognizant of the importance of data openness, which serves as a counterbalance to the massive data capture and exclusive exploitation by major digital platforms. The P2B Regulation [7] initiated regulation of digital platform data. It envisages transparency requirements regarding the use of this data for sellers to attempt to restore competitive conditions in markets dominated by platforms. Its provisions seek, albeit modestly, to regulate the conditions under which intermediation platforms and search engines provide user companies access to data transmitted by consumers. Online intermediation service providers, for example, must present user companies with a clear description of the scope, nature, and conditions of their access to certain categories of data and their use of this data [8]. The objective is for user companies to know whether they can use the data to enhance value creation and whether the provider shares with third parties any data generated by the user company's use of the intermediation service. However, the regulation does not compel online intermediation service providers to disclose data (personal or nonpersonal) to their user companies.

The Digital Markets Act (DMA) also includes provisions on data governance. Access controllers have access to large quantities of data they collect when providing essential platform services, as well as other digital services. To prevent access controllers from limiting the innovation potential of the digital sector by restricting user companies' ability to transfer their data, the DMA grants user companies and end-users effective and immediate access to the data they have provided or generated when using the relevant essential platform services of the access controller, in a structured, commonly used, and machine-readable format. This should also apply to all other data at various levels of aggregation that may be required to effectively enable this portability.

The DMA also seeks to regulate the behavior of digital platforms in combining user data from different sources or enrolling users in different services offered by their application programming interfaces (APIs). The accumulation of data resulting from these practices confers advantages that erect strong entry barriers. Additionally, the DMA acknowledges that an access controller may sometimes play a dual role as a provider of essential platform services, offering such services to its user companies while competing with these same companies for the provision of identical or similar

services or products to the same end users. In this scenario, an access controller may leverage its dual role to use data obtained from its user companies' transactions in the essential platform service for its own services, the offering of which is similar to that of its user companies [9]. To prevent access controllers from unfairly leveraging their dual role, the DMA ensures that they refrain from using any aggregated or unaggregated data, including anonymized data and personal data not accessible to the general public, for the purpose of offering services similar to those of their user companies.

In parallel with these texts, competition policy enforcement seeks to address anticompetitive practices concerning data capture, restrictive business practices, and abuses of dominant position on the basis of Articles 101 and 102 TFEU. Thus, anticipating elements of the Data Act regulation [10], the European Commission initiated an investigation in July 2020 into anticompetitive practices in the sector of consumer goods and services related to the Internet of Things, expressly aimed at complementing other actions launched within the framework of the Commission's digital strategy. The investigation focused on the sector of consumer goods and services related to the Internet of Things, including goods and services connected to a network and capable of being remotely controlled. The Commission believed that despite the still nascent development of the Internet of Things sector, certain company practices could structurally distort competition, especially the restriction of data access and data interoperability. Given the significant network effects and economies of scale in Internet of Things ecosystems, the risk is the emergence of dominant access controllers.

European data policy also intersects with European industrial policy. In the February 2020 Data Strategy, the Commission identifies the elements necessary for a "vision of a true single market for data," particularly the need for data infrastructures and cloud storage services that ensure essential characteristics of security, sustainability, and interoperability to enable European companies to benefit from a complete value chain covering data production, processing, accessibility, and reuse. The Commission seeks to stimulate investments in enhancing European capacities and infrastructures for data hosting, processing, and utilization. The Gaia X project [11], initially aimed at creating a data hosting platform purported to adhere to European values and rules, was intended to enable data sharing in accordance with fundamental principles of data protection, transparency, reversibility, and interoperability. However, subsequent developments in the project do not confirm these initial ambitions.

For the development of high-risk AI systems, the AI Act seeks to provide certain actors (providers, notified bodies, digital innovation hubs, experimentation and testing facilities, and research centers) with quality datasets in their areas of activity. There is an element of complementarity with the emerging European data spaces; facilitating the sharing of public interest data between companies (B2B) and with the government (B2G) is necessary for this nondiscriminatory access to quality data for training, validation, and testing of AI systems. The idea is that the relevant competent authorities, which provide or facilitate data access, can also facilitate the provision of quality data for the training, validation, and testing of AI systems [12].

These European data spaces are beginning to materialize in the healthcare domain [13]. The European health data space aims to facilitate access to health data and the training of artificial intelligence algorithms using these datasets. This space seeks to organize nondiscriminatory access to data that respects privacy and transparency requirements within an appropriate institutional governance framework.

The AI Act also contributes to this objective of data openness and availability through "regulatory sandboxes," which should enable the secure use of personal data. Regulatory sandboxes aim to promote innovation in AI by allowing experimentation with new AI

systems. The goal is to open access to markets by removing obstacles, including data access barriers, for small and medium-sized enterprises and startups. To achieve this, the AI Act allows the use of personal data collected for other purposes for the development of certain public interest AI systems, by organizing "business access to operational data within an administration-controlled framework and the production of exportable data sets for various use cases, so that the community can take advantage of them" [14].

2.2 The European method of data sharing

In its data strategy [15], the Commission discusses a dual approach that would rely on a general and cross-cutting framework, the Data Governance Act, and on sectoral and interoperable common data spaces.

Horizontal Governance Framework: The regulation on data governance, the Data Governance Act [16], proposes a general framework to create conditions for data circulation and promote their voluntary sharing. This regulation is based on a data sharing model that opposes data-hoarding logic. The regulation on data governance considers these different sharing models through four situations that take into account the legal classification of data.

Firstly, the provision of public sector data for reuse when these data are subject to third-party rights, particularly for reasons of personal data protection, as well as for the protection of intellectual property rights and the confidentiality of commercial or statistical information. The reuse of this data therefore did not fall within the scope of directive 2019/1024 on open data.

The regulation does not create a right to reuse this data but harmonizes the conditions under which reuse may be allowed (for example, through a requirement of non-exclusivity). Public sector organizations authorizing reuse [17] must be technically able to ensure data protection and respect for privacy. Member States will need to establish a single access point mechanism for requests for access to this type of data and structures that will support public sector organizations (through technical means and legal assistance).

Furthermore, two other situations concern data sharing service providers (both personal and nonpersonal), designed as neutral intermediaries of trust: sharing data, on the one hand, between companies for remuneration (B2B), and, on the other hand, between individuals and companies (C2B). The Data Governance Act defines a notification regime for data sharing service providers.[1] The idea is a form of certification or labeling of reliable data intermediaries; national authorities will need to monitor compliance with requirements related to the exercise of activities through a European administrative law regime [18].

These trusted intermediaries will have to meet several requirements, including a neutrality obligation regarding the exchanged data, and even, when services are provided to individuals, a duty of loyalty to the people using this data. The goal is to allow data sharing services to operate in an open and collaborative manner. These new data sharing intermediaries are trusted third parties, in the sense that they are independent of both data holders and users. The objective is for them to create sufficient trust to encourage the opening and sharing of this data, thereby enabling the emergence of new data-based ecosystems, independent of major digital platforms.

The challenge also lies, in the relationships between individuals and businesses, in securing the use of personal data by this trusted intermediary who must

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[1] As indicated in Consideration 17 of Regulation 2018/1807, this regulatory framework does not extend to cloud services.

assist individuals in exercising their rights under the General Data Protection Regulation (GDPR).

The fourth and final situation concerns the altruistic use of data ("data altruism"): this involves data voluntarily made available by individuals or businesses for the common good, to develop activities that enable data sharing for the general interest; it is based on voluntary data sharing. Organizations practicing data Altruism may voluntarily register as a "recognized data altruistic organization in the EU."

The differentiated approach envisaged at the European level aims to create common data exchange spaces in areas such as the environment, manufacturing industry, agriculture, health, financial data, mobility, energy, public administration, and skills. The creation of these spaces relies on the deployment of data sharing platforms and the improvement of accessibility, quality, and interoperability of data. The governance of these "data spaces" is based on a logic of regulation and co-regulation; it relies on "organizational approaches and structures (both public and private)" [19].

In November 2021, the Commission adopted a recommendation regarding a common European data space for cultural heritage [20]. Its stated objective is to enable the reuse of content and to provide quality content and efficient, reliable, and easy access to digital assets of European cultural heritage. It strengthens collaborations and exchanges with the network of data supplying partners (e.g., museums, galleries, libraries, and archives throughout Europe), aggregators, and experts working in the field of digital cultural heritage. For the Commission, artificial intelligence, machine learning, cloud computing, data technologies, virtual reality, and augmented reality are necessary for the digitization, online access, and digital preservation of European cultural heritage. This data space is anchored in the Europeana project, which aims to promote the digital transformation of cultural heritage institutions by offering standardized frameworks for sharing digital content and metadata online (Europeana data model standardized rights statements that cultural heritage institutions can use to inform the public about the status of digital objects regarding copyright and reuse).

Data sharing and reuse are still limited by interoperability issues. The November 2021 Recommendation encourages Member States to take necessary measures to promote and facilitate the application of existing and future standards and frameworks, and to collaborate at the European level to extend them within the data space [21]. Member States must also actively encourage cultural heritage institutions to make their digitized assets available through Europeana and to contribute to the data space. Finally, Member States must ensure that, through their policies, data from digitization projects funded by public funds become and remain easy to find, accessible, interoperable, and reusable (FAIR principles) through digital infrastructures (including the data space) to accelerate data sharing. The European health data space, outlined through the proposal for the European health data space of May 3, 2022, aims to harmonize data flows to help individuals benefit from the protection and free movement of electronic health data, especially personal data [22]. The creation of this European health data space is intended to facilitate access to different types of data available within the Member States and strengthen the use and reuse of health data for healthcare provision, research, and digital transformation of healthcare systems.[2]

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[2] The first recital of the proposed regulation specifies that the objective is to establish the European Health Data Space (EHDS) to improve individuals' access to their electronic personal health data and their control over this data in the context of healthcare (primary use of electronic health data), as well as for other purposes in the interest of society, such as research, innovation, policy-making, patient safety, personalized medicine, official statistics, or regulatory activities (secondary use of electronic health data).

The beginnings of this space can be found in the Toward a European Health Data Space (TEHDaS) program, which involved 26 Member States in the design of this European health data space, as well as in the EU4Health program [23], in which the Commission issued a call for proposals to develop a pilot version of the European health data space for the secondary use of health data for research, policy development, and regulation purposes. The aim is to develop and deploy a network of data nodes and assess the capacity to deploy such infrastructure at the European level. This project aims to create infrastructure and work on use cases to assess the interest of transnational reuse of health data. The choice of the French Health Data Hub, in July 2022, as part of a consortium bringing together national health data platforms from several Member States, as well as the European Medicines Agency and the European Center for Disease Prevention and Control (ECDC), raised questions as the Health Data Hub still uses Microsoft solutions for data storage [24, 25].

3. Data integrity

3.1 Data quality

The quality of data determines the proper functioning of many AI systems, especially those based on model training technologies. Since these systems rely on machine learning, the choice of training data is fundamental in terms of their representativeness and relevance to the application's purpose.

The AI Act also provides for appropriate practices regarding data governance and management for the development of high-risk AI systems other than those involving model training techniques to ensure that these high-risk AI systems are based on the highest quality of data.

As mentioned earlier, the issues revolve around AI security and protection against discrimination linked to algorithmic biases. The consequences of AI not being trained with sufficiently high-quality data can be dramatic. Therefore, in defining this legal framework for data quality, the Commission drew inspiration from responsible data management practices and data compliance with the FAIR principles ("Findable, Accessible, Interoperable, and Reusable") [26].

For example, predictive algorithms for recidivism probability disadvantage certain minorities, as demonstrated by malfunctions in the United States' decision support program based on the "Compas" [27] recidivism risk estimation algorithm. In its December 2020 communication on "Digitalization of Justice in the European Union" [28], the Commission considers AI applications in the field of justice. It emphasizes that AI is useful for anonymizing judicial decisions, speech-to-text conversion and transcription, automatic translation, dialog agents ("chatbots,") and robotic process automation (organizing, planning, prioritizing, categorizing, and assigning acts and tasks by robots). The challenge is for these intelligent systems to "support the decision-making power of judges or judicial independence" without "interfering with them," especially in high-risk uses, that is. if they intervene in decision-making and have significant effects on people's rights. While the Commission emphasizes the importance of testing such predictive algorithms and subjecting them to transparency requirements to combat biases and discrimination risks, we have already highlighted that it is not certain that it has fully considered all the risks arising from the use of predictive tools [29]; the widespread use of these algorithms can affect individual judges' decisions, who may hesitate to take the risk of following their subjectivity and deviating from automated

decisions, which may be perceived as objectified. The communication also reflects on how to enable interoperability of registers and databases. A plurality of actions focuses on establishing interoperable systems, data sharing among judicial services (for example, for the application of the "once for all" principle), and the establishment of common European data spaces in the field of justice, as part of the European data strategy.

In this regard, the AI Act emphasizes the governance of high-quality training, validation, and testing datasets. These datasets must be sufficiently relevant, representative, error-free, and comprehensive in relation to the system's intended purpose. They must also possess appropriate statistical properties, particularly concerning the individuals or groups of individuals on whom the high-risk AI system is intended to be used.

Specifically, the AI Act provides that training, validation, and testing datasets must consider, to the extent required for their intended purpose, the properties, characteristics, or elements that are specific to the particular geographical, behavioral, or functional context in which the AI system is intended to be used. It should be noted, on this point, that high-risk AI systems trained and tested with data related to the specific geographical, behavioral, and functional context in which they are intended to be used are presumed to comply with this requirement [30].

Several provisions of the AI Act focus on data and data governance. They stipulate that high-risk AI systems using techniques involving model training with data are developed based on training, validation, and testing datasets that meet certain quality criteria. Thus, training, validation, and testing datasets are subject to appropriate data governance practices. These practices include, notably: relevant design choices, data collection, pertinent data processing operations for data preparation, such as annotation, labeling, cleaning, enrichment, and aggregation; formulation of relevant hypotheses, especially regarding the information that the data is intended to measure and represent; prior evaluation of the availability, quantity, and adequacy of the required datasets; examination to identify potential biases; detection of any gaps or deficiencies in the data, and how these gaps or deficiencies can be addressed.

To protect the rights of other individuals against discrimination that may result from biases in AI systems, providers must be able to process special categories of personal data [31], for reasons of significant public interest, to ensure the monitoring and correction of biases related to high-risk AI systems. The AI Act specifies that to the extent strictly necessary for the purposes of monitoring, detecting, and correcting biases regarding high-risk AI systems, providers of these systems may process these special categories of personal data, subject to appropriate safeguards for the fundamental rights and freedoms of natural persons, including technical limitations on reuse, as well as the use of the most advanced security and privacy protection measures, such as pseudonymization, or encryption when anonymization may have a significant impact on the intended purpose.

3.2 Requirements for resilience and cybersecurity

The AI Act aims to establish conditions for high-risk AI systems to consistently produce results of high quality throughout their lifecycle and ensure an appropriate level of accuracy, robustness, and cybersecurity in accordance with generally recognized state-of-the-art techniques. It also stipulates that users should be informed of the degree of accuracy and the criteria used to measure accuracy.

Technical robustness is a crucial requirement for high-risk AI. European regulations seek to make them resilient against risks related to system limitations, as well as against malicious actions that may compromise the safety of the AI system and lead to harmful

or undesirable behavior. The absence of protection against these risks could have implications for security or result in violations of fundamental rights, for example, due to erroneous decisions or inaccurate or biased outcomes generated by the AI system [32].

Thus, cybersecurity is fundamental to protecting AI systems from attempts to divert their use, behavior, performance, or compromise their safety properties by malicious third parties exploiting system vulnerabilities. Cyberattacks may target specific AI resources, such as training datasets (e.g., data poisoning) or trained models (e.g., adversarial attacks). Therefore, the AI Act establishes requirements to ensure that AI systems withstand both direct attacks and more subtle attempts to manipulate data or algorithms.

Cyberattacks targeting machine learning systems can occur at two different times and target two distinct datasets. Either during training or through alteration of training data that modifies the AI's behavior. This tampering with data changes how the AI system works, making it less reliable. Alternatively, after training, cyberattacks manipulate the input data and trick the AI system into behaving differently.

To ensure a level of cybersecurity adapted to the risks inherent in learning systems, appropriate measures must be taken by providers of high-risk AI systems. The AI Act provides that the design and development of high-risk AI systems must achieve an appropriate level of accuracy, robustness, and cybersecurity and operate consistently in this regard throughout their lifecycle.

High-risk AI systems must also demonstrate resilience in case of errors, failures, or inconsistencies that may occur within the systems themselves or the environment in which they operate, notably due to their interaction with individuals or other systems. Certain technical solutions, such as backup plans or post-failure security measures, can ensure the robustness of high-risk AI systems.

Regarding high-risk AI systems that continue learning after being placed on the market or put into service, they must be developed in a way that potential biases resulting from using outcomes as input data for future operations ("feedback loops") are adequately addressed through appropriate mitigation measures.

It is worth noting that the evolution of data storage in the coming years will increase the surface area and entry points for cyberattacks. While today most data is consumer related and stored and processed in centralized cloud infrastructure, tomorrow, much more data, including industry, business, and public sector data, will be stored on various systems, including edge computing devices [33]. This edge data storage presents a significant cybersecurity concern. The Commission adopted a delegated act in October 2021 to improve the cybersecurity of wireless devices available on the European market (e.g., smartphones, smartwatches, fitness monitors, wireless toys, etc.). This act, based on the radio equipment directive, sets new legal requirements regarding cybersecurity guarantees, which manufacturers must consider during the design and manufacture of the products concerned. These provisions are intended to be complemented by a cybersecurity resilience law aimed at protecting connected devices throughout their lifecycle.

4. Conclusion

In summary, the relationship between data governance and artificial intelligence (AI) regulation is pivotal in shaping European digital policy. Data lies at the core of AI development, influencing its thinking, construction, evolution, and reliability testing. The European Union (EU) recognizes the importance of fostering data openness and accessibility, especially in nonpersonal, open, and industrial data, to support AI advancement while ensuring fair competition and protection of fundamental rights.

The EU's approach to data governance involves both horizontal and sectoral strategies. The Data Governance Act establishes a framework for data circulation and voluntary sharing, focusing on public sector data reuse and trusted intermediaries for data sharing services. Additionally, sectoral initiatives aim to create common data exchange spaces, such as the European health data space, to facilitate access to various types of data while ensuring privacy and interoperability.

Quality data is essential for AI systems to function properly and mitigate risks such as algorithmic biases. The AI Act sets forth requirements for high-quality datasets, emphasizing relevance, representativeness, and error-free characteristics. It also addresses cybersecurity concerns, mandating measures to protect against cyber-attacks targeting AI systems throughout their lifecycle.

As data storage evolves, with increasing data stored on edge computing devices, ensuring cybersecurity becomes paramount. The EU has taken steps to improve the cybersecurity of wireless devices through legislative acts with further regulations expected to safeguard connected devices throughout their lifecycle.

In essence, the interplay between data governance and AI regulation reflects the EU's commitment to fostering innovation, protecting fundamental rights, and ensuring a competitive digital market. By addressing issues related to data access, quality, and cybersecurity, the EU aims to build a robust framework that promotes trust, transparency, and responsible AI development in line with European values and principles.

Conflict of interest

On behalf of myself as the alone author, I state that there is no conflict of interest and I declare that no funds, grants or other support was received during the preparation of manuscript.
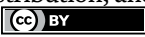
Dedication

I dedicate this paper to Prince Sultan University, a place that has greatly supported my learning and growth. I am thankful to the faculty and staff for their guidance and encouragement. This work reflects the knowledge and values I have gained during my time at PSU.

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Social Policy Implementation in Nigeria (2015–2023)

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Abstract

Nigeria recently adorned the unfortunate title of the poverty capital of the world, despite its huge potential and expenditure of tens of trillions of Naira on poverty eradication through multiple intervention policies and programmes. The topic will explore the implementation of the social policy programmes embarked upon by the federal government of Nigeria between 2015 and 2023. The paper will consider the circumstances that led to the initiation and implementation of the various intervention programmes under the aegis of the National Social Protection Policy (NSPP), including employment generation, social safety nets, conditional cash transfers, maternal and child health care, etc. The chapter will adopt a qualitative approach, generating data from existing literature to evaluate the implementation vistas of the policy thrust, after which inferences will be drawn to draw conclusions and recommendations for future policy implementation.

Keywords: social policy, safety nets, employment generation, conditional cash transfers, National Social Investment Programme

1. Introduction

Nigeria, despite having the largest economy in Africa, has had a chequered history in its development imperatives. Whereas many of its contemporaries have registered milestones in the reduction of poverty among their citizens, Nigeria, though enjoying a pseudo-leadership position in the African sub-region (largely due to its size and natural wealth), is also leading in its failure to spread its approximate N65,908.258.59 million 2023 gross domestic product (GDP) [1] to its sprawling 227.71 million population [2]. Although the Nigerian economy recorded a broad-based annual growth rate of over 7% between 2000 and 2014, the growth rates reportedly flattened (from 2015) due to distortions in monetary/exchange rate policy, fiscal deficit increases due to shortfalls in oil production, a highly compromised fuel subsidy regime and aggravated by the COVID-19 pandemic. As of February 2024, Nigeria's inflation rate got to its 24-year highest record of 31.7% [3]. All these dovetails in multi-dimensional poverty among its teaming population. For instance, in 2018, Nigeria gained the inglorious record of the world's poverty capital, with 87 million (at least 53%) of its citizens living in extreme poverty [4]. Although India

overtook Nigeria in the world's latest ratings, Nigeria, according to the World Poverty Clock, remains Africa's leading country with the worst poverty index, that is, having 70, 677, 758 people living in extreme poverty [5] and an estimated 133 million people classed as multidimensionally poor in 2023. The multinational poverty index (MPI) relies on 10 indicators to measure poverty in three different dimensions, that is, education (years of schooling and attendance), standard of living (sanitation, drinking water, electricity, floor, cooking fuel and assets) and health (child nutrition and mortality) [6]. This implies that in Nigeria, about 828 million Nigerians go to bed hungry every day in 2024, while about 25, 000 of them (including 10, 000 children) die every day [7].

This is because the Nigerian nation is faced with myriad socio-political and economic challenges including high-level insecurity propelled by banditry and kidnappings in the North West region, exacerbating insurgency by different terrorist groups in the Northeast, and devastating separatist agitations in the southeastern region. Spatial inequality looms large in Nigeria with the highest performing minority sections comparing comfortably with upper middle-income countries, against the vast worst performing states faring below the average low-income states [3]. A lot of Nigerians, especially those living in the North, do not have access to education, basic infrastructure such as electricity, safe drinking water and enhanced sanitation. Where there are jobs, the World Bank [8] views the version of Nigeria's hard jobs as not translating to exit from poverty because only 17 per cent of its workers are engaged in wage jobs, while the vast Nigeran workers are involved in small-scale subsistent farming and non-farming enterprises. Thus, the country is home to some of the highest records in underemployment, unemployment and low-productivity jobs which contributes to its grim poverty profile. Aligning with the poverty situation in Nigeria is the astronomical level of out-of-school children. As of 2023 records, Nigeria had well over an estimated 10.5 million out-of-school children, the highest in the world, while many of the children who are privileged to attend schools do so with unkempt or torn polythene school bags [9]. The overall Nigerian social inequality status and poverty situation have therefore been aggravated by the general absence or abysmally low infrastructure, weak capacity in the agricultural sector, stagnation in farm and non-farm productivity, inadequate social service delivery outputs, incongruence between the aspirations of the youth population and available employment opportunities, grossly inadequate utilisation opportunities in the educational and healthcare sector, poor leadership/poor governance, climate crisis, and its attending conflict scenarios.

If the Nigerian developmental features have been bedevilled by the degree of concerns raised above, regarding its very high-income equality and poverty ratings, what then is the value of the various intervention measures of government to provide the much-needed social protection to vulnerable Nigerians? This is coming on the hills of a recent assertion by the Governor of the Central Bank of Nigeria that such interventions have gulped over N10 trillion, yet no significant results have been recorded in designated sectors (see Ref. [10]). The chapter explores the implementation of the social policy programmes embarked upon by the federal government of Nigeria between 2015 and 2023, taking cognisance of the circumstances that led to the implementation of the various intervention programmes under the aegis of the National Social Protection Policy (NSPP) including employment generation, social safety nets, conditional cash transfers, maternal and child health care, etc.

2. Social policy, social protection/social security

Policies are the channels through which all societal problems are articulated into governmental actions for the delivery of the ends of government, which are always geared toward the betterment of the welfare of the society. In the policy arena, social protection is a comprehensive policy framework that encompasses interrelated social agenda models intended to diminish poverty and provide a sense of dignity to all citizens [11]. Researchers have variously interchanged social welfare/social policy issues with concepts like social security, welfare, social insurance, and safety nets but in the view of Stiftung [12], none of these terms or practices can stand alone to convey the import of social protection. Thus, Devereus & Sabates-wheeler's [13] conceptualization gains attraction with its broad view of social protection as encompassing public and private initiatives for the provision of income or transfer of consumption to the poor; for the protection of the vulnerable from destruction and the enhancement of the social rights and status of the deprived, all geared toward the reduction of the economic and social helplessness of poor and relegated groups.

In a more generalised sense, Monru [14] classifies social protection into three perspectives—as a mechanism for the management of social risk; as a fundamental right; and as a declaration of the minimum needs of the citizens in a cultured world. The management of social risk coincides with the objective of reducing the vulnerability of small-income earning households regarding consumption and access to basic needs, with the aim of protecting social capital. This is what Soderstrom [15] believes should insure the middle class against the risks posed on their lifestyles by such vulnerability.

The second scenario, being the right-based perspective, is traced to the International Labour Organisation's (ILO) 2001 declaration of social protection as a fundamental human right. This declaration was based on the international community's 1948 acknowledgement of such a right under the aegis of the 'Universal Declaration of Human Rights - Article 22 of the Universal Declaration of Human Rights and Article 9 of the International Covenant on Economic, Social and Cultural Rights (ICESCR)' (see Ref. [16], p. 6). The third perspective, though closely related to the second, pays premium to social protection as an essential need, as anchored by the United Nations' reference to public and private programmes carried out as response to numerous contingencies to offer assistance to families that are with children, besides the provision of basic health care and housing (see Ref. [17]).

In technical parlance, the International Labour Organisation, ILO [18], while conceptualising social protection within the prism of the Sustainable Development Goals (SDGs) 1.3, describes it as a public measure or measures that doll out benefits to ensure income security and access to basic healthcare, in the form of insurance against unemployment, benefits toward disability, pensions to the aged, cash and in-kind transfers, as well as contributory or tax-financed projects. According to the Nigerian Ministry of Budget and National Planning [19], social protection is a mixture of policies and programmes drafted for citizens and households throughout their existence to avoid and reduce poverty and socio-economic shocks by encouraging and improving livelihood and self-esteem.

This chapter adopts the definition of social protection as provided by Stiftung ([12], p. 4) to involve those policy measures and programmes at:

> *preventing, managing and overcoming situations that adversely affect people's wellbe-*
> *ing. It consists of policies and programmes*
>
> *designed to reduce poverty and vulnerability. Such policies promote efficient labour*
> *markets and reduce people's exposure to*
>
> *shocks. They enhance people's capacity to manage economic and*
>
> *social risks, including unemployment, exclusion, sickness, disability, maternal and*
> *child care, old age challenges and emergencies such as floods and violent conflicts.*
> *Such interventions may be carried out by the state, non-governmental actors, the*
> *private sector, or through informal individual or community initiatives.*

Citing the World Bank [20], UNDP [21] and ILO [22], Stiftung [12] outlines the functions of social protection to include the following:

i. Social protection as contributing to the maintenance of equity, social justice and human dignity;

ii. Social justice as being relevant for empowerment, political inclusion and the provision of a steadier advancement of those democratic institutions that promote the rule of law;

iii. Social protection as cushioning the effect of the economic sector crisis on susceptible populations. This is done through the stabilisation of the macroeconomic dynamics of increasing demand, enabling the citizens to be in a better position to conquer poverty, creating multiplier effects and averting exclusion of all forms by paying special attention to vulnerable groups and providing protection to the citizens round their life cycles;

iv. The provision of basic revenue security on the platform of social transfers like the payment of pensions to the elderly, support to persons with disabilities, income support benefits, children's benefits and guarantee of employment and basic services to the working poor.

v. Provision of universal access to basic affordable social provisions in the areas of health, education, water and sanitation, food security, and housing, among others. These services engender increased access to labour markets and confer benefits to those who would have been excluded from income-generating worker-based measures.

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vii. Social protection guarantees sustainable and inclusive growth through labour policies.

viii. Social protection has been proven as a veritable platform for fighting poverty and hunger in developing countries, hence serving as a contributor to the ideals of the sustainable development agenda.

ix. It contributes significantly to economic growth through improved access to healthcare, income and education, unlocking the full potential of the country's productive forces and improving participation in the labour market/entrepreneurial skill development. It also stabilises the economy in times of crisis by assisting to preserve demands from dropping sharply. By so doing, household consumption is maintained to the extent of overcoming the risk of poverty and social exclusion.

x. Through social protection, risk-related behaviours around teen pregnancy, crime, HIV, etc. are managed thereby helping in the sustenance of human capital.

xi. Social protection also has the potential of supporting environmental sustainability through the strengthening of capital against natural disaster.

3. Social protection programmes in Nigeria

In Nigeria, social protection interventions and programmes are majorly driven by the government through certain policy frameworks and parameters. The federal government of Nigeria eulogises the social protection clauses of the 1999 Constitution of Nigeria as the basis for its social protection policy drives and programmes, which are themselves, off-sets of fundamental human rights requirements for equality, inclusivity, security and dignity of living. For example, Sections 16 and 17 of Chapter 2 of the Constitution make it incumbent on state governments to provide maximum welfare, happiness and freedom to all citizens on the basis of equality of status, equality of opportunity and social justice. States are also required to provide food, shelter, reasonable national living wage, sick benefits, care and pensions for old age, as well as welfare of those with disabilities. In Section 17, sub-Section 3 (a), the constitution requires that every citizen should be availed the opportunity to secure adequate means of livelihood, coupled with the guarantee of suitable employment.

To that extent, successive administrations have devised and implemented different social protection strategies and programmes, over the years, with the aim of reducing poverty.

4. Subsidy reinvestment and empowerment programme (SURE-P)

In 2015, under President Goodluck Johnathan's regime, social protection programmes were classified into protective and preventive thresholds. According to the World Bank [23], the protective types were crafted as social assistant measures in the form of cash transfers, food transfers, fee waivers for certain categories of social services, subsidies in education and school feeding ventures. The preventive ends were delivered as social insurance packages in the form of premium waivers, health insurance, services, subsidised risk-pooling instruments – cooperative, and provision of basic services at the community levels. These programmes were largely delivered

through the instrumentality of the Subsidy Reinvestment and Empowerment Programme (SURE-P) introduced after fuel subsidy removal in January 2012. SURE-P programmes encompassed 'Maternal and Child Health (MCH), Community Services, Employment schemes, Mass Transit Programmes, Vocational Training, Road Works and Rail Transport' [24].

In a study to evaluate the impact of SURE-P, Atakpa [24] found that the programme, under its 5 major employment generation schemes, was able to achieve the following in the area of employment generation (**Table 1**):

The study indicated that 164,193 Nigerians were engaged (across the different geo-political zones of the country) in the totality of the different schemes under SURE-P. Although these employments were not direct, the Graduate Internship Scheme (GIS), for example, deployed over 20,000 Nigerian graduates (40%) of the 50,000 targets. Out of this, 70% of those graduates were retained by the firms that trained them, while the other 30% either secured jobs outside the training firms or became self-employed because they were better equipped to face interviews or they had started their businesses due to the skill acquired and from savings made from the monthly N30, 000 allowances paid during internship [24].

The SURE-P Community Services Women and Youth Empowerment Project (CSWYE) was designed to offer temporary employment to 185,000 unskilled Nigerian women and youth in community service with a monthly payment of N10,000 to each beneficiary during the period. At the end of 2015, the scheme had engaged 118,984 (64.31%) of its 185,000 targets, where the beneficiaries who resided in rural communities, assisted in improving the quality of rural infrastructure, as well as contributed to the economic growth of such rural communities. 925 beneficiaries under the CSWYE (25 from each state), after being trained on different skills by the Federal Ministry of Youth Development, got N150.000 to establish trade and became employers of labour at their different job levels [24].

The Technical Vocational Education and Training Project (TVET) component of SURE-P trained about 5025 citizens all over the country in different vocational skills involving electrical/mechanical engineering, automobile and railway maintenance and construction/housing.

Despite these records, the study observed that:

> *SURE-P could not be said to have adequately mitigated the negative impacts of the partial removal of subsidy on petrol since the benefiting population and sectors were*

S/N	SURE-P employment component	Number of beneficiaries
1	Community Health Worker Employed by SURE-P	12,107
2	Graduate Internship Scheme (GIS)	20,898
3	Community Services Women and Youth Empowerment Project (CSWYE)	118,984
4	Technical Vocational Education and Training Project (TVET)	5025
5	Youths Employed by the Federal Roads Maintenance Agency (FERMA) under SURE-P for aggressive maintenance of 22,500 km of Roads and 80 Bridges across Nigeria	7179
	Total	164,193

Source: Atakpa [24].

Table 1.
Total number of employments undertaken by SURE-P (2012–2015).

> *too narrow and infinitesimal for example, the employment of just 164,193 Nigerians by SURE-P during the period of analysis (though significant according to the result of the study) is a far cry from the projections of the Bureau of Statistics (NBS) that a yearly 1.5 million jobs were required to have kept the unemployment rate constant as at the fourth quarter of 2015.' ([24], p. 171)*

In summary, the Nigerian Economic Summit Group [25] reports that all the social protection programmes in Nigeria could only cover results as low as 5 per cent compared to 17 per cent, 45.2 per cent and 48 per cent coverage rates for Africa, the world and South Africa respectively. This inadequacy is also reflected in the inadequate coverage recorded for distinguished segments of the population, including people living with disabilities with 0.1 per cent; vulnerable groups with 0.2 per cent; and retirees with 7.8 per cent.

5. National Social Investment Programme (NSIP)

In 2016, during the regime of President Mohammadu Buhari, the Federal government of Nigeria established the National Social Investment Programme (NSIP) to address existing poverty-related and hunger issues among identified vulnerable groups including children, youths and women; with a more ambitious target of lifting 100 million Nigerians out of poverty, ten years from its 2017 birth year. The government earmarked a sum of 500 billion for this purpose [26]. Four sub-programmes were established under this programme, and each of them targeted a given group of interest in the polity. They included (i) the Home-Grown School Feeding Programme, (ii) N-power (iii) Conditional Cash Transfer Programme, and (iv) Government Enterprise and Empowerment Programme.

The federal government also encapsulated its social protection programmes under the National Health Insurance Scheme, In-Care of Poor (COPE), which was targeted at extremely poor households, (especially those led by women, the aged, the physically challenged and those with HIV/AIDS or fistula patients) harbouring children who are of school age, healthcare fee waivers for those who are pregnant and under-fives (bankrolled by the MDGs), and the Community-Based Health Insurance Scheme (CBHIS) relaunched in 2011.

At the level of the state governments, social protection programmes, during the review period included labour market programmes, programmes on social insurance, programmes on social assistance and welfare, microfinance programmes, interventions toward child protection, survival and development and health programmes.

By the middle of 2023 which coincided with the end of the administration of the Mohammadu Buhari administration, the following could be deduced from the implementation outcomes of the various social protection measures of the government:

6. Economic growth and recovery plan (AGRP) 2017–2020

In 2017, the Nigerian government in its strife to pursue a social protection agenda encapsulated the same under a medium-term development plan known as Nigeria's Economic Growth and Recovery Plan (AGRP) 2017–2020, to restore some level of economic growth to drive its social protection agenda through investments in specially directed social programmes, to scale down on the inequality profile of the

country and emphasise job creation to reduce unemployment and underemployment, especially among the youth and provide assistance to the poorest and most vulnerable sectors of the country [6].

7. The national home-grown school feeding programme

The national school feeding programme was known to have produced the most significant level of success compared to the other programmes. The programme which was designed to reduce the growing proportion of out-of-school children in Nigerian primary schools was estimated to reach 20 million primary 1–3 pupils across the country [27]. Seven years after its implementation, with an expenditure profile of over N200 billion on meals, Lawal et al. [28], citing the former Minister of Humanitarian Affairs, Disaster Management and Social Development, Sadiya Umar Farouq, report that about N12 million was expended every month to feed over 10 million pupils within a given school term in at least 53,000 schools across Nigeria. On the social security side, the programme also provided job opportunities to 120,000 cooks, at least 100,000 smallholder farmers and many aggregators as beneficiaries [29].

According to The Nigerian Economic Summit Group [25], the programme attained about 14.7 per cent of households' coverage and about 11 million beneficiaries (20.1 per cent of children within the age range of 5–13 years), between 2018 and 2019. Recent reports attest to the fact that the programme's low success can be traced to myriad problems revolving around high levels of corruption, poor quality control, irregularities in implementation, politicisation, and lack of accountability and transparency [27]. However, as part of President Bola Ahmed Tinubu's eight-point agenda and renewed hope action plan, the federal government has budgeted another 100 million naira in its 2024 budget with a view to expanding the school feeding programme to reach 10 million pupils under a public-private partnership initiative [30].

8. The N-power scheme

Under the N-power scheme (like the graduate internship scheme under SURE-P), the federal government had, through the office of the vice president, designed the programme with the target of providing the Nigerian youths with paid jobs, while setting the stage for them to develop skills at the exit of the programme, to become either employers of labour or be recruited into better jobs. During the programme duration, enrollees were paid N30,000 each month and were spread across key industries like health, education and tax [31]. At its commencement, 500,000 young Nigerians were enrolled in the programme. The entry requirement was a qualifying exam and within the first two years, over a thousand Nigerians who went through the different components of the programme were equipped with skills and relevant experience to fill their curriculum vitae [32]. According to a report credited to the former minister of Humanitarian Affairs, about 960,000 young Nigerians had benefitted from the programme [33].

One of the problems with the evaluation of programme impacts in Nigeria is always of inadequate data. Before its suspension, official records from the Ministry of Humanitarian Affairs indicated that though a specified number of persons who excited the N-power scheme could not be ascertained, it was believed that practically, all those who enrolled in Batches C1 and C2 of the scheme numbered over 1 million,

S/N	Batch	Number of youth beneficiaries
1	Batch A	200,000
2	Batch B	300,000
3	Batch C1	510,000
4	Batch C2	490,000
Total		1,500,000

Adapted from Nnodim [34] and Are [35].

Table 2.
Beneficiaries of N-power programme.

to teach in primary schools across the country [34]. This was based on the assumption that all those who enrolled in the scheme may have been paid the proposed N30,000 stipend, whereas there were various complaints about discrepancies and non-payment of the allowances in many instances [35].

Table 2 provides a picture of the number of benefitting youths under the different components of the N-power scheme.

President Bola Tinubu in February 2024 suspended the National Social Investment Programme with all its components following investigations into the reported misuse of funds meant for the programme, as millions of dollars assigned for the funding of the programmes through the Ministry of Humanitarian Affairs were reportedly unaccounted for Verain [36]. While announcing the justification for the suspension of the scheme, the former Minster for humanitarian Affairs had this to say:

> We must go back to look into N-power and understand what the problems are; so, we will basically suspend the programme for now until we are done with proper investigation into the utilisation of funds by the N-power programme. We want to know how many people are basically on the programme right now; how many people are owed and the amount they are owed. We are totally restructuring N-power and expanding it. There are lots going on. We met people who were supposed to have exited the programme last year and they are still claiming that they are teaching [34].

As it stands, there is uncertainty about the resumption date for the scheme, neither can the payment status of those who were already enrolled in the scheme as of the period of suspension be ascertained.

9. The conditional cash transfer programme

The Cash Transfer Programme of the scheme was designed to provide targeted transfers to poor and vulnerable households, with the hope of liberating them from poverty. As of May 2017, official pronouncement from government sources claimed that 35 states had engaged in the programme while signing MoUs and 30,000 households with valid bank verification numbers (BVN) had been paid PM News [37].

According to Ileyemi [38], the National Cash Transfer Office (NCTO) had announced that former President Buhari's version of the programme had made such transfers to 2,000,000 Nigerians cutting across 36 states and the Federal Capital Territory [39], 609 of the 774 local government areas, 6272 wards and 48,789

communities. At the initial stage beneficiaries received payments of N20,000 each [40] but later, based on conditions relating to school children and pregnancy, the CCT beneficiaries received the sum of N10,000 or N5000 each as basic payment [38].

Under the National Social Safety Net project (NASSP), it is believed that irrespective of the type of settlement, just about 1.6 per cent of households were enrolled, thus, the number of households that received cash or kind was not significant enough to have addressed the needs of this segment of the population. In fact, between March 2020 and the next year, just 1.7 million Nigerian households (3.9% of 43 million) were covered under the social safety net support via cash transfers from either of the different levels of government in Nigeria [25].

Ileyemi [38] does not believe that the scheme made any significant improvements to the poverty situation in Nigeria, as the number of Nigerians who lived in poverty had increased from 40.0 per cent in 2019 to 45 per cent in 2023. The World Bank was not left out in its negative assessment of the CCT scheme, as it observed that the programme had an insignificant effect on financial inclusion, household consumption and employment of beneficiaries, especially, women (see Ref. [41]).

Under the current administration, the scheme's relaunch targeted 15 million households for the transfers. This followed the deregulation policy of the Tinubu administration which further deepened the poverty crisis in the country. A report from the Ministry of Humanitarian Affairs announced that as of December 2023, i.e. two months after the relaunch, the federal government had disbursed the sum of N25,000 each to 3,500,000 households across Nigeria [38, 42–44].

10. The government enterprise and empowerment programme (GEEP)

The Government Enterprise and Empowerment Programme (GEEP) was initiated to provide access to financial services in the form of loans to traders, market women, artisans, women cooperative societies, small and medium enterprises, youth entrepreneurs and agricultural workers. The goal of the programme was to ensure productive employment and decent jobs for every man or woman, as well as the youth and people with disabilities, through the provision of between N10,000 and N100,000 loan facilities without interest and conditionalities in the form of collateral [45]. The format for registration simply required the supply of the right information on the name, mobile phone number and identity of the applicant [46].

This programme also known as GEEP 2.0 was restructured as part of the NSIP to lift 100 million Nigerians out of poverty. It was targeted at the skilled sector of the population who may have been left out of the other credit delivery schemes, through the provision of soft loans for the finance of their businesses. GEEP had three components viz., TraderMoni for marginalised youths, MarketMoni for vulnerable women and FarmerMoni with a special focus on rural farmers [47]. TraderMoni and MarketMoni had their loan amounts increased from the initial N10,000 to N50,000, while FarmerMon's loan portfolio was N300,000.

According to Njoku [48], about 2,200,000 Nigerian traders may have benefitted from the federal government's TraderMoni. Citing the Executive director of the Bank of Industry, Njoku reported that TraderMoni loans accrued to over 25,000 beneficiaries, while another 4000 citizens had benefitted from MarketMoni.

The former Vice President, while speaking on the gains of the GEEP indicated that over 4 million MSMEs had benefitted directly from the N150 billion programmes, from 2016 to 2022. He further explained that 57 per cent of the benefitting MSMEs

happened to have been owned by Nigerians below 35 years of age, while another 60 per cent of beneficiaries were women [49].

Under the current administration a 'rebranded' version of the GEEP incorporating the three components: TraderMoni, FarmerMoni and MarketMoni was launched by the wife of the President with a target to lift another 1,500,000 Nigerian beneficiaries out of poverty [50].

11. Challenges of social protection implementation in Nigeria

Despite the implementation of various social protection programmes and schemes these past years in Nigeria, the country's poverty/inequality profile has not improved significantly. Compared to other African countries, the Nigerian Economic Summit Group [25] reports that all the social protection programmes in Nigeria could only produce results as low as 5 per cent compared to South Africa and other countries in the world. The following section discusses some of the challenges of social policy implementation in Nigeria.

  i. *Inadequate Funding*: Funding has always been a major hindrance to the effective implementation of social protection programmes in Nigeria. Compared to other African countries, Nigeria's social protection budget provisions have always been low. As noted by a World Bank report, though Nigeria is the richest country in Africa, it spends only 0.28 per cent of its GDP and can only cater to 7.0 per cent of its population as regards social protection. This is considered low as compared to Rwanda at 1.5 per cent, Ghana at 0.58 per cent, Benin at 2.95 per cent and South Africa at 3.31 per cent (see Ref. [51]). With inadequate finance, the scope of most of the social protection schemes is usually too limited to make any significant impact on the populace.

 ii. *Corruption/Lack of Transparency*: where the funds are available, or the little that is available is deployed toward social protection, the issue of corruption, lack of transparency and high-level insincerity on the part of the leaders and implementers of social protection schemes constitute one of the worst challenges against the implementation of social policies in Nigeria. A lot of time, disbursements to beneficiaries are never traceable (see Ref. [25]). Nothing depicts the corruption-laden nature of the implementation processes of social protection schemes than the recent scandal rocking the implementation Ministries and Agencies where not only the former Minister of Humanitarian Affairs, Disaster and Social Development, Mrs. Umar-Farouk is under investigation for allegedly colluding with other officials of the Ministry to launder a staggering N37.1 billion of funds meant for the school feeding component of social protection but also her successor in the current Ministry of Humanitarian Affairs and Poverty Alleviation (Betta Edu) has been suspended from office on allegation of transferring N585.2 million from the National Social Investment office account to a private account of a civil servant [52–54].

iii. *Over-politicisation of Social Protection Programme*: In a lot of instances, government protection schemes are neither well-coordinated nor well-targeted. Right from the point of conception, the social needs of the vulnerable population may not have been well factored in, as they are not involved in the policy

agenda setting. Besides, there is no transparency in the selection process as relatives and cronies of political office holders are always the first set of beneficiaries of social protection schemes, instead of the vulnerable population.

iv. *Lack or Inadequate Data*: Information and data involving the true position of social security needs, the volume of protection parameters and the published results have always been shrouded in controversies in Nigeria. There have been complaints of deliberate manipulation of census figures in certain geopolitical zones of the country, to influence the distribution of social security amenities. These mutual suspicions have resulted in distrust and discrediting of whatever data is available. Besides, even the social register used for the disbursement of available social variables has never been trusted. One instance is in the recent doubt (well-founded) expressed by the Nigerian Labour Congress (NLC) over the authenticity of the social register inherited from the former federal administration for the disbursements of current conditional cash transfers to vulnerable households [38].

v. *Lack of Synergy between the Three Tiers of Government*: There has been a lot of discrepancy between the Federal, States and Local governments in the implementation of social security schemes projects in the country. This has resulted in some form of confusion and lack of direction, as well as proper tracking of social protection schemes and programmes.

12. Conclusion

On the whole, social protection programmes under the aegis of the National Social Investment Programme (NSIP) have not been able to lift a significant number of Nigerians out of poverty as variously announced by the programme initiators. According to the latest NBS report, the number of Nigerians living in multidimensional poverty is 133 million as may be compared to the 2019 national standard of 82.9 million poor Nigerians. Considering from the perspective of the citizens' evaluation model, many Nigerians are not aware, and neither do they believe in the existence of a robust social protection policy or programme. A breakdown of a survey by the National Bureau of Statistics (NBS) in 2021 showed that out of a total of 39,692 households sampled, only 2418 (6.1 per cent) of them were either aware or had received any form of support or social transfers from the Nigerian government. This shows that about 37,214 (94 per cent) households have not received any form of social transfer [51]. Thus, the feeling among the majority of Nigerians is that the government and its personnel are self-serving and do not care for the welfare of the citizens. Little wonder that 133 million of Nigeria's 227.71 million population not only remain multidimensionally poor but also, many more of them are just a hair's breadth away from falling into abject poverty if nothing is drastically done to reverse the trend.

13. Recommendations

In light of the aforementioned issues concerning the implementation of social security protection in Nigeria, this chapter suggests the following measures as ways of improving and sustaining the essence of social protection programmes in the country:

There is a need for government to increase budgetary allocations to social protection programmes in Nigeria. Since the current poverty gap index for Nigeria is 0.129, huge resources are needed if this gap is to be bridged, thus the suggestion by the World Bank (see Bailey [51] is instructive, that going by Nigeria's population, the least that is required for investment in the social protection sector of the Nigerian economy is within the threshold of N3.7 trillion per year.

Instead of crafting too many sub-components of social protection programmes that are neither feasible nor implementable given available resources and convenience, the government needs to develop and implement a comprehensive National Social Inclusion Strategy that prioritises the social welfare of its most vulnerable households.

The idea of creating and enforcing numerous exercises that depict a social register always creates suspicion and subjectivity. There is a need for the Nigerian government to harmonise all its data banks into one comprehensive social register that gives an equal opportunity for every Nigerian, especially the most vulnerable population in rural communities to be captured and published for easy accessibility to everyone. Processing such an authentic social register will ensure that the target population is reached whenever social protection schemes are contemplated, instead of allowing for the manipulative tendencies of self-serving politicians to come to bear at the selection process.

The presidency should ensure that the most credible set of Nigerians are selected to manage all social protection implementation platforms like the National Social Investment Programme or designated ministries, departments and agencies. Continuous accountability measures should be put in place to detect (early enough) any infractions that suggest any form of corruption in the implementation of social protection programmes.

There should be greater synergy among the three tiers of government and the federal government should play the role of an altruistic coordinator instead of a dictator in the course of action regarding the social protection needs of the vulnerable populace, which, of course, are more contiguous and accessible to state and local levels of administration. In so doing, government at all levels should painstakingly conduct need assessments, while adopting the bottom-up approach in determining the best approach to meet the basic needs of vulnerable populations.

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Chapter 12

Public Sector Procurement and the Support of Small and Medium-Sized Enterprises: A Comprehensive Public Procurement Regulatory Framework

Charles Tsikada, Shahid Imran and Asad Ullah

Abstract

Governments worldwide leverage their purchasing power to advance social, economic, and environmental agendas. Public procurement can be employed as a strategic instrument to support small and medium-sized enterprises. Many countries are showing a rising interest in leveraging public procurement to foster the integration of small and medium-sized enterprises into markets. However, access to public procurement contracts is a challenge for small and medium-sized enterprises. There are challenges posed by government policies that are frequently overlooked. Public procurement regulations cover procedures, methods, standards, and terms for inviting bids, evaluation, selection, negotiation, awarding, and payment of suppliers of goods and services. However, many small businesses fail to meet these procedures, methods, standards, and terms because of capacities and resource constraints. There are public procurement initiatives that are currently being implemented throughout the world to help small businesses gain access to markets. Nevertheless, these initiatives are still relatively new and unstructured. There continues to be a dearth of peer-reviewed research. This chapter delineates small and medium-sized enterprises from various viewpoints, underlines their importance, explains the frameworks for public procurement, and proposes government-led initiatives that could facilitate the integration of small and medium-sized enterprises into the market. It is concluded that governments should implement strategies aimed at assisting small businesses. These strategies may include noncompetitive practices, subcontracting initiatives, qualification criteria, preferential schemes, and award criteria. By doing so, governments can create a fairer playing field, promote the competitiveness of small businesses, and encourage their engagement in public procurement processes. This, in turn, will foster SME growth, spur economic development, and facilitate job creation.

1. Introduction

The definition of small and medium enterprises is based upon different criteria such as number of employees, value of assets, sales, and volume of output [1, 2]. However, the existence of a universally agreed-upon definition for a SME is impeded by political strategies and economic conditions, which lead to divergence across nations and even within them [3, 4]. For example, while France defines SMEs as businesses with fewer than 500 employees, Germany sets the threshold at fewer than 100 employees. In the United States, an SME is characterized as a company with up to 500 employees and annual earnings not exceeding US$25 million [5, 6]. Similarly, the Indian government identifies SMEs as firms employing up to 499 individuals and generating less than Rs100 million in revenue [7]. In Canda, SMEs are defined as independent firms with less than 200 employees. In Malaysia, SMEs have less than 75 full-time workers or with a shareholder fund of less than US$1 million. In Zimbabwe, SMEs are described as independent legal entities, employing up to 100 permanent staff members and achieving a maximum revenue of US$1,000,000 [8]. In addition, definitions within countries may further differ based on sector or business type. For instance, in Japan, SMEs in manufacturing, mining, transportation, and construction are those with fewer than 300 employees or capitalization below 100 million yen. Conversely, in wholesale, SMEs employ fewer than 100 individuals or have capitalization under 30 million yen, and in retail, they have fewer than 50 employees or capitalization below 10 million yen [2, 9].

In summary, the term small to medium enterprise differs in context, by country, value of assets, annual sales revenue, volume of output, political strategies, and economic conditions, thus different authors do not agree on one universal definition. Similarly, there is no uniform definition of SMEs [10–12]. Whereas in some countries a company is of a medium sized, in others, the same company is considerate to be large, thus it would not be included in the category of SMEs. However, number of employees cannot be used as the only criterion as it can lead to misconceptions as to whether some SMEs can be regarded as SMEs or not. Various role players have established definitions either for purely analytical purposes or for the implementation of government programs. Notwithstanding the wide variations of the definition, there are some commonalities. In this chapter, a small to medium enterprise (SME) is an independent legal business entity that operates within a certain threshold of size, which may vary depending on the country, sector, or type of business. This threshold often encompasses factors, such as the number of employees, value of assets, annual sales revenue, and volume of output. While specific criteria may differ across regions and industries, SMEs generally exhibit traits such as relatively limited scale compared to large corporations, a focus on innovation and flexibility, and a significant contribution to employment and economic growth.

2. Significance of small and medium-sized enterprises

Small and medium-sized enterprises hold significant importance in the economic, industrial, and social advancement of nations. Rohra and Panhwar [13] and Abbasi, et al. [14] highlight the consensus among many countries regarding the pivotal role of the SME sector in supporting their economies. Numerous studies affirm the contribution of SMEs to economic growth. In Ghana, for instance, the government has implemented measures, such as financing support to foster entrepreneurship [15]. Similarly,

in Pakistan, SMEs play a critical role in economic growth, technological innovation, and supply to both large and cottage industries, thereby promoting economic revitalization. In South Africa, SMEs are recognized as vital drivers of economic growth and development, thus contributing significantly to job creation, innovation, and overall prosperity [16]. The SMEs in Zimbabwe are instrumental in economic expansion, employment generation, and rural and urban development with their contribution amounting to US$8.58 billion to GDP in 2016, employing 5.9 million people and constituting over 70% of the Zimbabwe Revenue Authority's taxpayer database [17]. The Zimbabwean government has established the Ministry of SMEs and cooperative development to focus on SME support [18, 19]. In summary, SMEs play a crucial role in driving economic growth, fostering innovation, promoting social development, and facilitating job creation. Thus, collaborative efforts involving governments, stakeholders, and supportive policies are essential to harness the immense potential of SMEs for sustainable and inclusive economic prosperity.

3. Public procurement frameworks

Governments, being the primary purchasers of goods and services, offer enticing prospects for small and medium enterprises. Studies demonstrate that adhering to internationally accepted best practices in public procurement, such as transparency and streamlined award processes, can lower project costs and improve quality by stimulating competition for contracts. Using public procurement laws, governments often incentivize, support, and sustain local SMEs [20]. Securing a significant government contract can strongly motivate SMEs to register and formalize their operations, thus bringing these companies into the mainstream economy. In United States, federal government reserves 23% of its total contracts for American SMEs, with additional set-asides for SMEs owned by women, veterans, and Native Americans [21]. These preferential access policies bolster an American SME sector and align with important social objectives. In Canada, procurements over CAD 5000 are allocated to Aboriginal populations. Australian procurement regulations mandate that a minimum of 10% of all purchases come from SMEs [22]. Canada and Mexico incentivize subcontracting by awarding additional points to bids where lead contractors engage SMEs [23]. Procurement laws in Argentina grant SMEs a price preference margin of 7%. In Brazil, government purchases below a certain threshold must be assigned to small firms [24]. In South Africa, Preferential Procurement Regulations of 2011 require entities to subcontract 30% of contract value to SMEs [25]. In Ecuador, public works below a specified value must be allocated to SMEs through a random online lottery from a pool of registered and pre-qualified SMEs. Zimbabwe mandates that the government acquire at least 25% of goods and services from SMEs, with a 10% preference for locally based contractors and suppliers in tender schedules [26]. The sections below describe specific provisions in public procurement, and how they have been applied to public food procurement initiatives.

3.1 Top of form noncompetitive practices

It is not necessary for qualified suppliers to compete based on the lowest price and best quality in their bids. Governments around the world have the option to employ noncompetitive practices to facilitate SMEs in accessing markets. Instead, procuring entities can publish a call for bids for the purchase, outlining the commodities,

quantity, standards for quality, and delivery schedule. SMEs can submit their proposals outlining the commodities and quantities they want to sell. They are expected to obtain an eligibility declaration, which certifies their status. The government can implement mandatory set-asides in procurement processes for SMEs, provide price preferences or margins to SMEs in bidding competitions, favor SME participation through subcontracting requirements, and establish quotas or thresholds for SME involvement in government contracts [27]. In addition, some governments may utilize randomized selection processes, such as lotteries, to allocate contracts to SMEs or provide preferential treatment to locally based SMEs in procurement decisions [28]. As evidenced, governments around the world can use noncompetitive practices to assist SMEs to access market. These noncompetitive practices aim to level the playing field for SMEs, enhance their competitiveness, and promote their participation in public procurement processes.

3.2 Subcontracting

Subcontracting in public procurement can indeed be a strategy to assist small and medium-sized enterprises by providing them with opportunities to participate in larger projects that they might not be able to undertake on their own. For instance, this approach has been commonly used to encourage large government suppliers to subcontract SMEs. The USA has a well-established subcontracting program for SMEs which applies to all contracts above USD650 000 [29]. Contracts above this threshold require suppliers to submit subcontracting plans for small businesses, including minority- and women-owned businesses. In the United Kingdom, the government has put in place several initiatives to support SMEs involvement in public procurement [30]. For instance, in the construction sector, larger contractors subcontract certain aspects of projects to smaller firms. One example is the Crossrail project in London. In this case, several SMEs were able to participate in this infrastructure project by subcontracting with larger construction companies [31]. This allowed them to gain valuable experience and exposure to larger projects, which they might not have been able to secure independently. The EU has directives in place to promote SME participation in public procurement across its member states [32]. This is quite evident in the provision of IT services to government agencies. Large IT firms often secure contracts to provide IT solutions to government departments. However, they subcontract portions of the work to smaller IT companies specializing in niche areas, including cybersecurity and software development. This allows SMEs to contribute to larger projects and benefit from the stability and scale provided by the prime contractor. Requiring prime contractors to subcontract a certain percentage of the contract value to SMEs, encouraging larger companies to engage SMEs as subcontractors.

3.3 Qualification criteria

Clear definitions of what constitutes an SME should be provided to ensure that only eligible businesses benefit from the assistance measures. This definition includes criteria such as revenue, number of employees, or asset value [33]. Certain contracts may be reserved exclusively for SMEs which ensures that a portion of government procurement opportunities are specifically allocated to smaller businesses [34]. Larger contracts may include provisions requiring prime contractors to subcontract a portion of the work to SMEs, thus providing opportunities for smaller businesses to participate in larger projects [35, 36]. While it is key for SMEs to have the financial

capacity to fulfill contracts, overly stringent financial requirements can be prohibitive. Therefore, qualification criteria may include tailored financial thresholds that consider the size and nature of SMEs.

3.4 Preferential schemes

Preferential scheme refers to a situation where competitive advantages are given to bidders that meet specific social, economic, and environmental criteria [37]. There are two subcategories of preferential criteria: price preference and procurement award criteria. Bid price preference is the practice of raising the costs of non-preferred suppliers by a predetermined percentage point to evaluate their bids [38]. In an open bidding procedure, for instance, a procuring entity might give a target group of suppliers a price preference by raising the bid prices of non-preferred suppliers by 10%, making their bid more expensive [39]. The bid from a targeted supplier, on the other hand, may be discounted by 5%, giving it an edge over other bids. To increase competition, a bid from SME that is an approved supplier could receive a certain percentage discount. This approach recognizes that some types of providers will not always be able to compete on price with other suppliers. Consequently, it provides target groups with a price advantage. Procuring entities can select the amount of a discount they want to offer to regional vendors based on the circumstances. Preferential treatment has often been used to promote SME access to public procurement markets. In the United States, the Buy American Act gives preference to domestic suppliers in federal procurement contracts, providing a price advantage to American businesses over foreign competitors [40, 41]. In the European Union, public procurement directives encourage the consideration of environmental and social criteria in tender evaluations, giving preference to suppliers with environmentally friendly practices or those that promote social inclusion [42, 43]. In South Korea, the public procurement service runs an innovation-driven procurement program to support the development and adoption of innovative technologies and solutions in public procurement [44].

3.5 Award criteria

Contract award criteria in procurement refer to the set of standards or factors used by procuring entities to evaluate and select the winning bid or proposal for a contract [45]. These criteria are established to ensure fairness, transparency, and value for money in the procurement process. The selection of the winning bid is based on how well it meets the specified requirements and delivers the best value to the procuring entity [46]. Bids that satisfy social, economic, and environmental criteria may be given extra points under this system. Procuring entities grant additional points to bids that exceed the minimal specification when employing award criteria [47, 48]. Public procurement award criteria that support SMEs aim to level the playing field, promote participation, and enhance the competitiveness of SMEs [27]. Granting price preferences or margins to SMEs in bid evaluation processes can allow them to compete more effectively based on their pricing compared to larger competitors [49, 50]. Reducing administrative burdens and simplifying documentation requirements for SMEs can make it easier for them to participate in procurement processes [51, 52]. Breaking down large contracts into smaller lots or dividing projects into phases to accommodate the capacity and capabilities of SMEs [53]. Providing technical assistance, capacity-building programs, and mentoring services to help SMEs improve their bidding capabilities and compete more effectively [54]. Giving preference to

bids from SMEs based in the local area or region where the procurement is taking place supports local economic development and job creation [55, 56]. Facilitating opportunities for SMEs to form consortia or joint ventures to collectively bid on larger contracts that may be beyond their individual capacity [53, 57]. These award criteria are designed to create a more inclusive and supportive procurement environment for SMEs. This will enable them to compete, grow their businesses, and contribute to economic development and job creation.

4. Building a comprehensive public procurement framework for SME growth

A comprehensive public procurement framework designed to foster SME growth entails implementing a range of measures, including noncompetitive practices, subcontracting initiatives, qualification criteria, preferential schemes, and award criteria. By facilitating SME access to markets through noncompetitive practices, such as mandatory set-asides, price preferences, and randomized selection processes, governments around can level the playing field and enhance SME competitiveness. Subcontracting programs enable SME participation in larger projects, while clear qualification criteria ensure targeted support for eligible businesses. Preferential schemes, including price preferences and procurement award criteria, provide competitive advantages to SMEs based on social, economic, and environmental criteria. Award criteria that consider SME capabilities and provide support, such as simplifying documentation requirements and breaking down contracts into smaller lots, further promote SME participation. Together, these measures create a supportive environment for SMEs to compete effectively, grow their businesses, and contribute to economic development and job creation within a comprehensive public procurement framework.

5. Conclusion

In conclusion, the definition of small to medium enterprise varies across countries and industries, influenced by factors such as political strategies, economic conditions, and specific sectoral considerations. While there is no universally agreed-upon definition, SMEs generally operate within certain thresholds of size, which encompass factors such as the number of employees, value of assets, annual sales revenue, and volume of output. SMEs play a vital role in driving economic growth, fostering innovation, and facilitating job creation. Establishing a connection between public procurement and SMEs *via* public policy represents a crucial initial step, particularly in regions where certain developing countries lack policies that offer preferential access for SMEs to government contracts. Governments may employ strategies to support SMEs, including noncompetitive practices, subcontracting initiatives, qualification criteria, preferential schemes, and award criteria. These measures aim to level the playing field, enhance SME competitiveness, and promote their participation in public procurement processes, thus contributing to SME growth, economic development, and job creation. A comprehensive public procurement framework designed to foster SME growth incorporates a range of these measures, creating a supportive environment for SMEs to compete, expand their businesses, and contribute to overall economic prosperity. By implementing these strategies, governments around can maximize the potential of SMEs as drivers of economic growth and development.

6. Implication of the study

This study examined the diverse definitions and significance of small and medium-sized enterprises across different countries and industries, which can help inform policymakers in developing tailored policies to support SME growth. This study contributes to the academic literature by synthesizing existing research and providing a comprehensive overview of the significance of SMEs in economic development and public procurement. The study explains the role of public procurement frameworks in supporting SMEs. This includes noncompetitive practices, subcontracting initiatives, preferential schemes, and qualification criteria. Understanding how governments can leverage procurement policies to promote SME participation can enhance efficiency, transparency, and inclusivity in public procurement processes. However, this study relies on information from various countries and industries, each with its own unique characteristics. Thus, findings and conclusions drawn from this study may not be generalizable to all regions.

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