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"Implementation of One-Stop Shop (OSS): Case Study of ASAN Service OSS in Azerbaijan"

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List of abbreviations

ASC - Administrative Service Centers

ASAN - Azerbaijan Service and Assessment Network

AVIS - Automated Tax Information System

DOST - Sustainable and Operative Social Provision

EE - Eastern Europe

FSU - Former Soviet Union

IAMAS - Entry-Exit and Registration Interagency Automated Information Search System

ICT - Information and Communication Technologies

NPG - New Public Governance

NPM - New Public Management

OSS - One-Stop Shop

OOP - Once-Only Principle

OECD – The Organization for Economic Cooperation and Development

PSR - The Public Service Register

PSH - Public Service Halls

TOE - Technology-Organization-Environment

UNDP – United Nations Development Programme

ABSTRACT

The emergence of digital technologies calls for exploring a one-stop shop model to integrate e-government practices in public service delivery. Specifically in the post-Soviet countries, complexities such as bureaucracy resistance, fragmented public service delivery, and lack of citizen engagement hinder the one-stop shop model implementation. This study focuses on the one-stop shop model implementation in developing post-Soviet countries, with the case focus on Azerbaijan. The research entails the qualitative methodology while considering the interviewing as the main data collection method and employs the TOE framework with an application of the deductive approach. The study also investigates the impeding and facilitating factors shaping the OSS implementation process. The novelty of the research is to bring forward possible suggestions for better OSS implementation in the case of Azerbaijan and similar post-Soviet countries.

Keywords: *one-stop shop, e-government, public services, citizen engagement*

1. INTRODUCTION

This chapter introduces the background of New Public Governance (NPG) with a concise definition of the One-Stop Shop (OSS) model further to be elaborated in the literature review. Furthermore, the section presents the case country context of the ASAN Service in Azerbaijan while introducing it on the ground of post-Soviet countries. We further emphasize the essential motivation for the study by highlighting the significance of the research in Azerbaijan and similar post-Soviet countries. The research purpose and objectives along with the research questions finalize the introduction chapters and serve as the transition to further extension and elaboration of the highlighted concepts through the literature review.

1.1 Background of New Public Governance (NPG)

The late 19th and beginning of the 20th centuries were when public administration left its cradle stage as a separate scientific discipline, having been considerably influenced by socio-political changes and economic development (Ni et al., 2017). On the other hand, industrialization and urbanization posed a new and dynamic challenge for governance; however, the latest emerging issues could not be handled by the then-existing models of bureaucracy, which were quite insufficient (Vogel & Hattke, 2022). For most of its history up until the late 20th century, public administration was dominated by structures of hierarchical control and bureaucratic procedures, resulting in slow decisions, inefficient service delivery, and lack of innovation (Khuroshvili, 2023). NPM used to be the answer to those changes and introduced three essential elements: goal-oriented culture, decentralized decision-making, and costs through performance metrics and competition. This has raised concerns about commercialization and neglect of public services towards underprivileged communities (Popeda & Hadasik, 2023).

The following wave, New Public Governance (NPG), was intended to remedy the wrongs of over-fragmentation and inefficiency that NPM brought about. NPG introduces horizontality, transparency, and a citizen-centric model of e-governance that fosters collaboration and accountability among all stakeholders using digital platforms and state-of-the-art technologies (Karpenko et al., 2023; Krogh & Triantafillou, 2024). This development has been crucial in enhancing service delivery since it sought the cooperation of different agencies and used technology to ensure efficiency in public administration (Mountasser & Abdellartif, 2023). In addition, digital governance furthered the public administration cause under NPG. Advanced technologies made it possible to digitalize procedures in administration and automate the most routine work on online digital platforms. This increased the efficiency as well as the transparency and reduced the redundancy. Bureaucracy was minimized, and access to public services was improved in this digital transformation of government-to-citizen interaction (Karpenko et al., 2023). In the following chapter, we define one of the innovative governance concepts introduced within the NPG paradigm, the so-called One-Stop Shop (OSS) model.

1.2 One-Stop Shop (OSS) defined

The OSS model, as inspired by the practices of the private sector, puts digital technologies for integrated government services in one space- whether it be physical, online, or hybrid in nature. Introducing the OSS model in public administration has enabled citizens to access many services in a single space. Instead of going to independently operating government offices for each service to carry out a transaction, this way has used efficient usage of resources, cost-effectiveness, and satisfying the needs of the citizens, and it has promoted collaboration and interdependence among diverse government agencies (Profiroiu et al., 2023). The OSS model embodies the fundamental principles of NPG by putting users first, being collaborative, transparent, and engaging citizens in

governance practices (Kolbenhayerova & Homa, 2022). Taken together, these help to establish an agile and inclusive public administration.

Notably, infrastructure improvement concerning ICT has made it easier for the public administration to adopt OSS model. The digital age makes the integration of innovative solutions a matter of great necessity since, with such a fast pace in life, citizens are used to receiving consistent and dynamic services, and it is O.S.S. systems that are remodeling government structures to be able to fit into this expectation of society (Vevreniuk et al. 2021). In addition, OSS model can help avoid crucial administrative problems underlying bureaucratic models. Under the conditions of a bureaucratic model, government agencies have more independence; they have their existing standards to follow and are free from control on the part of a centralized authority. Such fragmentation creates room for corruption, hinders transparency, and increases redundancy in service delivery, which may yield inefficient governance with no accountability (Agostino et al., 2021). On the other hand, the OSS model aims at the removal of such fragmentation in government organizations by the adoption of common standards in operations and service delivery. As a result, administrative procedures and service delivery can be effectively simplified and streamlined (Karpenko et al., 2023). The OSS model, on the other hand, try to optimize resource allocation, enhance transparency, increase responsiveness, and ultimately improve citizen satisfaction with public services (Vevreniuk et al. 2021). This is achieved by promoting and fostering collaboration between different government organizations using interoperability. The popularity of the OSS model worldwide is associated with its support for the development of e-government services (Fang, 2002; Clarke, 2020). It is seen as a constructive, innovative way of modernizing public services in general (Karpenko et al. 2023).

Nowadays, digital technologies are not only influencing the enhancement of the public sector efficiency strategically, but also have a significant impact on the government transformation into

more innovative, transparent, and participatory governments (OECD, 2014; Tan & Crompvoets, 2022). Nevertheless, the automation processes and human capital replacement with digital agents within the multicomplex technological networks are current obstacles challenging public servants while alienating them from their conventional roles and behaviors (Tan & Crompvoets, 2022). In the context of the OSS model, it should also be emphasized that despite the strengths of the OSS model, the streamlining process concerning OSS is still full of significant obstacles. It includes the complexity of the amalgamation of various services, the necessity of constant technological improvements, and the permanent struggle against bureaucratic resistance. Undermining implementation complexity, lack of resources, and over-expectations of politics along with the citizens' expectations hinder success (Vashakidze, 2014; Howard, 2017; Rehimli, 2023). We proceed to the elaboration of the OSS model via the lens of the post-Soviet countries, and with the introduction of the research case of Azerbaijan in the following sub-chapter.

1.3 Transition to OSS in Post-Soviet Countries: case of Azerbaijan

OSSs are particularly relevant to transition countries, as these countries often face significant challenges in public service delivery due to fragmented administrative structures and inefficient bureaucratic processes (Gashi & Krasniqi, 2019). Alike sample could also include developing former Soviet countries due to the similar governmental structure. Post-Soviet developing countries provide valuable insights into public sector reforms due to their significant societal transformations and economic transitions. Understanding these transformations can help explain current institutional patterns and foresee future trends in public sector management (Vakulenko & Mattei, 2023).

The transition from the Soviet administration to independent statehood marked a substantial period for Eastern European (EE) and former Soviet Union (FSU) countries, including Azerbaijan. These countries faced the dual challenge of dismantling the existing Soviet administrative apparatus while

building new, independent public administration systems amidst economic and political crises (Stark, 1996; Rehimli, 2023). The early 1990s in Azerbaijan were particularly tumultuous, necessitating substantial reforms to establish a new state power structure and administrative system (Rehimli, 2023).

Azerbaijan's public administration reforms in the post-NPM period have been particularly noteworthy. One of the very significant breakthroughs towards integrated delivery of public services was through the establishment of ASAN service centers. Of course, at the root of ASAN's effectiveness is a completely automated and digitalized system that realizes the potential of the OSS model toward gaining efficiency, transparency, and citizen satisfaction while minimizing bureaucratic hurdles and opportunities for petty corruption (Sadik-Zada, Gatto, & Niftiyev, 2022; Rehimli, 2023). After its establishment in 2012, the Azerbaijani "ASAN service" model was widely recognized at the United Nations Public Service Delivery Forum held on June 23-26th, 2015, in Medellin, Colombia. The model received its approval when it was awarded the United Nations Prize for its unique manner of implementing the One Stop Shop (OSS) model in public service delivery. The innovative OSS model made the model of "ASAN service" become one of the interests at the international exhibition. Azerbaijan is a novel case study in this regard, particularly as the Global South country, considering its success in implementing the OSS, which has been effective in not only the reduction of petty corruption but also in better public sector service delivery.

1.4 Motivation for Research

Globally, governments are working on service improvement mechanisms for their citizens. Centralized decision-making processes, bureaucratic resistance, and lack of coordination, as well as collaboration shaped by lack of ICT infrastructure, are the main struggles of the government structures in developing post-Soviet countries

Those countries share a common past inherited from the Soviet legacy and its features, which include bureaucratic inertia, authoritarian regime, and lack of citizen engagement. which include the need for continuous technological upgrades, and the necessity to maintain a high standard of service delivery amidst the expansion of the services (Baimenov & Everest-Phillips, 2016).

Above mentioned challenges highlight the need for ongoing efforts to refine and improve the OSS model (Sadik-Zada et al., 2022; Rehimli, 2023). Even though the OSS model is not new, its implementation in practice is quite new, particularly for developing post-Soviet countries. Therefore, there is a gap in the existing literature regarding key challenges faced in the implementation of OSS model and applied solutions to overcome those challenges in developing post-Soviet countries.

Thus, this study aims to address the gap by examining the challenges and coming up with possible solutions within the process of implementation (Rehimli, 2023; Sadik-Zada et al., 2022). This study aims to fill this gap by analyzing the case of the ASAN Service, and examining the challenges and solutions encountered during its implementation.

Even though Azerbaijan has been in the process of OSS system implementation, research studies in the field remain scarce. Hence, before adopting the OSS model, Azerbaijan faced challenges in bureaucratic inefficiencies, and fragmented government organizations inherited from the Soviet era (Gasimzade, 2020; Rehimli, 2023; Sadik-Zada et al. 2022). The country's problems got complicated due to its inherited fragmented government organizations from the Soviet Union. However, the country did manage to modernize public administration through the establishment of the ASAN Service. Azerbaijan has gained immense experience in how to establish the necessary infrastructure to acquire an OSS model, and it has practically sustained the ASAN Service during the last 12 years. Even though the Azerbaijani OSS model adoption experience might be a notable example for other

developing post-Soviet countries that still rely on old-style public administration practices, its implementation challenges still are there (Potter & Favour, 2024). Also, the rapid urbanization and modernization needs of the cities, coupled with proactive international collaborations - provide a dynamic environment for studying the factors shaping the implementation process of digital public services.

1.5 Research Aim and Objectives

The main aim of the study is to explore the key challenges in the implementation of OSS model in the public administration of developing post-Soviet countries, with the study context of ASAN Service in Azerbaijan. To reach the aim of the study, the objectives below are drawn:

1. *To investigate the technological factors influencing the implementation of OSS model*
2. *To explore the organizational factors influencing the implementation of OSS model*
3. *To identify the environmental factors influencing the implementation of OSS model*
4. *To bring forward the enhancement mechanisms towards implementation of OSS model*

Taking the objectives as the ground, the central research question is generated as below:

Central Research Question: *What are the factors shaping the implementation of e-government practices within ASAN OSS model in Azerbaijan?*

Subsequently, the sub-research questions below serve to address the central research question above:

SQ 1: *What are technological factors shaping the implementation of ASAN OSS model?*

SQ 2: *What are the organizational factors shaping and impeding the implementation of ASAN OSS model?*

SQ 3: *What are the environmental factors (legal and social) shaping the implementation of ASAN OSS model?*

SQ 4: *How can ASAN OSS model implementation be enhanced?*

1.6 Research Outline

Chapter 1 This chapter defines the One-Stop Shop (OSS) concept in the framework of the New Public Governance (NPG). It also introduces the essentials of the research study including the research gap (motivation for study), research context, the research aim and objectives.

Chapter 2 Literature review chapter provides a more comprehensive overview of the research concepts. The key technological, legal, social, and organizational challenges faced in implementing the OSS model are also addressed. The TOE framework is addressed as the theoretical concept along with the Institutional Theory due to the transition country structure.

Chapter 3 Furthermore, the methodology section explains the case study research design, strategy, philosophy, data collection means, ethical considerations, and limitations of the research. We use the TOE framework to guide the semi-structured interview questions, and further for its application to test the research findings by using thematic data analysis.

Chapter 4 This chapter presents the research findings and discussion of the insights derived from the interviews. Discussion is based on the analysis of the findings against the main literature concepts.

Chapter 5 In conclusion, the research questions are studied and were intended to be answered. Moreover, while acknowledging the limitations of the study, suggestions are provided for future research.

2. LITERATURE REVIEW

This section provides a comprehensive overview of the One-Stop Shop (OSS) model, with a particular emphasis on its key functions, public values, and main implementation challenges. Initially, the researcher introduces the concept of joined-up government, establishes a clear definition of the OSS model, and presents the key principles as well as the theoretical foundations of OSS, with a particular emphasis on its role in promoting joined-up government and digital platforms. Furthermore, the chapter discusses the public values associated with the practical implementation of the OSS model and the corresponding key challenges encountered in the implementation of OSS including fragmentation of government units, overlap of some services between government units, absence of effective legislation, unclear implementation strategies, ICT infrastructure limitations, interoperability challenges, citizen adaptation along with trust concerns, security risks, and constraints related to human resources and training. The challenges are reviewed under four main categories, which are technological, legal, social, and organizational. Additionally, the literature review explores the limited adoption of the OSS model in developing post-Soviet countries.

2.1 Towards Digital Era

In the pre-New Public Management (pre-NPM) era, the main features were the classical Weberian bureaucracy, which focused on hierarchical organization, clearly defined competencies, and the appointment of bureaucrats based on technical qualifications. This system functioned under rigorous

regulation and order, renowned for its accuracy, consistency, and dependability, rendering it highly effective in executing administrative duties (Vashakidze, 2014).

Similarly, Eastern European (EE) and former Soviet Union (FSU) countries underwent a centrally controlled economy under communist governments in the pre-New Public Management (NPM) era. These countries saw substantial challenges in reestablishing their public sector practices following the downfall of socialism, requiring them to decide between radical or gradual transformations (Stark, 1996). The shift towards a market economy necessitated significant economic, political, and social transformations, frequently driven by external forces such as financial crises and international financial institutions (Peters, 2011; Foster & Magdoff, 2009; Vakulenko & Mattei, 2023). In Azerbaijan, the period before New Public Management (NPM), when the country gained independence from the Soviet Union, was a time of the creation of modern Azerbaijani statehood. The transition required substantial reforms to destroy the established Soviet administrative system that had been in operation for seventy years. In the period 1992-1997, Azerbaijan was challenged by many problems in building a new and independent public administration system due to issues like economic and political instability (Rehimli, 2023).

After adopting the NPM model in the following period, significant shifts were marked in public sector reform. Public sector reform of this period was in response to the fragmentation and ungovernability that characterized the epoch of the NPM. It was during this period that they emphasized the establishment of authority, integration of different components, and enhancement of political power to make the provision of public service well-coordinated and efficient. The post-NPM reforms mainly emanated from the shortcomings identified in NPM. The reforms were aimed at regaining control and creating a higher level of coordination within the public institutions. The initiatives gained through the application of these reforms were mainly for strengthening vertical

integration and adding political control. They also focused on horizontal collaboration and coordination in networks, teams, and projects to fill the gaps in the silo produced by the structure of NPM (Christensen & Lægreid, 2011).

The post-NPM era also focused on producing ways and means to remedy the coordination deficiencies and fragmentation that NPM reforms gave rise to. The emphasis is on gathering power, gluing the pieces together, and centralizing political power to improve coordination and efficiency in public service delivery. The objective was to re-establish authority over administrators and address problems associated with fragmented public organizations and the lack of collaboration between different agencies (Vashakidze, 2014). Howard (2017) captures an integration and centralization transition in the post-New Public Management era to cure the division and inefficiencies that arose under NPM. OSS was there to increase service delivery through the elimination of redundancy and inefficiency. These models-built service user profiles, treating the service user as a "customer", and this reduced annoyance due to having to deal with many disconnected service providers.

In Eastern Europe (EE) and FSU countries, following the NPM era, business-oriented rules in the public sector have been enforced to maximize efficiency and effectiveness in the delivery of services. In these reform paths, performance assessment and management, new accounting and reporting principles, changes to the civil service, and privatization initiatives have been included (Savas, 1992; Mikesell & Mullins, 2001). However, the consequences of these reforms were not unambiguous. They led to debate about specific local circumstances, such as historical background, political stability, and the position of public officers in the sphere of politics (Christensen, Lie, & Lægreid, 2008; Shpak et al., 2019; Vakulenko & Mattei, 2023).

In the post-New Public Management (NPM) era, Azerbaijan implemented comprehensive public administration reforms to align with modern state management systems. Notable actions undertaken were the creation of a self-governing administrative system and the execution of many global initiatives and governmental changes. Key improvements encompassed the establishment of ASAN (Azerbaijan Service and Assessment Network), ABAD (Easy Support to Family Business), and DOST (Sustainable and Operative Social Provision) service centers. The objective of these reforms was to improve the delivery of public services and enhance citizen satisfaction by shifting from authoritative and mandatory management methods to more innovative and regulatory approaches. This involved the integration of digital solutions and the promotion of dialogue between the public sector and citizens as well as the private sector (Rehimli, 2023). Hence, the aforementioned shifts serve as the ground of e-government.

E-government can be considered as one of the very significant public administration transformations since the late 1990s. The process coexists with the practice of principles of New Public Management (NPM) aimed at greater transparency, effectiveness, and accountability within the public sector service delivery process. The use of digital technology in public administration is mainly used to help reduce petty forms of corruption. It has been affirmed that e-government introduction ensures critical financial savings and leads to an increase in customer satisfaction, thus becoming very successful in addressing problems related to the inefficiency and corruption of public bureaucracies (Bason, 2010; Carr & Jago, 2014; Sadik-Zada et al., 2022). The following sub-chapter elaborates on the joined-up government concepts while bringing up an emphasis on the One-Stop Shop (OSS), serving as the focus context of our research.

2.2 Joined-Up Government Definitions and Concepts

In public administration, joined-up government refers to the cooperation and coordination of different government agencies in delivering an integrated public service to the public (Millard 2023). One-Stop Shop (OSS) is one of the examples of the so-called above concept. Several fundamental principles underpin joined-up governance. Firstly, joined-up governance should work to do away with the administrative or bureaucratic boundaries that were bequeathed from bygone days of empirical approaches to public administration. The idea is for government agencies to cooperate and coordinate their actions for a result-based culture by ensuring the integration and pooling of resources by the different government bodies.

Moreover, joined-up governance seeks to undertake a citizen-based approach and to achieve this, the service delivery of public services is made efficient, user-friendly, and friendly to all citizens (Sagarik et al. 2018). In essence, common benefits of joined-up governments include improved service delivery, effectiveness in resource allocation, minimization of redundancy, achieving interoperability, collaboration between various government agencies, responsiveness to growing societal needs, and public trust towards government organizations being improved among many others (Aoki et al. 2023). However, the real challenge lies in executing these joined-up government models. Thus, the key challenges that governments face while implementing joined-up governance are organizational resistance towards collaboration, dependency on established bureaucracy, procedural standardization across different arms of government, weak and disparate ICT infrastructure, and political pressure leading to non-interoperability of government agencies (Millard 2023).

The following sub-chapter expands on the evolution of the One-Stop Shop (OSS) model to align with the above-mentioned conceptualizations.

2.3 Evolution of One-Stop Shop (OSS) Model

The concept of the OSS model was initially developed in the late 1920s and 1930s in the United States. It emerged as a business model that gives customers the convenience of access to a wide range of products supplied by multiple retail brands under one roof in a physical space like a departmental store (Knox & Janenova, 2019). This concept has been central as an illustration of joined-up governance that came as a way of addressing the inefficiencies and disarray in the public service delivery of the public administration systems. Captured in the 1970s, while evolving in Australia, the OSS model had the aim of providing greater accessibility of welfare services to claimants, making decisions less labyrinthine, and coordinating work between officials at all levels (Wettenhall & Kimber, 1997). OSS in public administration is one such concept under which digital technologies can be used in creating a one-stop shop for bringing under one platform all the government departments to ease and streamline the process of service delivery, and to meet citizens' societal needs (Agostino et al., 2021). One-stop shops (OSSs) are physical, virtual, or, in combination, places where the public may obtain many different products and services in one coherent and non-divisive procedure or process (Howard, 2017). The premise here is that several services will be put together to address the issues about fragmentary services being offered publicly. OSSs are designed to ensure that a single access channel is made available for accessing various government services, enhancing the user experience, and reducing inefficiencies and duplications.

Apart from its emergence as a physical location for public delivery centralized service, OSS has been recently linked more closely with the advancements in e-government and information and communication technologies (ICTs). According to Layne and Lees' (2001) four-stage growth model for e-government there is a progression from information cataloging to the vertical and horizontal integration of government services. This model stresses the importance of reevaluating government

procedures to achieve citizen-focused service delivery. The incorporation of ICTs into OSS model enables information processing, remote service access, and real-time communication, between citizens and public agencies (Bellamy & Taylor, 1998). Implementing the OSS model requires changes that involve redistributing responsibilities and integrating traditionally separate government functions. New directions in the administration, which go further than NPM, are emerging in coordination and connectivity through sectors to overcome the inefficiencies. The trend toward the provision of an integrated service delivery system is also consistent with the ideas of New Public Governance, which suggests network-oriented approaches in public administration. A One-Stop Shop OSS solution must change internal work processes and relationships with external services to be implemented appropriately (Wimmer, 2002). This means having to redesign work processes that include secure communication technologies, and that also inform and support citizens at every step of service delivery.

This OSS implementation for public service success depends on the capability to address the already mentioned issues, including accessibility to services and citizen participation. Jaeger and Thompson (2003) suggest that e-government needs to be aimed at literacy, accessibility, and user education in a way that does not prohibit different demographics. In summary, successful models of OSS will have the delivery of their services through service channels, a listening service for user needs, and promotion to open the government and its citizens. Even though there are benefits to implementing an OSS model that serves the public, there are existing challenges like data security, accuracy in integrating information systems, and autonomy of each governmental unit. Furthermore, One-Stop Shop (OSS) holds promise in boosting engagement. There is a concern that it might oversimplify active citizenship as mere consumer transactions (Bekkers & Zouridis, 1999). Research indicates that effectively implementing OSS involves taking an approach that combines technology

advancements changes and proactive citizen involvement. This mirrors the shift, in public administration reform, towards multifaceted strategies instead of rigid single-dimensional methods (Christensen & Lægreid, 2010).

There are different types of OSS model. In the first type, the OSS system provides complete service integration, meaning that all services are delivered directly by the OSS. In the alternative model, the OSS model serves as a referral system, meaning it only manages the overall service interaction by guiding citizens to the appropriate government agency to complete the requested transaction (Fredriksson, 2020). In both alternatives, the main objective of OSS model is to provide a seamless and user-friendly experience for citizens to access public services with maximized efficiency.

The concept of OSS has been adopted and taken up, especially by developed countries, as a method for the enhancement of public service provision and citizen involvement. Advanced ICT infrastructure is an excellent milestone to this realization because it offers the right technology upon which OSS model can be implemented appropriately (Vevreniuk et al. 2021). Nevertheless, the most developing countries in the post-Soviet region have not advanced their public administration structures into digital mechanisms. Besides the difficulties in the execution process and the lack of a well-integrated infrastructure for ICT, digitalization in these nations has not been perfectly affected (Kurmanov, 2020). Consequently, they fail to meet the contemporary needs and expectations of citizens in the digital era. Most developing post-Soviet nations are not modernized in public administration since they did not use digital mechanisms to tailor government services most fully (Karpenko et al. 2023).

The OSS model is applicable due to the model's applicability in different environments. As an illustration, Bekkers and Zouridis (1999) offer a study into the integration of ICTs into the Dutch public administration that concentrated on creating one-stop shops. Such one-stop shops aim to

make service delivery easier by incorporating a variety of services under one access point, hence making them much more efficient and accessible to citizens. The Dutch Student Loans Agency is a classic one-stop shop model, as students can interact with the agency through conventional paper forms, smartcards, or the Internet. This approach not only standardizes the process of service delivery but is also flexible enough to meet heterogeneous citizen requirements by offering various communication channels (Bekkers & Zouridis, 1999). Compared with this, Christensen and Laegreid's (2011) description of a One-Stop Shop model for local partnerships aims at integrating control and formalization with flexibility and variety during the reforms of the Norwegian welfare administration. It was also compulsory that every municipality established a co-located welfare and labor office where services, at the very least, had to include a minimum service portfolio (Christensen & Lægreid, 2011). This model of leadership structure for municipalities made it possible for them to have flexibility in their choices while at the same time maintaining standardization in how services are provided, enabling an increased range of those services. Each municipality could implement it within local needs.

Some believe OSS has taken a prominent place in public administration since it is seen as a tool to bring convenience in service delivery and, therefore, enhances the citizen experience. The research work of Lowndes et. al. (2001) brings to light the impacts of OSS on improved access to services and increased citizen participation. They observe that the one-stop model is dubbed popular because it provides quick solutions to various problems and guarantees local access to a broad scope of services. The OSS model is convenient for the time-pressed. It proves to be highly valuable for the ones leading a hectic lifestyle due to extended operating hours. As one of the interviewees mentioned, as cited in Lowndes et al. (2001): *"You require a location that is accessible throughout the day, where you can drop by and express your viewpoint"* This reflects a broader need for more

flexible and responsive public services designed to deliver against the diverse requirements of the community. On the other hand, the objective of the OSS model is to reduce the distance between bureaucracy and citizens by offering a solitary point of contact for a variety of services. This will streamline processes and improve the efficacy and effectiveness of services. Thus, the OSS model aims to ensure government accountability and responsiveness, and, at the same time, to provide an easy and fast means of access to services by citizens (Vashakidze, 2014).

As Rehimli (2023) indicates, in the context of public administration reforms in Azerbaijan, the OSS model is depicted in several examples, such as the ASAN service centers, that are arranged in such a way as to bring many mechanisms of many types of public service delivery under one accessible roof. In this regard, the model is aimed at enhancing service efficiency, transparency, and citizen satisfaction by reducing bureaucratic obstacles, and streamlining the service delivery processes. According to Sadik-Zada et al. (2022), the OSS model under the e-government framework reduces people's interaction with potentially corrupt officials and opportunities for petty corruption. The idea of operationalizing an OSS model about public administration through the ASAN service centers in Azerbaijan underlines what promise digital innovations can have, where service delivery is effective, transparent, and accountable.

The OSS model is conceived and designed to be single, comprehensive, and integrated into an operational platform that meets real-life technological challenges and bridges the gap between existing test beds that are either too specialized or not large enough in scope to yield relevant end-user input for new technologies. Despite the solutions suggested, the OSS model continues to face recurrent obstacles in its execution. Mavromatis et al. (2024) go on to state that constant engagement with local communities and stakeholders is necessary to prevent major operational setbacks from issues relating to regulation and compliance. Moreover, the complexity of the technical aspect and

the user interface has been a struggle to balance, especially when ministering to a diverse audience with various levels of technical ability (Mavromatis et al., 2024).

Furthermore, while reflecting on the inferred evolution of one-stop shop concept, we can observe that current e-government stage models focus on integrating forms, however, this evolution implies the transition to the non-stop shop, which takes a step ahead to eliminate those forms. While a one-stop shop aims to align the government services to the citizen needs the no-stop shop steps beyond the conventional understanding by also delivering services without expecting citizen-driven input along with the provision of personalized services (Scholta et al., 2019).

2.4 Public Values Associated with the OSS Model

Critical functions associated with OSS model for Public Administration include increasing collaboration and coordination among government agencies and, at the same time, increasing the overall quality of public service delivery (Scholta et al., 2019). The prime function of OSS model from a joined-up governance perspective is centralizing service delivery. By bringing together various arms of government at a central point, OSS model maximize access to services since citizens can access as many government services as possible under one roof. In this respect, as much as these different arms of government collaborate, it is important the eliminate bureaucracy, corruption, and governance inefficiencies in service delivery (Grossman et al. 2017). On the other hand, centralization of services also reduces paperwork and redundancy of service transactions while reducing time for service transactions for each citizen by shorter periods (Millard, 2023). Aligned with the above accentuated, it is worth highlighting the once-only principle (OOP) concept in the e-government context which outlines that citizens, organizations, and businesses should provide data to the governmental and administrative authorities only once. This principle was emphasized as one of the key facilitators of the e-Government in Europe declared by the Tallinn Declaration on e-

government held on October 6th, 2017. Nevertheless, this adaptation calls for public administration with a significant degree of trust grounded based shared legal basis (Krimmer et al., 2021).

Operational cost efficiency is another significant value that OSS model adopt. Shared resources and infrastructure in OSS model enable government agencies to reduce redundancy and consumption of resources to serve a citizen (Grossman et al. 2017). The OSS model promoted the interests of the government and the citizens through operational cost-effectiveness. As much as reduced administrative costs benefit the government, minimizing redundancy makes it possible for the citizens to complete their service transactions in a shorter time, hence saving their precious time - that practices citizen-centricity (Kolbenhayerova & Homa, 2022).

User feedback is valued in OSS model for improving quality service delivery. Staff trained in OSS model provide guidance and clear information on how to access services or submit feedback on citizen satisfaction with service delivery (Agostino et al., 2017). OSS model also value the provision of a platform that is *user-friendly*. It is essential, besides this, to utilize OSS model in public services so that citizens, regardless of physical capabilities, location in remote areas, demographic background, or language barriers, have access to them (Knox & Janenova, 2019).

Embedded into OSS model are the values of *transparency and accountability*. Transparency and accountability build public trust in governmental organizations and increase citizen satisfaction levels (Vashakidze, 2014; Pardalis et al. 2019). Embracing these values makes sure that there is the elimination of bureaucracies and corruption while at the same time *increasing responsiveness* to the public (Aoki et al., 2023). *Interoperability* is another characteristic of OSS model, whereby coordination of all the systems of different departments is done, thus making them compatible with each other. This reduces redundancy, easing data sharing and holding the government agencies

accountable to one another. All these together, allow OSS model to deliver consistent, bureaucracy-free, and transparent public service (Millard 2023).

Indeed, in general, there is great emphasis on this one-stop model among the public, and people see these interfaces not just as a convenience but also as something that can facilitate public severe consultation and participation. Lowndes et al. (2001) say that citizens appreciate this kind of service interface not because it is convenient but because it promises entire interaction in the local governance process. The research accentuates that efficient "customer care" in the one-stop shops is a prerequisite for promoting citizen engagement. This model has been seen to be valuable in connecting gaps between citizens and local authorities thus creating a more inclusive and responsive mode of governance (Lowndes et al., 2001, p. 453). The OSS model is also linked with other values like integration of services, effectiveness, and user satisfaction. It attempts to provide several services under one roof coherently, reduce the delivery costs per unit of service delivery by minimizing duplication and repetition, and improve satisfaction among staff and service users with service delivery experience (Howard, 2017). More specified public values associated with the OSS model include speed, ensuring the shortest possible delivery time for both customers and agencies; engagement, delivering services in a citizen-centric manner; responsiveness, implementing mechanisms to address variations in service levels and drive necessary changes; value, demonstrating cost-effectiveness and delivering value driven by customer outcomes rather than agency processes; and integration, seamlessly integrating services with a no "wrong door" policy for citizens. These values are crucial for the successful implementation and operation of OSS model, particularly in transition countries where administrative efficiency and user satisfaction are critical (Gashi & Krasniqi, 2019).

Having a glance at the context of Azerbaijan, the public values associated with the OSS model include increased transparency, efficiency, accessibility, and citizen satisfaction. The ASAN service centers, for instance, have significantly improved the quality of public services and facilitated easier access to government services for citizens. These centers have fostered a more positive relationship between the government and the public by ensuring that services are delivered efficiently and transparently (Sadik-Zada et al., 2022; Rehimli, 2023).

2.5 Global Overview on Implementation Challenges of the OSS Model

Worldwide, governments have outdated government ICT infrastructure, which impairs the realization of necessary digital enhancements for OSS model (Ribeiro et al., 2019). Therefore, based on this assumption, an effort to retrofit modern One-stop shop infrastructure with out-of-date government IT systems could be *technically infeasible*, and thereby subvert the dependability and efficiency of the OSS (Grossman et al., 2017). This OSS framework indicates the smooth exchange of data and interoperability across the other government systems, thus that's a major problem (Profiroiu et al., 2023). Secondly, *legal clarity* goes much to attain the intended, successful OSS model. Good legislation will guide services' interoperation, data sharing, and interoperability (Kolbenhayerova & Homa, 2022). Without any legislative framework, the regulatory obstacles would be difficult to deal with, and the consolidation of government agencies may not achieve the desired goal (Fredriksson, 2020). In addition, *incoherent implementation strategies* will most probably lead to skepticism and confusion regarding government agencies as well as staff (Grossman et al. 2017). This would, in turn, give rise to resistance and uncertainty towards adopting systems based on OSS. Hence, a clear roadmap and governance structure are central to effective transition management and the minimization of organizational resistance (Gashi & Krasniqi, 2019). Common issues include the *trust of virtual citizens and citizens' ability* to adapt to digital services.

For example, as argued by Xin et al. (2022) the use of virtual open-source software models is believed to raise some questions regarding data privacy and cybersecurity. Weak ICT infrastructure and poor OSS platforms make citizens reluctant to share information online about themselves, as they may fear unauthorized access and cybersecurity threats. Establishing public trust in OSS platforms is vital for triggering citizen participation. *The existence of dispersed government units* is another significant hindrance. Organizational change and collaboration promotion must be established as a critical ingredient to harmonize the agency's independent operation (Howard, 2017). OSS model must address fragmentation for seamless service delivery and efficiency (Grossman et al., 2017). On the other extreme, duplicated and *overlapped services* provided by multiple government departments can confuse and lead to inefficiency. If service overlaps are not appropriately managed during service consolidation, it may bring redundant requirements and duplication of work, thus disrupting the user experience (Fredriksson, 2020). Protecting sensitive information from cyber-attacks and *unauthorized access* is also an essential aspect of the corresponding environment (Pardalis et al., 2019). Cybersecurity concerns involve identity theft, scams, and unauthorized access that entail significantly high risks. To avoid these risks and safeguard public confidence, solid and resilient infrastructure and proactive action will be necessary (Ribeiro, 2019). In many post-Soviet developing countries, the *lack of digital literacy* and skills among human resources may represent the most severe problem. Training and professional development programs deliver government employees the skills needed to be able to work effectively on digital platforms while addressing technological issues if necessary (Ribeiro, 2019). Nonetheless, there are substantial implementation impediments to an OSS model, such as *organizational fragmentation*, *resistance to change within bureaucracies*, *ensuring interoperability and integration* of varied functions and services of the government, managing the complexities of

ICT implementation and usage, and diversity in needs and expectations of different user groups (Vashakidze, 2014). Howard (2017) expands on it further by accentuating the existence of organizational mandates taking a significant place, along with the allocation of resources, leading to turf issues, which create bureaucratic resistance and inter-agency rivalries. Cultural issues- such as developing vertical or silo mentalities—frustrate efforts to make the very shared values that are deemed necessary for integrated service delivery. Resource-related problems may mainly occur when projects have high initial costs and low ongoing funding. Sometimes, it is even challenging to prepare staff with appropriate skills and training to deliver the demanded integrated services. To highlight most faced implementation barriers hindering OSS model success in the context of the post-Soviet countries are bureaucratic resistance, the need for significant technological infrastructure, and the coordination among various government agencies. Moreover, there are severe issues with the centralization of state functions and integration of innovative development within public administration. Overcoming these challenges depends on collective efforts to streamline processes and encourage inter-agency cooperation (Sadik-Zada et al., 2022; Rehimli, 2023; Potter & Favour, 2024). In the next sub-section, we continue by further expanding on the case of ASAN service in Azerbaijan.

2.6 OSS Model Implementation and Challenges in Developing Post-Soviet Countries

Having a short glance at the facts and figures (see table 1) reflecting OSS implementation advancements we may observe the following highlights through post-Soviet countries. Kazakhstan established Public Service Centers (PSCs) in 2005, expanding to over 350 locations despite initial resistance, to modernize its public administration and improve service delivery (Janenova & Kim, 2016; ACSH, 2017). Georgia has successfully implemented OSS model through Public Service Halls (PSHs) and Community Centers, offering over 450 services, and reducing corruption,

bureaucratic barriers, and service costs (Gilauri et al., 2021). Armenia initiated a limited OSS system in 2011 to streamline business registration, reducing service delivery time by two weeks, but has not expanded the OSS model to its broader public administration (International Finance Corporation, 2011). Tajikistan implemented a limited OSS system in 2020 to streamline export-import and transit procedures, enhancing efficiency and transparency but not extending to other public services (Asia Plus News Article, 2020). Ukraine established a nationwide OSS system known as Public Service Centers (PSCs), offering over 450 services daily to more than 2000 citizens, supplemented by the online government portal "Diia," although rural areas face access challenges due to unreliable internet (IDLO International, 2022; Open Government Partnership, 2022; European Commission, 2023). Moldova began testing OSS through pilot projects in 2022, with limited services in two cities, aiming for a nationwide system (UNDP, 2023). Hence, developing post-Soviet countries have inherited their public administration practices from the former Soviet Union, which was highly bureaucratic and valued organizational stability. Such a governance model is outdated in today's digital world. However, the implementation of digital solutions in public administration also requires significant financial investment. Especially, to accommodate the needs of OSS model, advancing technological infrastructure, training digital literature human resources, and building institutional capacity to address fragmentation, interoperability, and governmental inefficiency challenges- require substantial investments (Karpenko et al., 2023). Therefore, most developing post-Soviet countries may struggle with limited financial resources while transitioning to digital governance. As developing countries, they may also have other conflicting development goals, which can reduce the importance of modernizing public administration. Besides having a limited budget there can be other critical challenges (Baimenov & Liverakos, 2022) such as corruption, bureaucracy, weak ICT infrastructure,

governance inefficiencies, and digitally illiterate government employees and population, which can be barriers to the implementation of OSS model. Consequently, it is crucial to study the challenges and understand the gaps in the existing governance systems of the developing post-Soviet countries, where public administration needs to be modernized, and the implementation of OSS model can facilitate this process. However, academic research available on OSS model in developing post-Soviet countries remains opaque.

Table 1. OSS in developing Post-Soviet Countries

Country	Year of launch	OSS System	Key features and achievements
Azerbaijan	2012	ASAN Service	• Consolidated over 400 public services • 27 ASAN Service centers in major cities • 99.5% citizen satisfaction rate • Minimized corruption and bureaucracy *(World Bank Group 2017; ASAN Service Index 2024)*
Armenia	2011	Unified Office of Public Services	• Streamlined business registration process • Reduced service delivery duration by approximately two weeks *(International Finance Corporation, 2011)*
Georgia	2011	Public Service Halls	• Consolidated over 450 public services • PSHs in major cities and towns • Community Centers in rural areas • Largest PSH in Tbilisi offers up to 500 services • Minimized corruption and bureaucratic barriers • Reduced cost of accessing public services *(Gilauri et al. 2021)*

Uzbekistan	2013	Single Portal of Interactive State Services (my.gov.uz)	• Simplification of the signature processes with the digital signature • Mobile application for sending of appeals to the public authorities • 50 services introduced in 2020 *(Avazov & Lee, 2022)*
Kyrgyzstan	2013	Single Window System	• Amelioration and simplification of the trade processes • Adoption of new technologies within trade infrastructure • Integration with international trade systems *(Lee & Mah, 2020)*
Kazakhstan	2005	Government for Citizens	• Embraced OSS concept to modernize public administration • Expanded to over 350 locations • Improved service delivery *(World Bank Group, 2017)*
Moldova	2022	e-Government Center	• Two OSS centers in Cahul and Ungheni • Limited range of services to test the practicality • Interested in nationwide OSS system implementation *(UNDP, 2023)*
Tajikistan	2020	Single Window System	• Streamlined export-import and transit procedures • Online registration and electronic document submission • Reduced bureaucracy and enhanced efficiency as well as transparency *(Asia Plus News Article 2020; European Commission 2023)*
Ukraine	2020	Administrative Service Centers	• Nationwide OSS system ASCs offer more than 450 service • More than 2000 citizens benefit daily • Established online government portal "Diia" *(IDLO International 2022; Open Government Partnership 2022)*

Regarding challenges of the countries in OSS implementation, we can face both similarities and differences while having a glance at the above-presented post-Soviet countries, including Azerbaijan. Testing pilot projects and lack of implementation place for the OSS model in the Case of Moldova (UNDP, 2023), and Armenia (International Finance Corporation, 2011) being limited to the streamlining of business registration services whereas the OSS model is not fully adopted yet in the public administration are the government challenges in the OSS direction. In the case of Kazakhstan, bureaucracy resistance from government agencies is emphasized as one of the crucial impediments, and hence like the nuance accentuated in the Azerbaijani case as well. Alongside, Azerbaijan still faces major challenges from the umbrella of technological, organizational, and environmental aspects which are highlighted through scanned literature and empirical findings. While looking at the scenario of Georgia, is slightly similar, but it particularly highlights the essence of bureaucratic resistance and how the government has been trying to minimize it (Gilauri et al. 2021). In the context of the Tajikistan situation (European Commission 2023), export-import and transit procedures are still limited within digitalization advancements, and yet the system does not include all the public administration services yet. The case of Kyrgyzstan (Lee & Mah, 2020) also comes up with resistance to change, legal barriers to the adoption of the systems, and skill gaps from a human resource perspective. The low level of citizen engagement is one of the essential highlights of the Uzbekistan government (Avazov & Lee, 2022), and that again can prove the age difference rationale behind it. Also, limited access in rural areas due to internet connection shortages is another crucial impediment as pointed out in the case of Ukraine (IDLO International 2022; Open Government Partnership 2022).

Finally, Azerbaijan adopted a comprehensive OSS system in its public administration by consolidating over 400 public services under the ASAN Service in 2012 (Jafarli, 2022). According

to the World Bank Group (2017), Azerbaijan has minimized corruption and bureaucracy in its public administration by implementing a comprehensive OSS system. Currently, 27 ASAN Service centers are operating in major cities of Azerbaijan, and the citizen satisfaction rate is 99.5% (ASAN Service Index, 2024). The following sub-chapter discusses the existing implementation challenges faced in the application and integration of the OSS model in general.

2.7 ASAN Service in Azerbaijan

Azerbaijan is among the post-Soviet developing countries with advanced case studies as far as well-established OSS model are concerned and are supported by recent efforts in digitalization. To understand the digitalization reforms in the adoption of an OSS system in Azerbaijan, it is important to examine the brief history of administration in Azerbaijan, digitalization history and infrastructure, recent digital reforms, and the OSS system, which are outlined as follow:

2.7.1 Brief History of Recent Transformation in Public Service Delivery

Azerbaijan first acquired modern-state status in 1918 when it declared independence from the Russian Empire and formed the Azerbaijan Democratic Republic, the first secular parliamentary democracy among Muslim nations (Ministry of Foreign Affairs of the Republic of Azerbaijan n.a.). However, this independence was short-lived, as Azerbaijan was incorporated into the Soviet Union in 1920, where it remained until the collapse of the Union in 1991. During this period, Azerbaijan was governed by the centralized and bureaucratic practices of the Soviet Union (Ismayilov, 2017).

Post-independence in 1991, Azerbaijan faced numerous political, economic, and administrative challenges, with the bureaucratic practices inherited from the Soviet Union proving inadequate for meeting the evolving needs of society. Continuous reforms aimed at digitalization created the foundation for establishing an OSS system (Garashova 2018).

In 2003, at the World Summit held in Geneva, President Ilham Aliyev announced Azerbaijan's commitment to digitalization and innovative reforms in governance. The importance given to the ICT sector led to the implementation of the first e-government portal in 2005 (Garashova 2018). In 2010, a new e-government program was approved, resulting in the launch of the "e-Azerbaijan" program in 2012. This initiative was the first phase of implementing an OSS system in Azerbaijan, currently operating as an online portal offering over 400 services by 40 government agencies (Innovation and Digital Development Agency n.a.). This digitalization minimized bureaucratic barriers, enhanced service accessibility, and streamlined information exchange between the government and citizens.The formation of e-government in Azerbaijan is based on international practices, focused on the "single window," and complies with the current legislation of the Republic of Azerbaijan (Innovation and Digital Development Agency n.a.).

2.7.2 OSS System in Azerbaijan: ASAN Service

Since 2012, Azerbaijan has reformed public service delivery by adopting innovative approaches and enacting laws on civil service, anti-corruption, ICT, and e-government (Jafarli, 2022). The creation of the State Agency for Public Service and Social Innovations under the President of the Republic of Azerbaijan (SAPSSI) in 2012 was a key step. The SAPSSI aimed to enhance public service delivery, digitalization, and innovations in public administration (SAPSSI n.a.). The SAPSSI launched an OSS system known as "ASAN Service" in 2013, which stands for Azerbaijan Service and Assessment Network. The SAPSSI manages the ASAN Service centers, coordinates state agency functions, assesses performance, and integrates state agency databases (Jafarli 2022).

The ASAN Service provides a wide range of public services, including banking, insurance, legal support, and translation, through public-private partnerships. There are currently 30 ASAN Service

centers across Azerbaijan, with more than 70 million transactions completed to date (ASAN Service, n.a.).

The implementation and operations of ASAN Service are supported by various legal frameworks, including the Constitution of Azerbaijan, presidential decrees, international agreements, and agency regulations (Garashova, 2018). ASAN Service centers have the right to improve service quality based on citizen feedback, expand innovative technologies, study international practices, and implement other legally defined activities (Azerbaijan Newspaper, 2016).

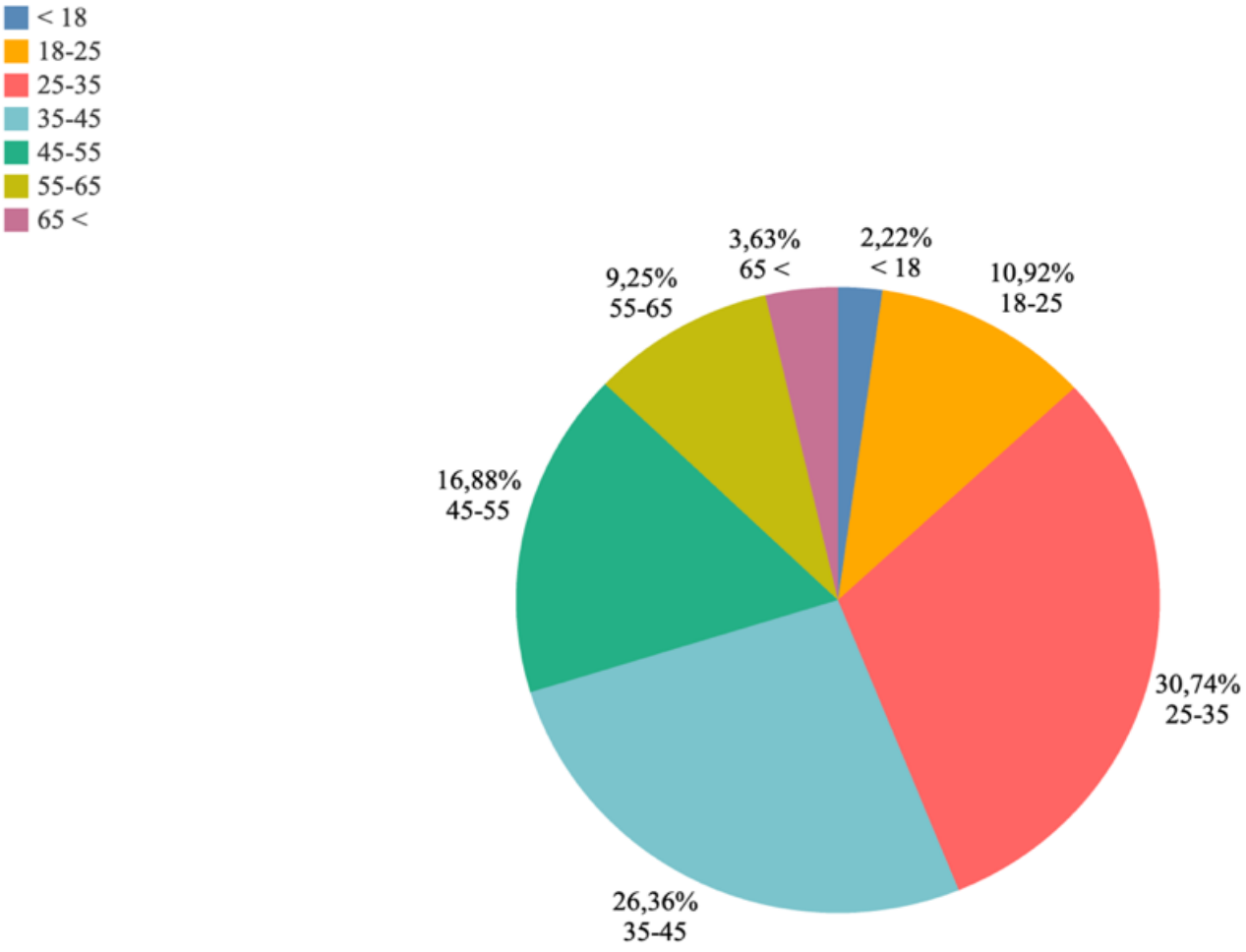
ASAN Service aims to reform public administration by providing diverse government services at a single location, focusing on transparency, anti-corruption, innovation, simplified service delivery, reduced bureaucracy, enhanced e-government, and improved relationships between government entities and citizens (Azerbaijan Newspaper, 2016). The objectives include promoting cost-effectiveness, high ethical service standards, professional service delivery, public trust in government, transparency, elimination of corruption, adoption of e-government initiatives, interoperability, accountability, efficiency, and improved service quality (Garashova, 2018).

Initially, 5 ASAN Service centers were opened in 2013, consolidating 9 government agencies (Jafarli, 2022), including the Ministry of Justice, Ministry of Internal Affairs, Ministry of Taxes, State Committee for Property Issues, State Customs Committee, State Migration Services, State Land and Mapping Committee, State Social Protection Fund, and National Archives Office. Key services offered included notarial services, driver's license replacement, ID and passport issuance, property and tax documents, migration documents, labor pensions, land cadaster, and conviction certificates (Garashova, 2018).

ASAN Service centers also introduced digitalized solutions such as electronic queue systems, complaint booths, utility payment terminals, and a call center called "108" for service information,

complaints, and feedback (ASAN Service n.a). The “ASAN signature” service introduced in 2013 allows citizens to verify their digital identity and sign digital documents using a physical SIM-card on mobile devices (ASAN Service n.a.). In 2015, the “ASAN Pay” system was launched to facilitate electronic payments for administrative fines and court decisions, offering online transactions and detailed information about penalties and violations. Citizens can appeal fines through the ASAN Pay portal (Garashova 2018). Also in 2015, ASAN Radio was launched to educate citizens about social and legal laws in an engaging way (ASAN Radio n.a.).

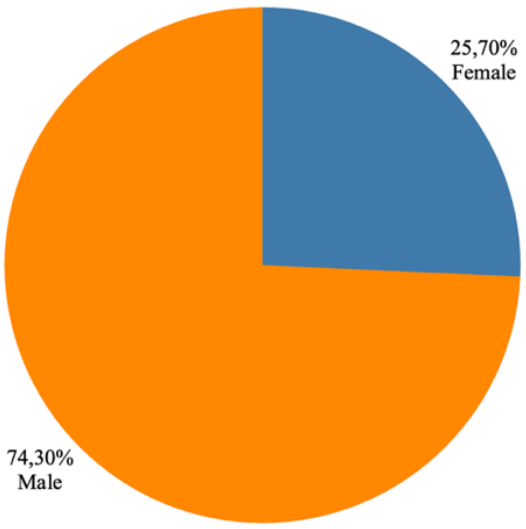
Figure 1. Age distribution of ASAN Service (ASAN Service,2024)



According to ASAN internal report (ASAN Service, 2024), as represented in the figure above, the age distribution of ASAN Service users is primarily composed of individuals in the 25-35 years age group (31%), followed by those aged 35-45 years (26%). The smallest user groups are those under 18 years and those aged 65 and above, both at 4%. This indicates that the services are predominantly utilized by the working-age population.

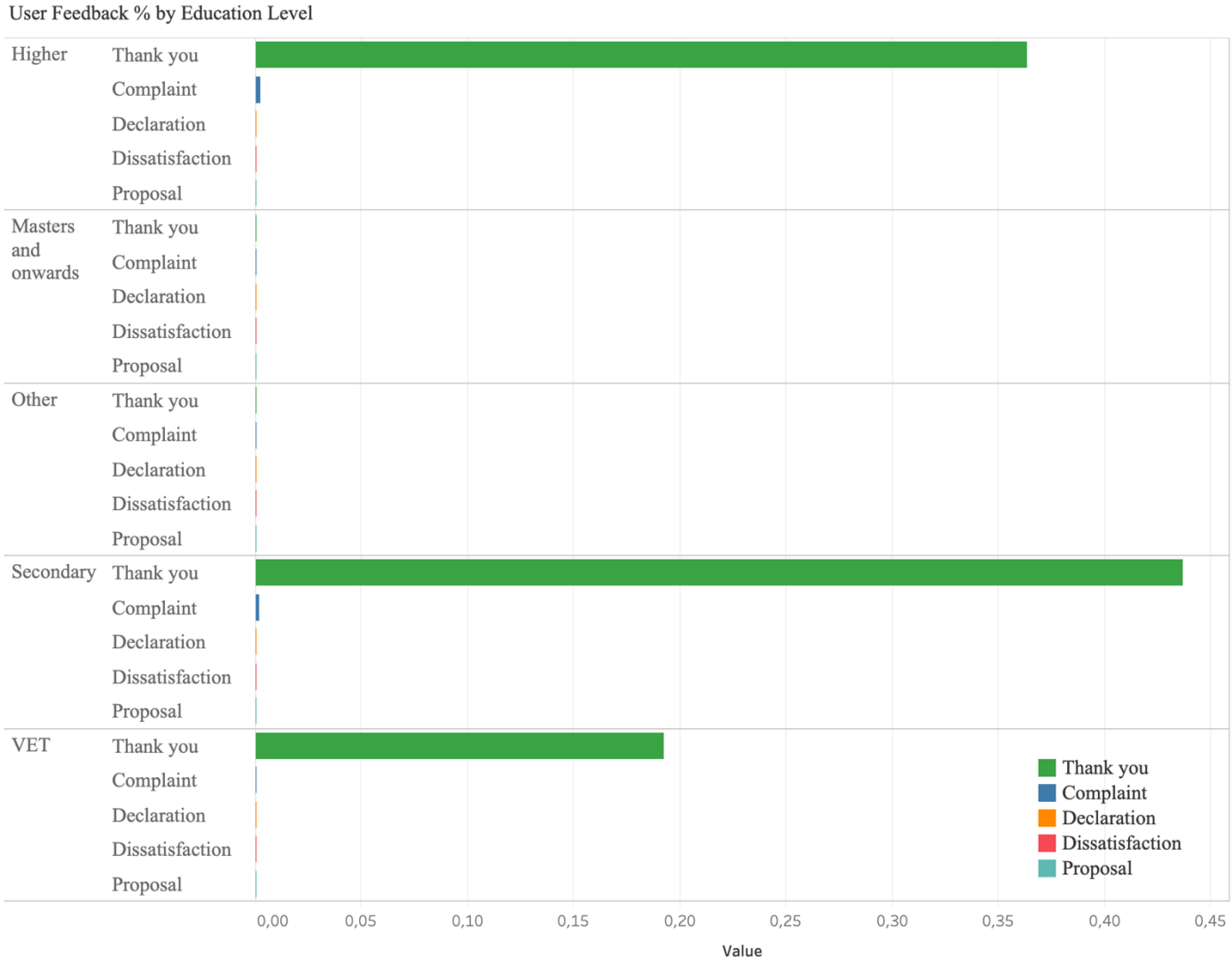
The figure 2 below also demonstrates the gender distribution amongst the ASAN users (ASAN Service, 2024):

Figure 2. Gender distribution



In terms of user feedback categorized by education level (see figure 3) the feedback reveals that the most significant feedback is in the form of thanks, with the highest percentage from users with secondary education (43.70%) and high school education (36.38%). Complaints and suggestions are relatively minimal, indicating a high level of satisfaction with the services provided by ASAN.

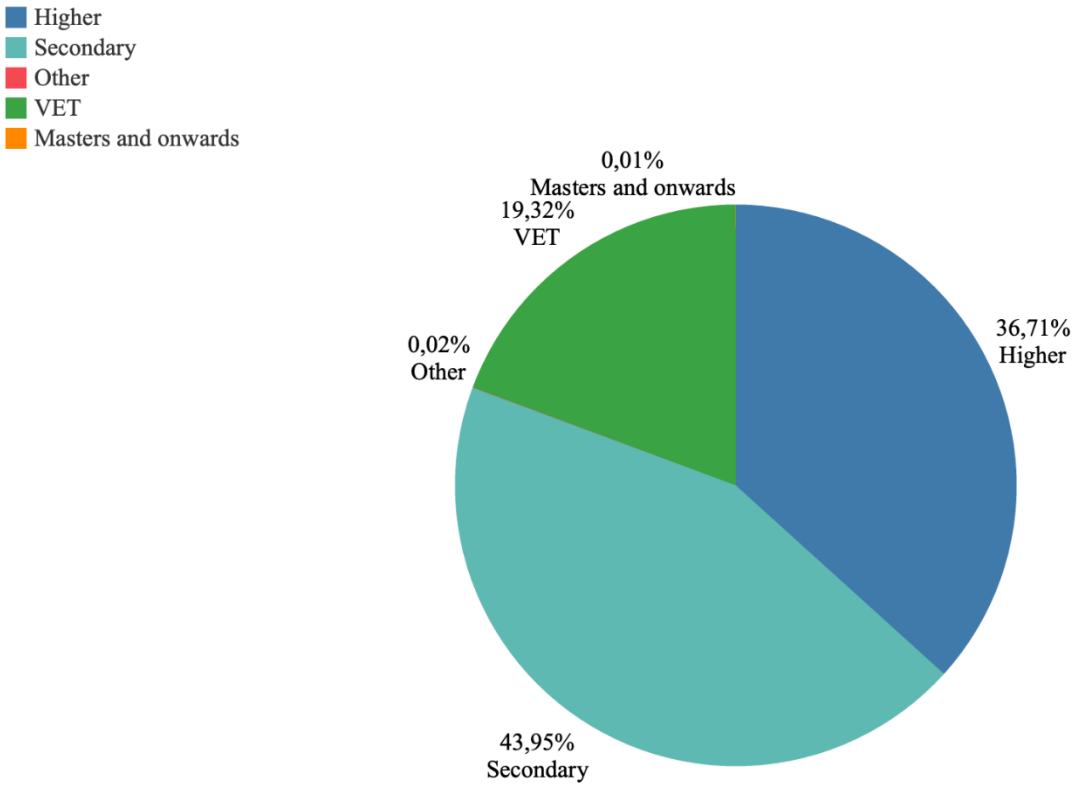
Figure 3. ASAN Service Data on Citizen Perceptions (ASAN Service, 2024)



Besides having displayed the user feedback percentage by the educational level, it would also be interesting to look at the percentage of the education level standing for those feedback points.

The chart below represents these figures:

Figure 4.Feedback by the Educational Level (ASAN Service, 2024)



Currently, the ASAN Service Index offers an online platform to enable citizens to independently rate the delivery of public services electronically. The statistics gained from the ASAN Service Index can be found in the ***Table 2.***

Table 2. ASAN Service Index 2024 statistics

No. of service providers	52
No. of services	504
No. of citizen ratings	940434
No. of services rated by citizens	930690

(ASAN Service, 2024)

As of 2024, ASAN Service has completed over 74 million transactions (see table 3), serving more than 8.9 million citizens across 30 centers (ASAN Service, 2024). The most requested services include ID cards (26%), notarial services (14%), passports (9%), medical services (5%), tax registration and ASAN signature (4%), migration services (4%), property registration (4%), bank services (4%), and translation services (3%).

Table 3. Number of ASAN Service centers completed transactions, and citizen satisfaction rate by year

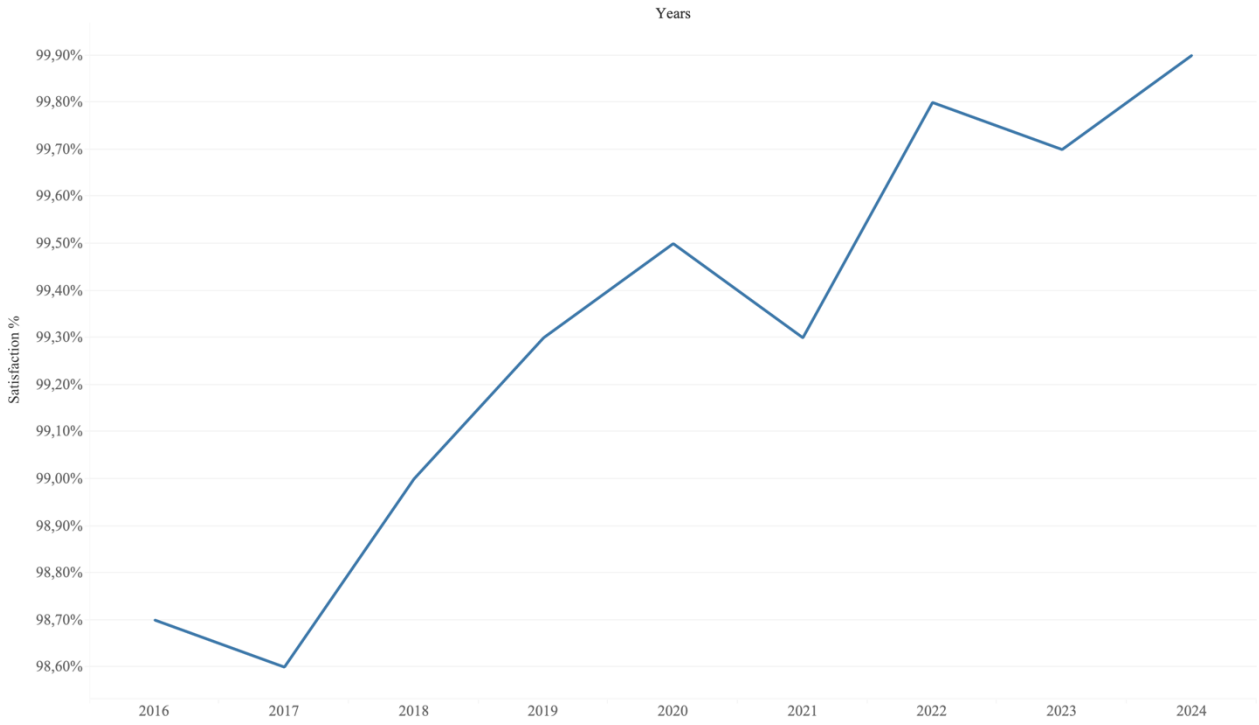
Year	Number of Centers	Number of Completed Transactions	Citizen Satisfaction Rate
2013	5	918,026	-
2014	7	2,665,226	-
2015	9	3,799,676	-
2016	11	5,506,349	98.70%
2017	14	5,903,454	98.60%
2018	17	6,795,019	99%
2019	18	9,025,424	99.30%
2020	22	5,741,917	99.50%
2021	24	8,029,745	99.30%
2022	27	9,882,641	99.80%

2023	29	11,471,197	99.70%
2024	30	4,358,401	99.90%

(ASAN Service , 2024)

Also, having a glance at the pattern of citizen satisfaction, we can observe a growing line starting from 2017, with a slight drop in 2021, which could have been perhaps influenced by the pandemic conditions, even though digitalization was taking over by then, and then followed up with further growth up until nowadays. Thus, we may infer enhanced citizen satisfaction within last years as in the chart below:

Figure 5. Citizen satisfaction % by years (ASAN Service, 2024)



The following sub-chapter expands further on the implementation challenges of ASAN service.

2.7.3 Overview of Challenges in the Implementation of ASAN Service

Azerbaijan has faced numerous challenges both reactive and proactive while implementing the OSS model in public administration. Those challenges are outlined as follows in a more detailed way.

Technological & Security Challenges

Azerbaijan dealt with the problem of outdated ICT infrastructure, not suitable for the application of a single window mechanism for integration of heterogeneous government IT systems. This was remedied by first improving IT infrastructures and embracing common data standards to enable easy exchange of data and interoperability (Ribeiro et al. 2019; Pardalis et al. 2019; Sadik-Zada et al., 2022; Rehimli, 2023). In the sensitive data protection scheme and mitigation of risks arising from cybersecurity perspective, substantial investment was made in ICT infrastructure via encryption protocols, multi-factor authentication, and real-time monitoring for cybersecurity threats (Pardalis et al. 2018; Kolbenhayerova & Homa, 2022). Nevertheless, the challenges still remain and call for more discussion and feasible solutions.

Legal & Social Challenges

The lack of a harmonized legal framework at first challenged the system integration. Azerbaijan addressed this issue by creating a very complex structure of laws and regulations that were meant to ease OSS implementation, with due uniformity and consistency in the services being provided (Grossman et al. 2017; Sadik-Zada et al., 2022; Rehimli, 2023). From social perspective, the citizen trust in digital services also needs to be developed. Public education campaigns were generated to

portray the benefits and security of digital services. User-friendly designs of platforms enabled higher engagement and satisfaction levels of citizens (Li & Xue, 2021; Sadik-Zada et al., 2022; Rehimli, 2023).

Organizational & Human Resource challenges

There is resistance from government organizations to adopting OSS model because of employee concerns about job loss. These issues were mitigated through clear implementation strategies, stakeholder engagement, and detailed roadmaps, which developed a culture of collaboration (Gashi and Krasniqi 2019; Sadik-Zada et al., 2022). The fact that these employees were not digitally literate and tech-savvy was countered by targeting investment in training programs and professional development initiatives to boost the digital capabilities of the government employees themselves (Roche et al. 2021). Inferring from the challenges, we can imply that despite the country serving as an inspiration for other developing post-Soviet countries in terms of the change in the way public services are being delivered, it still must battle the misuse of big data, resistance to change by bureaucracy, and informal norms characteristic of most bureaucracies in developing and transition economies. This is significant evidence of how complicated it is to transform traditional public administration systems into digitalized, more accountable, and effective versions.

2.8 Theoretical Framework

One of the suitable ways in which the implementation of One-Stop Shop (OSS) models in public service delivery could be better understood is through the application of the Technology, Organization, and Environment (TOE) framework. Study results indicate that successful implementation of an integrated One-Stop Shop (OSS) is only feasible where a strategy is put in

place that amalgamates technological evolutions, organizational amendments, and active citizen participation. The effectiveness of the OSS model needs robust ICT infrastructure and interoperability, common data standards, and supportive IT investments (Ribeiro et al., 2019; Pardalis et al., 2019; Profiroiu et al., 2023). From an organizational perspective, the reduction of fragmentation and service overlap will necessitate simplification of service delivery, fostering inter-agency collaboration, and promoting innovation (Fredriksson, 2020; Talal, 2023). Enough resources, training, and defined strategies are also vital (Gashi & Krasniqi, 2019; Kolbenhayerova & Homa, 2022). Suitable legislation and public confidence require a single set of legal enforcement and public awareness (Grossman et al., 2017; Ribeiro, 2019). Such factors and political will, supplemented with regular controls, help in the implementation and longevity of the OSS (Vashakidze, 2014; Rehimli, 2023). In this respect, the Technology-Organization-Environment (TOE) framework by Tornatzky and Fleischer (1990) is highly appropriate for considering the case of OSS implementation within public administration since this model considers the technological organizational, and environmental determinants of innovation to a very significant extent. The TOE framework provides a comprehensive model of organizational adoption and implementation of technological innovation by explaining three contextual factors: *technological, organizational, and environmental factors*. This framework is particularly applicable when analyzing the One Stop Shop implementation in the public administration area. We get familiar closer with a framework in the next sub-chapter.

2.8.1 Technological, Organizational, and Environmental Context (TOE)

Technological

Technological factors are very crucial in the implementation and success of OSS in the delivery of public services. ICT integration becomes necessary for the simplification of processes, improved

delivery of services, and better access by citizens. In fact, according to Layne and Lee (2001), e-government falls under a four-stage growth model where it starts as a simple means of information dissemination to full integration of government services. This integration is like the backbone, which forms the foundation for ensuring a quick process in information transactions, real-time communication, and remote access to services that underpin OSS functionality. In addition, using the latest modern ICT in OSS could provide the avenue for increased efficiency and transparency in dispensing public services (Bellamy & Taylor, 1998). For instance, the proliferation of online portals, digital databases, and automatic workflow helps decrease the bureaucratic cost burden on the citizens and increases the responsiveness of public agencies. This technological dimension is essential in dealing with the fragmentation and inefficiencies that OSS models hope to rectify (Taylor et al., 1996). The technologies currently used in the organization, as well as those available in the marketplace, are not yet absorbed. The context limits the range and speed of technology change that an organizationa can implement (Baker, 2012). Generally, technological innovations are classified into three types: incremental, synthetic, and discontinuous. Incremental innovation introduces new characteristics or new versions of already-existing technologies; it is the least risky and disruptive type. Synthetic innovation consists of combining existing technologies into a new use. Discontinuous innovations, also known as radical innovations, are significant departures from already existing technologies or processes. Their adoption often calls for urgent and decisive decisions (Baker, 2012). Organizations must also consider whether the technologies are competence-enhancing, building on existing expertise, or competence-destroying, making current competencies obsolete. The adoption and implementation of ICTs in increasing transparency and reducing bureaucratic discretion are central technological factors of e-government and OSS models (Sadik-Zada et al., 2022). These factors improve the efficacy and effectiveness of service delivery,

thus making government processes easier and more transparent. However, technological barriers such as technology complexity, lack of interoperability, low training on ICT, and resistance to technological change could bring huge challenges in the implementation of the OSS model.

Organizational

Organizational factors envelop the structural and cultural dimensions within public institutions that facilitate adopting and implementing OSS models. A redesign within organizations is inevitable with the transition from traditional public administration to OSS because it usually needs more adequate organizational designs that would, in turn, help to support integration wherever services were once fragmented, which this reallocation commonly implies (Christensen & Lægreid, 2010). This relocation involves changes within work routines, leadership structures, and inter-departmental coordination. Many structural and cultural elements live in hybridity and complexity in modern public administration. Implementation of OSS should balance the principles laid by NPM, which focus on autonomy and decentralization, with post-NPM trends emphasizing more control and coordination (Christensen & Lægreid, 2007). Furthermore, the organizational context encompasses the characteristics and resources of the firm, including linking structures between employees, intra-firm communication processes, firm size, and slack resources. Mechanisms that promote innovation, such as informal linking agents (e.g., product champions and boundary spanners) and cross-functional teams, are crucial. The structure of an organization also plays a significant role; organic and decentralized structures are generally more conducive to the adoption phase, whereas mechanistic structures may better support the implementation phase (Baker, 2012, pp. 233-235). Additionally, communication processes led by top management, which foster an environment supportive of innovation, are vital. Factors like firm size and slack resources, although frequently discussed, do not have a conclusive link to innovation, indicating that more specific organizational

variables need to be considered. Finally, organizational challenges include resistance to change and the need for managerial innovations to support the transition to digital public administration (Sadik-Zada et al., 2022). Organizational facilitators for the implementation of OSS are considered strong leadership, effective inter-agency coordination, comprehensive training and development for staff, and the development of a supportive organizational culture. These may help smooth procedures and create an environment for innovation in service delivery and better service. Problems in this area usually include bureaucratic resistance, lack of managerial innovation, insufficiency of resources, and organizational fragmentation.

Environmental

Environmental factors can be defined as the outside pressures and contextual elements in which OSS implementation occurs for public service delivery. Included in these are such factors as political, social, and economic conditions, together with regulatory frameworks and stakeholder expectations. Public sector reforms, according to Christensen and Lægreid (2010), are often triggered by the need to respond to demands in society, economic challenges, and global trends in governance. In OSS, environmental factors further extend to considerations of equity, access, and citizen participation. Jaeger and Thompson (2003) argue that e-government strategies must address issues of digital literacy and access to avoid exclusion based on an individual's demographic profile. It is, therefore, paramount for OSS models to consider inclusiveness and responsiveness to all citizens, as well as their accessibility across the different social classes and technology literacies. Other environmental factors are the rules and regulations under which public services are provided. Policies and regulations that support the integration of services, data sharing, and inter-agency collaboration would go far in supporting OSS implementation successfully within this environmental context (Bekkers & Zouridis, 1999). Support infrastructure, availability of skilled

labor, and technology service providers are other factors affecting innovation. Innovation is influenced by government regulation, which can create new constraints for innovation or open opportunities for new applications of technologies. A general political and institutional setting- of the quality of institutions and trust in the public- performs a significant role in the successful implementation of e-government systems (Sadik-Zada et al., 2022). A supportive legal framework, sound political commitment, engaged citizens, and favorable socio-economic conditions build a stable and supporting environment for OSS to be taken and maintained. On the other hand, barriers to OSS implementation come from legal and regulatory constraints, socio-political instability, public distrust, and economic challenges.

2.8.2 Justification of the TOE framework application

Several significant factors influence the administrative structure of developing countries of post-Soviet including Azerbaijan. This study takes the case of ASAN Service regarding technology, organization, social, legal, institutional, and history for implementation. It is thus argued that the Technology-Organization-Environment (TOE) and Institutional Theory will be applied as the ground in investigating the principal obstacles that might be encountered during the implementation process of ASAN Service in Azerbaijan.

In this framework, **T** is the technology dimension that looks at the information communication technology (ICT) infrastructure applied in the service; **O** is organizational, which looks at the structure and processes of the organization involved in the service; **E** is the environment, and these assess the legal frameworks and citizen expectations as two of the elements that represent the broad external environment along with the institutional theory. Institutional theory explains that organizational decisions are not based only on well-established goals but also depend on various contextual factors (Scott, 2001). The institutional settings driven by the structures, routines, and

culture include multiple function levels. Thus, this theory also rationalizes the traditional administrative practices and inherited institutional structures of Azerbaijan from the former Soviet Union that provided a starting ground for the development and implementation of the ASAN Service.

This research applies the TOE framework to analyze the challenges and to discuss the feasible solutions in the implementation of ASAN service. Once emphasizing TOE, we do not purely mean technological integration, but also transparency, trust, and citizen participation towards shift to e-government (Bayona & Morales, 2017). For example, with the knowledge of the ICT infrastructure of the ASAN service, one could identify that technological difficulties are associated with integration and cybersecurity issues. A study on the identified structure and processes of the organization presented challenges in human capacity building and interoperability issues. The external environment is also studied, including the legislative framework and citizen expectations, to understand their impact on the adoption and effectiveness of the ASAN Service. Understanding how historical events and administrative structures shaped the development and implementation of an OSS model in Azerbaijan requires the analysis of historical and institutional legacies. This has therefore framed the following study to undertake a systematic literature review and analyze challenges with solutions in association with the implementation of ASAN Service as a nationwide OSS model in Azerbaijan.

TOE can serve as the framework for the analysis of the research findings obtained from the interviews and can facilitate in drawing valuable recommendations for future practice and research both in Azerbaijan and other developing post-Soviet countries.

The following chapter continues by presenting the methodological approach of the research via

emphasizing the research design, philosophy, and data collection means including the interview process, and corresponding analysis of the findings.

3. RESEARCH METHODOLOGY

The methodology chapter outlines the chosen research design, research approach, and data collection means including a detailed overview of the interviewing process and the limitations to be considered for future research.

3.1 Research Design

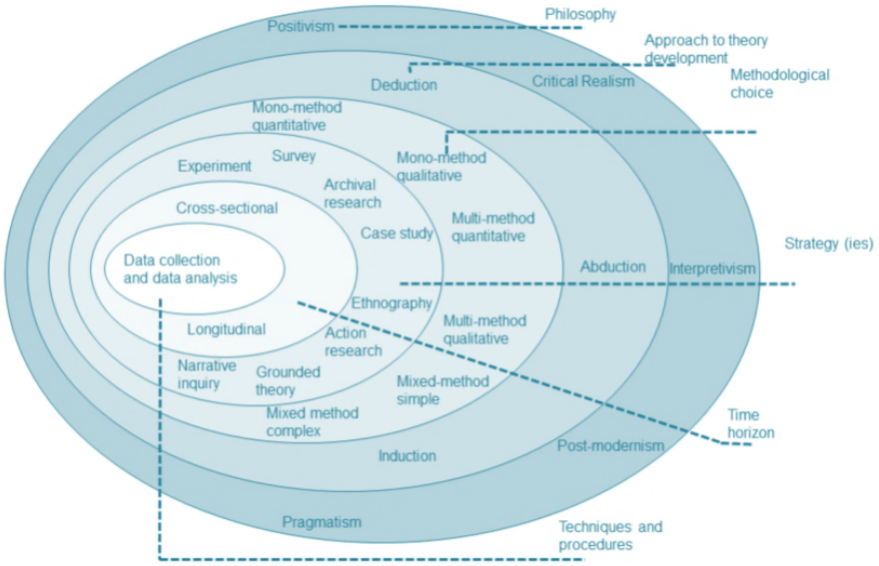
The case study is chosen as the research design to employ this qualitative research study. The qualitative research study is usually applicable to cases focusing on studying the group or individual behavior in an organization (Yin, 2015). This research design type is suitable for live contexts where open-ended insights can help to understand the phenomena (Yin, 2015; Saunders et al., 2019). The researcher collected the data from the ASAN Service employees holding leading positions within different strategic directions. The essential intention behind the interviews was to gather the relevant data to test the existing and chosen theories as well as the concepts revealed via the reviewed literature findings.

3.2 Research Philosophy

Philosophic stances lay within various approaches towards theoretical reasoning. While theories imply the “how” and “why” set of facts relating to each other, the research philosophy helps to underpin the way certain context is viewed from one’s lens (Denzin & Lincoln, 2011). Also, theoretical approaches usually rely on the range of mental sequences to connect the data logic with the theory, and the philosophy of the research facilitates the interpretation of that data logic

(Saunders et al., 2019). According to Saunders et al. (2019) research onion layers, interpretivism is chosen as the research philosophy for this study. The main idea behind interpretivism is focusing on the specific situational context rather than the generalized laws and regulations.

Figure 6. Research Onion



(Saunders et al., 2019)

Hence, interpretivism conveys the actor-played scenario where the roles can be interpreted based on the scenario given. In the case context of ASAN service, this philosophy necessitates comprehending the various leading actors who try to convey the human perception towards the digitalized era, guided by the corresponding questions.

3.3 Research Approach

The deductive approach is chosen for testing the theoretical framework aligned with this study. The vital purpose of the deductive approach is to explain the relationship between the context variables

and the main concept while striving to assess the theory alignment (Hennink, Hutter, & Bailey, 2020).

3.4 Data Collection

For collecting the empirical data, there are various existing tools such as survey, questionnaires, and interviews. The interview data collection was chosen for this study along with the usage of the desk research which was conducted by the usage of different scientific journals, books, reports, and ASAN internal data statistics.

3.5 Sample Selection and Interviewing

Sampling is the initial step before the launch of the interviews. Sampling is required for choosing a suitable number of participants based on certain criteria to reach the prospective findings. The sample for this study stands for 7, including the pilot study, which carries the rationale of the purposive sampling technique. Non-probability purposive sampling type applies in the case when the researcher relies on his/her judgment backed up with conceptual knowledge while looking for the group of people to be interviewed. The semi-structured interview type was applied to the process which gives more room both for the researcher and the participant to ask follow-up questions and to reflect more openly. The sample includes the ASAN Service agency representatives who oversee the strategic targets within the system. Before commencing the field interviews, the pilot interview was conducted as well. The researcher built up the interview questions according to the main tenants of the TOE framework yet also considering their alignment with the sub- research questions. The table summary below provides a concise glance at the sample selection and conducted interview details.

Table 4. Interview Data Summary

Interviewees	Data collection mean	Auido-recording
ASAN actor 1	Online	Yes
ASAN actor 2	Online	Yes
ASAN actor 3	Online	Yes
ASAN actor 4	Online	Yes
ASAN actor 5	Online	Yes
ASAN actor 6	Online	Yes

The researcher conducted the interviews online via Google Meet platform due to the physical distance conditions. Semi-structured interview type was chosen for the interviews. The main essence of the semi-structured type is based on open-ended questions The consent for the interview audio recording was taken from the participants during the conversations. The essential advantage of face-to-face online interviews is that the interviewees' emotions and facial expressions during the interviews are observed more easily, which in turn creates room for a more realistic interpretation of the findings. The study employs the case of Azerbaijan, and the corresponding interview language was Azerbaijani as not all the participants are fluent English speakers.

3.6 Pilot Study

Holding the pilot study is crucial for testing the interview questions and updating them accordingly for the field data interviews. As the initial idea for the interview process was to conduct interviews with various regional ASAN branches, thus the researcher conducted the pilot study with the head of one of the regional ASAN branches. Thus, as the outcome of the pilot study, it turned out to be more apparent that the interview insights that are intended to be obtained must be approached from

more strategic perspectives. However, the pilot findings obtained from the regional office carried more operational essence. Therefore, as the corollary of the pilot study analysis, the researcher decided to approach the central ASAN service agency located in Baku, Azerbaijan to reach insights of more strategic character. Also, considering the human factor integrated into the interview process, we could anticipate that interview questions could not be enough to cover the main essence of the study, and thus the follow-up questions could have been in place, particularly considering the semi-structured interview type employed for the study. Nevertheless, this nuance was considered for the field data collection process when the interviewer aimed to ask more follow-up questions if any of the points were not elaborated enough.

3.7 Data Analysis

In the scope of this qualitative study, the thematic analysis has been chosen as the analytical data approach (Yin, 2018). The main steps in this approach include the transcription of the data, coding the repetitive patterns, and generating the essential themes for further analysis (Yin, 2018; Saunders et al., 2019). The interview results were transcribed and then translated to English since they were conducted in Azerbaijani initially. As a corollary of the thematic analysis, the necessary empirical themes were generated out of the interview insights to be integrated further to the results and discussion of the study.

3.8 Trustworthiness

Trustworthiness is essential for assessing the dependability, transferability, credibility, and confirmability of qualitative research to avoid possible biases (Saunders et al., 2019). For elaborating on it more, we present its each component by reflecting on them through the lens of this research.

Dependability

Dependability is about the data maintenance throughout the research time. Tracking the research-related activities during the study flow including the interview details builds up the dependability. In the context of this study, following the same interview protocol guide including the questions, timing, and ethical consent check stands for the dependability of the research.

Credibility

Credibility stands for the truth of the data gathered and perceived. It is an analogous version of internal validity in quantitative research. To align the credibility of the gathered data, the interviewer relistened to the audio recordings for number of times to ensure the logical alignment between the information delivered and perceived in the right way by the opposite party (Hennink, Hutter, & Bailey, 2020).

Transferability

Transferability implies the applicability of the findings in other contexts. It refers to the generalization in the quantitative research, however, the main difference is that it addresses the interviewee's story by trying to apply a personalized approach rather than looking at it from a broader or generalized perspective. Also, the transferability dimension outlines a detailed context description of it.

Confirmability

This dimension addresses the progress details of the study journey. Thus, to ensure the confirmability of the study, the researcher kept notes on rationalizing the theoretical, conceptual, analytical, and methodological choices throughout the process.

3.9 Ethics of the Research

Research ethics is a highly indispensable part of the qualitative study. Protection of data privacy, obtaining verbal or written informed consent, and respect towards participants are essential steps to be taken during the interviewing process. In the context of this research, the main purpose and the idea of the research were conveyed to the participants in advance by the researcher. No refusals have been faced by the prospective participants during the process. The researcher received permission for audio recording by asking the consent before the start of each interview. Also, the participants were given a chance to ask follow-up questions if the questions or any other details were not clear enough.

3.10 Limitations of Research

Initially, the researcher planned to conduct a mixed-method study including both quantitative and qualitative methods. However, eventually the researcher decided to go for the qualitative method only. The main trigger for that was the pilot study outcome when it turned out that strategic perspectives are needed more, and since the respondents from the strategic positions could not have been enough for the survey participation in terms of answers, therefore the author decided to conduct interviews only to ensure the quality of findings in more efficient way. On the other hand, in terms of sample selection -higher number of interviewees can be considered for future research studies in the same or similar disciplines if given cross-country context or comparative analysis.

4. RESULTS AND DISCUSSION

This chapter provides an overview of the empirical findings while being put in comparative analysis with the literature findings. The relevant analysis and discussion help to comprehend the reality of the theoretical scenario in practice for understanding the extent to which the findings align or do not with the literature. In the context of this study, the findings and discussion cover four earlier introduced objectives in chapter 1. While putting forward the interview findings, the researcher aligns the interview quotes to cross-compare them with the scanned literature. However, the main idea is not only to simply compare the literature and empirical findings but also to interpret the rationale behind those shared insights.

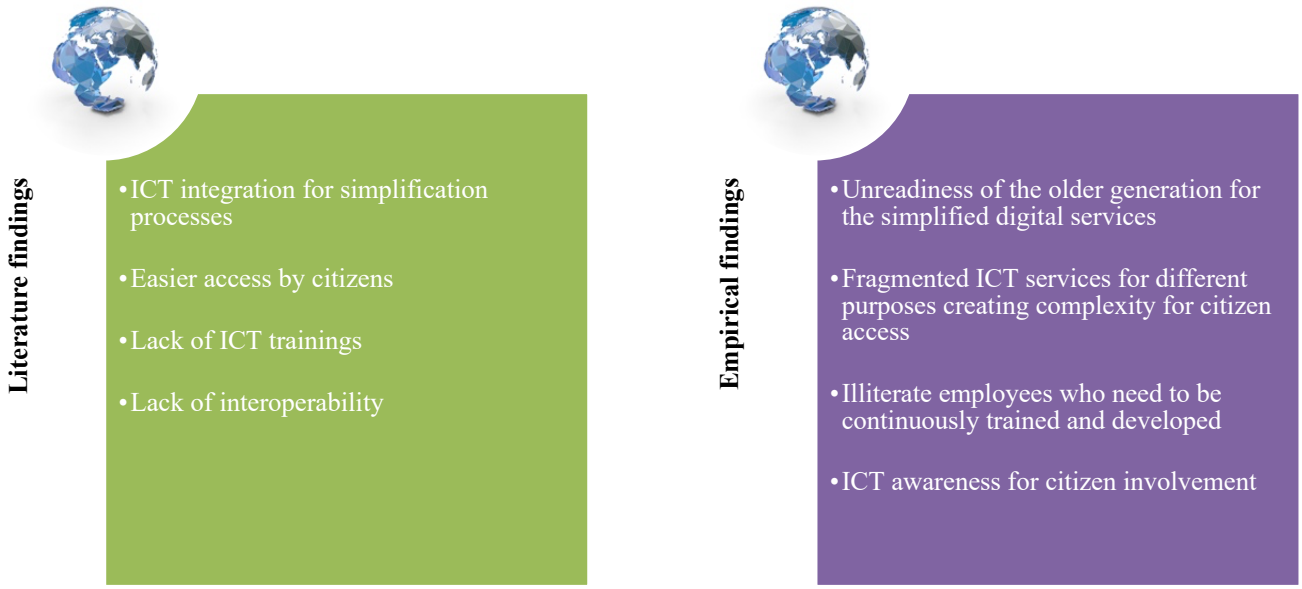
Since the interview questions were tailored according to the research questions and objectives, the obtained results intended to answer those questions. The quotes to be demonstrated through this chapter serve as evidence of the realistic scenario from the specific context where dimensions find their place in the practice yet are conveyed live via behavioral and cognitive reflections.

Figure 4 below presents the main highlights inferred for the first objective out of derived empirical insights.

4.1 To investigate the technological factors influencing the implementation of the OSS model

The author earlier presented the essence of the technological, organizational, and environmental factors in the implementation of OSS for e-government practices. The impact of those factors is indeed unavoidable since they influence not only the internal mechanisms but also the external ones

Figure 7.Overview of the literature and empirical findings aligned with Objective 1



such as consumer satisfaction and loyalty for instance. The researcher conducted 7 interviews including the pilot study with one regional representative for exploring and testing the insights. The interview participants shared both challenges as well as the realized and still needed advancements for the successful implementation of the model. While sharing the empirical insights, we provide the interviewees' views on technological, organizational, and environmental factors from the strategic perspective. Aligning with the first research objective, the discussion of technological perspective is discussed in the following paragraphs.

ASAN actors highlight the technological perspective as standing for the ground of innovation and digitalization. Referring to ASAN actor 1 (April 19, 2024), technological advancements have triggered the challenges for the older generation to confront the digitalization era. The participant states:

"For example, ASAN Radio operates as a traditional tool, and we have also created ASAN TV on social networks to facilitate this process. There are still difficulties in this area, especially the representatives of the older generation and people who lived most of their lives in the Soviet era have difficulties with digitalization and the concept of a one-stop shop, and they prefer physical communication. One of the main goals of creating the ASAN service is to move the population from physical to electronic services" (ASAN Actor 1, April 19, 2024).

Referring to the statement above, we may imply that there is a lack of one-stop shop concept awareness both demographically and geographically. This rationale implies conventional Soviet Union generation beliefs who are inclined to get physical services onsite and are far away from the integration towards a one-stop shop concept. Thus, transiting from traditional physical interaction to digital remains the end goal. ASAN actor 1 (April 19, 2024) states:

"For this purpose, we have defined relevant steps in our regulations. We also strived to raise awareness in Baku city. The activities performed in this direction are the organization of educational materials and training. However, we were confronted with challenges while addressing special regions and remote mountain villages."

ASAN actor 4 (May 4, 2024) adds to the aforementioned:

"In general, such an approach was out of the question in the era before ASAN service. There was a service based on the Soviet bureaucratic system in Azerbaijan. There were institutions and there

were services that they provided, and these services were mainly related to the issuance of documents and references, and these were provided in a retail manner, without centralized standardization, and in many cases without digitalization. Total citizen satisfaction was out of the question here.".

The above-mentioned statements refer to the role of technology in the shifts of societal mindset as well. However, unfortunately, it takes a while to integrate this new mind wave into the older generation due to various personal and contextual factors.

Stolterman and Fors (2004) describe digital transformation as "*the changes that digital technology entails or effects on all facets of human life*." This notion is indeed conveyed via the empirical interview insights when the actors highlight the blend of physical and digital human interaction yet is certainly shaped by various external factors triggering the citizen's behavioral decision which can be affected by the media means including social networks.

ASAN actor 1 elaborates as follows:

"Today, one of the standards is that 70% of shares in social networks should be dedicated to raising awareness on services, and 30% to other projects. Thus, the ASAN radio project is the first radio specialized in the field of public service aimed to raise awareness first. The issue of awareness was aimed to be eliminated in a way so that the citizens would be informed as well when they come to the physical center. For that, volunteers are used to facilitate this awareness process. For example, they assist in providing information in the information center, and then directing it to the relevant employee of the institution."

Another commonly highlighted technological challenge is security management. Security risks of different types of data are the main remaining struggle for alike organizations.

ASAN actor 1 (April 19, 2024) outlines the security system as below:

"Previously, security was implemented through Estonia's X-Road information security service. All information systems were connected to that service. This was an issue that could question safety. We have created our own national Electronic Government Information System - ASAN Bridge, which is also responsible for data security during the data exchange between government units under ASAN".

ASAN actor 4 (May 4, 2024) adds a broader horizon on the data security concept:

"Here, more problems may be related to the steps taken by the receiving entity to store the data rather than what kind of data is transferred. That is, data storage must be secure, and this is more a matter of data governance."

Furthermore, referring to ASAN actor 2 (April 20, 2024), the X-Road outsourcing tool was highly costly, when maintenance was needed. He also adds in addition to the ASAN actor's 1 earlier response that it was not efficient in terms of security of relying and being dependent on external tools.

In addition, the interviewee elaborates on the security system as follows:

"In general, there is a single system, which is the ASAN digital Bridge - Electronic Data Information System (or the Electronic Government Development Center), and the entire integration takes place through this main system. Now this service is being implemented by the Ministry of Regional

Development and Transport. Here, the main purpose of the ASAN service is related to the need to allocate more resources to the organization, design, and standardization of more government services" ASAN actor 2 (April 20, 2024).

Another advantage of the ASAN bridge is to facilitate interoperability (ASAN actor 4, May 4, 2024). ASAN actor 4 also states:

"But before ASAN service, there were institutions that did work according to the reality of their time. For example, there was an automated information retrieval system project in the administration of the Ministry of Internal Affairs, which we call IAMAS. There was an AVIS project of the Ministry of Taxes, and there was a project of the Real Estate Committee, and they worked quite well separately, but at that time there was no suitable ground and environment for joint work. Being able to work together for digital development - interoperability for development is very important."

On the other hand, aforediscussed collaboration also may have certain drawbacks. ASAN actor 4 (May 4, 2024) also states:

"In other words, the sharing of information between two state institutions was carried out through the structure of the ASAN Bridge as a generally unambiguous approach. ASAN Bridge ensures security during the data exchange. However, data is stored in the ICT infrastructure of individual institutions since ASAN is not a service provider. Here, more issues may be related to the secure way of storing the data rather than what kind of data is transferred. That is, data storage must be secure, and this is more a matter of data governance which would enable us to increase citizen trust even more."

Another technological challenge that has been faced is fragmentation. Even though certain solutions have been implemented, with more services being added to the system, the necessity is still there. ASAN actor 2 (April 20, 2024) states:

"Before ASAN Service, there was no possibility of having digital infrastructure to automate services since all the services were fragmented. Also, in some ministries, the services were digitalized without integration, and each ministry did digitalize certain services with different ICT infrastructures therefore it was impossible to integrate different ICT infrastructures. Since there was no strategic ICT management in the government, we had fragmented ICT infrastructures offered by different government units."

The additional shared notion was about the significance of technological collaboration as with the example of the Ministry of Digital Development and Transportation:

ASAN actor 2 (April 20, 2024) states:

"Between 2018 and 2023, ASAN was also responsible for automating and digitalizing some services which currently is done by the Ministry of Digital Development and Transportation. It has been easier for us to build and run such a center from scratch because until then we had been already working with different government organizations and being aware of the services and foundation. Those electronic services and ICT infrastructure are made by ASAN but now is run by the Ministry of Digital Development and Transportation."

Additionally, ASAN 6 actor (May 20, 2024) elaborates on those e-government services as follow:

- *MyGov: where online services are available and citizen personal profile with cabinet functionality (where you can see your data, and see who is searching and inquiring about your data while giving opportunities to appeal their requests)*
- *ASAN Login: single sign-on (authentication) to have access to all the services*

We cannot also evade without highlighting the impact of a pandemic on the development of digital transformation. The pandemic period has played a significant role in the transition to the digital era.

ASAN actor 6 (May 20, 2024) states:

"During the pandemic, we improved the issue of digital literacy a lot. Especially during the pandemic, it was at that time that we already needed to further improve the queuing system, so shortly before the pandemic, we released the ASAN queuing mobile application. Either the one had to call the call center to take a queue, which was for elderly people with low digital literacy, or he had to enter the system through the mobile application and select the queue according to the service and the date he wished for. So, we have considerably improved the issue of digital mobility during the pandemic."

Another issue stated by ASAN actor 4 (May 4, 2024) was the lack of service clarity and the way ASAN tried to solve it:

"The biggest problem was the lack of clarity on the services provided in terms of description, and scope. We did not have a list to look at, which state institutions provided which state services, and generally there was no clear definition of state service in legislation. We can now say that, for example, a new legislation has come into force, and here such a definition is given that the process presented by some state institution and creating a legal result is called public service.. The Public

Service Register (PSR) now allows us to identify public services and then determine which public services can be digitized. In general, there was no questionnaire for a state service, that is, we did not know how many services there are, which institution provides this service, which documents are required, on which legal and normative basis the state institution provides this service, in general, what is the duration and fee of this service, where can it be paid for, where it can be obtained generally those institutions had none of these. It was the first revolutionary and strategic in ASAN model that these state institutions were forced to include services, some of them were very spontaneous, and some of them gave whatever they had without even realizing the essence of this work at that time."

4.2 To investigate the organizational factors influencing the implementation of the OSS model

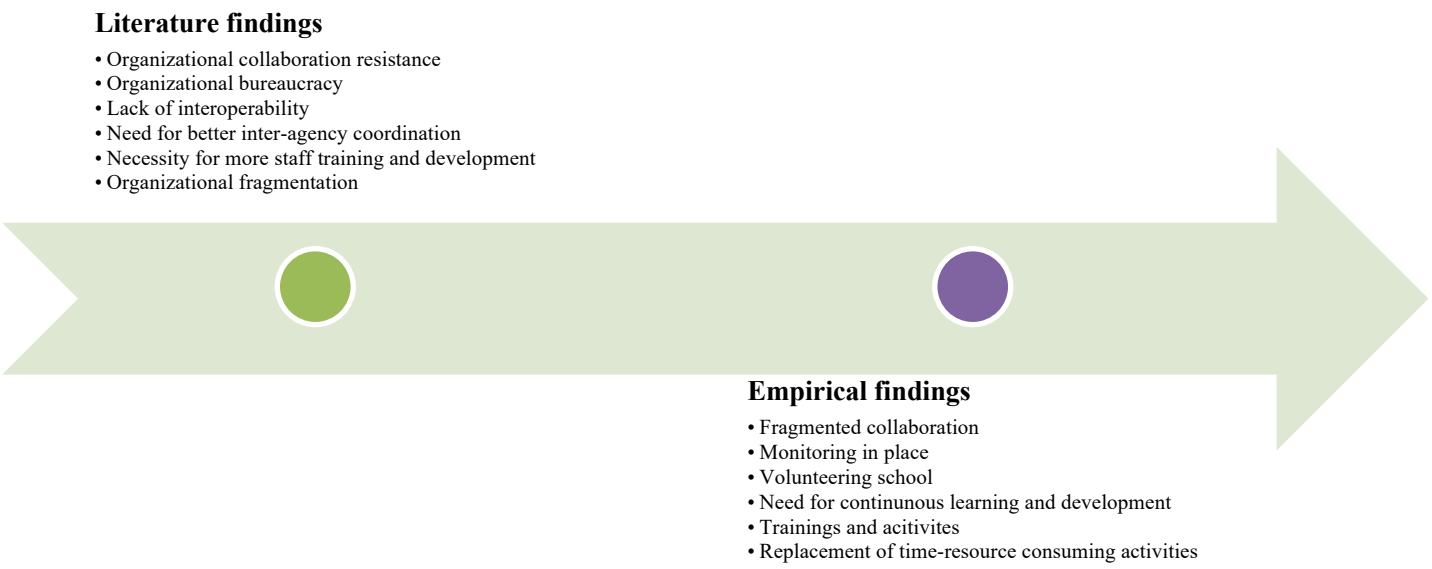
Without forming an organizational culture, it is quite hard to sustain long-lasting results. Organizational factors shaping the organizational culture are not limited to the vision and mission of the organization only but are also linked to its human capital retention as well as citizen engagement. Organizational culture is defined as the beliefs, assumptions, and values possessed by the organization's members. Thus, learning and development of human capital is highly focal for e-government plans and initiatives. Usually, governments (Norris & Moon, 2005) often argue that employees are inadequately trained to use information technologies, and this leads to change resistance. Maintaining e-government skills requires continuous human resource development practices within the organization.

Amongst the organizational challenges that governments face while implementing joined-up governance are organizational resistance towards collaboration, dependency on established bureaucracy, low staff capacity, procedural standardization across different arms of government,

weak and disparate ICT infrastructure within organizational scope, and political pressure leading to non-interoperability of government agencies (Millard, 2023).

The figure below demonstrates the main highlights found both in literature and empirically addressing objective 2.

Figure 8.Overview of the literature and empirical findings aligned with Objective 2



The insights gained from the interviews elaborate on the earlier literature findings. The interview participants highlight the significance of service integration and the matter of human touch in it. Relating to the collaboration nuance, the resistance from institutions because of initial misconceptions about ASAN led to a lack of interest in collaboration amongst ministries.

Referring to ASAN actor 5 (May 6, 2024):

"Conflicts of interest have arisen here. There was a misconception about the objectives of ASAN. Conflicts arose between institutions here. To prevent the conflict of interests, we have already

formed the structure of Asan in such a way that Asan will not provide any services, Asan will simply gather those ministries in one building and those ministries will provide their services in a single space through the integrated ICT. When we did it here, other problems, mindset - issues of people's approach and thinking appeared. and they didn't want to hand over their database. There was a resistance to work collaboratively because of misconceptions."

Referring to ASAN actor 1 (April 19, 2024):

'The government mainly consisted of different fragmented ministries serving the citizens. Each ministry was highly specialized in the area they belonged to. Since the ministries were independently responsible for delivering the services, and most of the services were delivered in traditional ways with no external monitoring-human intervention, human error, and corruption were the challenging factors."

The above-mentioned factors impede the development of the organizational culture and in turn, have an overall unfavorable impact on the organizational success. Therefore, the quality of inter-organizational service delivery was very low in the past. Thus, ASAN Service designed certain services with new and advanced solutions and eliminated unnecessary procedures in public service delivery which has been time and resource-consuming. ASAN Service delivered a systematic review of service integration between the government units. Currently, there is 360-degree assessment and monitoring between ASAN and other government organizations (ASAN actor 1, April 19, 2024). Moreover, the effectiveness of the facilitating measures employed to address key challenges faced in the establishment and operation of ASAN Service is assessed based on the results of the "ASAN Service Index", which is calculated based on the feedback of Azerbaijani citizens interacting with services offered at ASAN Service centers.

ASAN actor 1 (April 19, 2024) also adds:

"While we monitor them, they do monitor our operations as well. On the other hand, citizens monitor each part of the service delivery, including ASAN and other government organizations."

From the quote above, we can infer that mutual monitoring is highly indispensable for ASAN organizational culture, and this is built based on mutual trust between the organization and the citizen. However, despite the advancements held in the process for the elimination of bureaucracy, red tape, and procrastination by unifying all the governmental services under one roof- the organizational challenges remain. To overcome those challenges, it is not enough to hire qualified candidates for the leading positions only but is also crucial to sustain the human capital in the constant development. ASAN actor 2 (April 20, 2024) states:

"It was initially very difficult to find people who are experienced to serve citizens with advanced tools and services. We built a volunteering school which later contributed a lot to our human resources."

From the statement above we may infer that the organization has been taking crucial steps for investing in human capital. The participant also adds that:

"For all employees in ASAN, there are annual training scores required. This is mandatory for all employees to test their soft skills, time management, stress management, and professional knowledge. Training is consistent. People in the IT sector mainly lacked the soft skills to work in the public sector. We trained specialists with soft and hard skills, and now most of them have progressed to the managerial level".

Referring to ASAN actors, human resource development plays an essential role in boosting the organizational culture. ASAN trains its operators in various directions such as service improvement, readiness for innovation, and citizen satisfaction every month for about 3 months (ASAN actor 2, April 20, 2024).

ASAN actor 2 also states: "*Generally, when each new employee is appointed, they are trained in various work principles of ASAN service, transparency, efficiency, efficiency, etc. all this is given in detail to the operators as detailed information. Also, as an example, let me mention that in connection with these trainings, it is true that all the employees of the center have their training package. For example, if someone works in an ASAN Service center, they should undergo training on time management and greeting citizens at least once a year".*

Accessibility to the same opportunities by the staff members is also essential for building the organizational culture. ASAN Innovative Development Centre can serve as an example for this rationale:

"We also have our own ASAN innovative development center. Here, we have already prepared all the training in the form of videos, so for example, you must get acquainted with five trainings during the year, you must watch them, the employee enters and gets acquainted with those trainings…".

Above mentioned offer for the employees reflects again the innovative or digital touch the company integrates even in simpler terms such as via video for instance. The ASAN actor 3 (April 25, 2024) elaborates with the following:

"We don't create barriers, there is free training in various fields, for example, procurement, training on an innovative approach, management of start-ups…It is free of charge".

Throughout the examples above, we can observe that ASAN strives towards solving and enhancing the organizational culture, however, there is a need for more since people come and go, and yet ASAN centers and services grow. It is not feasible to solve the context in one day where the human factor is reflected, and continuous work is needed for this.

Employee motivation also lies in the heart of organizational culture, which is also supported by a range of theories, and organizational case examples on a global scale. For example, Singapore Airlines focuses 30% on process tracking, 30% on product innovation, and 40% on human capital training (Wirtz & Heracleous, 2012). The sense of recognition leads to motivation as also supported by Lloyd (2005) and Maslow (1954) as cited in Lester (2013). The combination of the processes targeted for behavioral evolvement and integration, directly and indirectly, influences the organizational culture. Hence, we cannot deny the role of the employee feedback as well which in turn can be turned to the change management process where they can be involved. Another example can be given from Audi company which introduced Audi academy undertaking different competitions and motivational incentives leading to better organizational performance. Regardless of the performance type, it is affecting the mission and vision of the company yet also influencing customer loyalty and satisfaction.

We can see the following highlights relating to the above notions implying ASAN practice in reality: *"We have indeed proposed various courses in the IT sector. Negotiations are also currently underway with UDEMY. We buy UDEMY courses and inform every IT employee to enter and take advantage of those courses. I oversee IT direction myself, and I observe which employee is more interested in UDEMY courses. The employee can be entitled to an employee of the month as well.*

*When the employee has more than 80 points, an additional amount is paid to the employee's salary as an extra motivational incentive. Employee's salary is paid at a certain amount to be additional motivation, and it attracts employees more (*ASAN actor 3, April 25, 2024)*."*

Indeed, we may infer that it is not easy to sustain and provide the same level of training and activities for every single ASAN branch because of the lack of human capital to provide those supportive activities.

ASAN actor 3 (April 25, 2024) also adds: *"During the adaptation period, we conduct the first ethical behavior training, stress management, time management, improving knowledge of legislation, service standards, and principles training. These are necessary learning activities. You are sent to training. You must participate in the assessment. After that, you can start the service. And it's not a matter of having passed it. Every year there is a period of those trainings. You need to take those trainings no less than 1-2 times a year."*

From the ambitions expressed by the interview participants above, we can the positive intentions towards amelioration of the organizational culture shaped with significant efforts put into the improvement of human resources.

4.3 To identify the environmental factors influencing the implementation of the OSS model

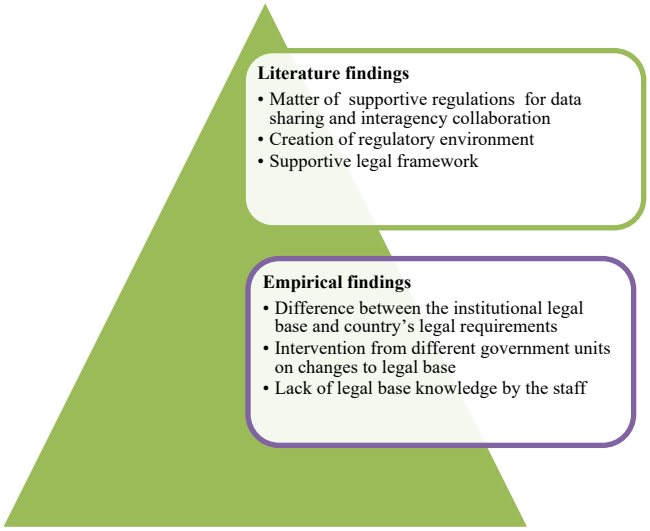
In the context of our research, the environmental factors mainly entice the legal and social factors which are interlinked because of the given setting. Regulations and policies that address inter-agency collaboration and data privacy, as well as data sharing, do either hinder or facilitate the OSS implementation process. Innovation is influenced by legal regulations which can also impede the innovation process or open new opportunities. Well-rounded and supportive legal ground along with

suitable socio-economic conditions build a stable environment for OSS to grow and to be maintained. On the other hand, the opposite leads to barriers and challenges in the OSS implementation. Referring to Garcia and Paedo (2005) restrictive regulations lead to negligence of technologies in e-government.

For example, the signature technologies require shifts in jurisdictions before they come into adoption.

Thus, the legal umbrella should be integrated within the organizational ground and must be a safety valve for e-government activities. Figure 6 below provides an overview of the main literature and interview findings:

Figure 9.Overview of the literature and empirical findings aligned with Objective 3



Referring to the ASAN actor (April 19, 2024) we can infer the remaining challenges despite the undertaken steps in the digitalization of legal services:

"We created the legal framework for the electronification of government services. However, not every government service can be digitalized."

The statement above claims that the difference between the institutional legal base and the country's legal requirements leads to challenges. According to ASAN actor 4 (May 4, 2024) changing certain institutional regulations is a long process requiring separate decrees and orders from the President. Furthermore, worth emphasizing the intersection of social and legal aspects within an environmental context.

ASAN actor 1 (April 19, 2024) emphasizes:

"In 2012, we were informing people about the ASAN Service Model. Today, we serve a large crowd. ASAN service centers receive an average of 34,000 applications per day. On the other hand, moving forward from our constitution, raising information awareness in the field of Information Communication Technologies and Digitalization was one of the set goals."

Similar situation is described in the reflection below about the registration restriction, which is still a challenge to work on:

"Because when we started our activity, we had a registration restriction. There was such a registration restriction in terms of territory the citizens lived in the city of Baku. For example, Nasimi district, Narimanov, Binagadi districts looked after ASAN service No. 1. No. 2 looked at other regions, and in Baku, if you are registered in any region, you should apply to ASAN service, which is responsible for that region. The only service for which we managed to remove the registration restriction in general at that time was the service of issuing and replacing the driver's license. It took 50 seconds to get a driver's license regardless of where it was registered, and it was the fastest service, after that, we managed to change all citizens' passports as a second service. However, notary, tax, and property, these services have territorial limitations in a certain sense. In

the notary, there were issues related to purchases and sales, and we collected these data and prepared proposals for the preparation of the decree" (ASAN actor 5, May 5, 2024).

Changing the public image of various government unit representatives via the usage of uniforms is another idea that was conveyed during the interviews. ASAN actor 2 (April 20, 2024) emphasizes as follow:

"Secondly, since the citizens previously had bad experiences with other government organizations and their employees, we started to ask representatives from other governments to be with our ASAN uniforms. They wear ASAN Uniforms to show off they are ASAN employees, not other government units. This has been a very important decision since it avoided the citizens' dissatisfaction and increased first great impressions about the environment in ASAN."

Another interesting notion during the interviews claimed the purpose of the certain standard maintenance of the organization within legal conditions was the following:

"Currently, based on our proposals, an indication has been given to the state bodies that the information contained in the state information systems and resources should not be requested from the citizens, which has been found in the law on administrative work. This is a very important factor for the once-only principle of the one-stop shop" (ASAN actor 1, April 19, 2024).

Social awareness and citizen engagement are also supported by the constitution as we can see from above, and this, in turn, means that the digital eco-system is not only based on one range of factors, but sometimes comprises more than one aspect integrated into each other. In alignment with this notion, ASAN actor 4 (April 25, 2024) reflects the following:

"In addition, to improve the quality of our service, we have a persona, that is, sometimes we don't even know who they are, they go and receive services as citizens, and if there are any difficulties, they prepare a report on it, and based on it, we explore new solutions for it."

Another initiative taken towards amelioration the interaction with people, in particular older people within remote locations has been the application of mobile buses. ASAN actor 5 (May 6, 2024) states as follows:

"We have regional areas that do not have an ASAN service center, or even if there is one, we have remote villages and towns, where there are difficulties for the population to apply to the centers. They can't come, they are sick, or maybe they don't have the means. We have mobile services for these occasions. Mobile buses and trains were assigned to each regional center. They identify the remotest villages in the area where they are located and send applications there regularly. Thus, we send the bus and train to stay there for 15 days. We call them sprinter village travelers. The one who goes there, for example, stays there for 1 week, takes the documents, processes them, and returns them."

On the note of the earlier mentioned range of insights, ASAN actor 4 (May 4, 2024) also adds the reflection towards the future of a one-stop shop while potentially addressing the social and legal aspects of the environmental context:

"ASAN service started with one-stop shop logic, but the goal was to move towards a no-stop shop. It has been constantly developing in a way of receiving regular services. But as you know, the ecosystem has changed, and some powers have been given to the Ministry of Regulatory Development in this area. Currently, there are certain versions regarding the positioning of ASAN

in state institutions. Has the need for ASAN service disappeared, it certainly has not. ASAN service is still trending. People come for their specific needs. Hence, potentially digitalization will prevent the flow to ASAN after some time. Work should be done again with the development of service infrastructure at state institutions. It should undertake the mission of redesigning the public service. For example, if you need 5 documents, they can be transferred to your name in 1 minute with facial recognition. Depending on its position, this institution is rooted or not, or it has other positions and plans, but I think it is seen as a way out".

As an additional reflection to the above, ASAN actor 6 (May 6, 2024) also highlights future-oriented insights which may potentially serve as extra insights for the recommendations of our research: The actor states:

"Simply put, we want to automate certain services so much that we are already taking certain measures in this regard, that is if you want to change a kind of license or if it has expired, you will already do it through that terminal. No need to come to the center in the future at all. We have an artificial intelligence strategy. Then we fully improve the management systems, for example, we want to form a certain self-service. However, the limitations are that not every person can use self-service and older people/disabled people still need some help. Also, it is necessary to improve and shape the promotion of smart cities, to form eco-friendly approaches, and at the same time to have these ordinary electronic charging stations, for example, if you come to ASAN and get service, let your car is charged. Even our mobile buses work with a solo panel, they work with solar energy even when they stop and serve. In other words, we are expanding the concept of eco-friendly and smart city as well."

The subsequent chapter elaborates on the conclusion and recommendations of research while summing up the main highlights and yet reflecting on the possible recommendations drawn both from the reviewed literature and collected empirical insights.

5. CONCLUSION & RECOMMENDATIONS

Based on the study corollary, we may infer that building up and sustaining the e-government is not an easy task, especially given the context of the post-Soviet countries where bureaucratic resistance and fragmented governance are still the case. Another reflective result of the study is that the same factors shaping the implementation process can be both impediments and facilitators depending on the direction they function. However, despite the discussed challenges which are still in place to be solved and improved, there might also be valuable recommendations for developing post-Soviet countries drawn from our research case since those countries share similar political and administrative backgrounds and implementing or planning to implement an OSS system. Yet it is important to acknowledge that the unique social context of Azerbaijan might play a critical role in the assessment of employed measures, therefore, they may not present the same results in different social contexts on a broader scale.

ICT infrastructure limitations and interoperability challenges (technological), absence of effective legislation and unclear implementation strategies (legal) and citizen adaptation and trust concerns (social) under environmental, fragmentation of government units; overlap of some services between government units, security risks, and constraints related to human resources and training (organizational) are the main angles addressed both in the relevant literature and in the obtained findings within this research.

As discussed earlier in the chapters, OSS model operate on modern ICT infrastructure that supports

interoperability. Before consolidating government agencies into an OSS system, outdated and weak IT infrastructure should be upgraded and customized to support the functions of the OSS model. Otherwise, the OSS model would likely fail to deliver on its main public values, which are particularly interoperability and reliable service delivery (Ribeiro et al. 2019). To overcome the challenge of interoperability, agencies of government must implement common standards and data protocols. Government agencies can facilitate seamless data exchange, share information, and coordinate services using the OSS model more effectively (Pardalis et al. 2019). If the current interoperability infrastructure is not solid enough to reduce the gap between disparate government systems, governments will be faced with reinvestment in new government IT infrastructure that supports the OSS model and is structured explicitly to support the needs of the OSS model (Profiroiu et al. 2024). Regarding insufficient legislation, it is also essential to adapt the legislative environment to the OSS model so that processes and methods within the unified platform can be standardized. Government agencies must follow similar legislation, as well, under the ambit of one legal framework so that they can continue to work in a more unified environment and interoperate within one platform for the delivery of consistent and effective services (Grossman et al. 2017). Where the existing legislation is not favorable for the use of the OSS model, then the same may be considered either in the form of devising new laws or even a bit of tinkering with the existing one to meet the demands of the OSS model. There is, therefore, the necessity of legal counseling and clarification in OSS implementation. Their presence eliminates regulatory barriers and uncertainties in implementing services, integrating service delivery, and sharing data systems among the various government agencies in a manner that will achieve interoperability (Fredriksson, 2020).

A general assessment must be done concerning the status of the government systems and what must be done to incorporate services into the OSS model to overcome the problem of vague strategies of

implementation. It is at this assessment stage that the government agencies and other stakeholders can engage in the process of planning and preparing a roadmap for the transition to an OSS model. This would also reduce organizational opposition during the implementation of the OSS system (Kolbenhayerova & Homa, 2022). To follow the implementation process more closely, a clear identification of activities and responsibilities related to the introduction should be written within the implementation plans for each organization (Gashi & Krasniqi, 2019).

Through public education, most citizens in developing countries are technologically illiterate. This will bring about citizen adaptation and may even help solve trust concerns. Governments must prioritize public education on the benefits of digital government services and the data privacy guaranteed. To establish public trust in OSS platforms, it is necessary to demonstrate the reliability and practicability of such systems in solving problems involving people (Ribeiro, 2019). Also, OSS applications would be designed with friendly user interfaces, ease of navigation, and a responsive customer support system. Public trust and citizen satisfaction could also be increased significantly if the approach used to design and deliver public services is user-friendly (Li & Xue, 2021).

Simplification in service delivery is the first thing to put in place to address the challenge of fragmented governments and the consolidation of diverse government agencies into one space effectively. Governments could also pick those areas where improvements could be made in eliminating the bureaucracy to ensure minimum redundancy and common standards and protocols are designed for a hassle-free service delivery process. Furthermore, governments can address the fragmentation challenge by encouraging collaboration of the government units and creating a shared culture that ensures successful cooperation (Talal, 2023).

Moreover, several steps need to be taken to overcome the challenge of overlapping services. They include conducting a thorough review of existing services in each government unit. This will make

it easy to determine how the different resources are redundant and inefficient (Folayan et al. 2020). Secondly, the OSS model reallocates resources and standardizes processes and procedures. This avoids duplication in the provision of service (Fredriksson 2020). Lastly, several steps would thus be followed in the eradication of the challenge of service duplications (Kamal et al. 2021). Streamlining the services that overlap also eases operations, reduces the administrative burden, and improves the general quality of service (Fredriksson, 2020).

Security risks can be minimized through investment in robust ICT infrastructure to guarantee governments secure OSS model against potential crimes related to cyber. Sensitive data has to be protected from unauthorized access and data breaches with the help of encryption protocols and multi-factor authentication mechanisms (Kolbenhayerova & Homa, 2022). Any potential cybersecurity threats must be monitored on a real-time basis so that interventions can be made at the right time. Furthermore, both employees of government offices and citizens themselves should be made aware of possible cybersecurity threats and how to improve data security within the OSS platform (Pardalis et al. 2019). Implementation of proactive measures to reduce security risks will ensure added protection for the preservation of sensitive information and public trust in OSS model (Ribeiro, 2019).

The problem of digital illiteracy and the skill gap in human resources can be solved by applying the following measures. Employees must be informed about the roadmap simultaneously with the culture of innovation in government organizations. Another consideration, then, is the increase in digital literacy and capabilities of employees for them to be able to handle the attendant challenges of an OSS model. Governments should invest in ongoing training and professional development for employees to guarantee that they have the knowledge, skills, and competence required for practical work with the OSS model—delivery of maximum public value from its use (Kolbenhayerova &

Homa, 2022). Capacities for human resource development have been considered the priority for developing human resources and organizational readiness in the successful implementation of the OSS model in public administration (Lie & Xue, 2021).

Transition to the “no-stop shop” journey has also been highlighted through the literature as well as the empirical interviews. Thus, it can be inferred though it has not been discussed in the literature profoundly, but both literature and empirical findings propose further research on the transition for the no stop shop concept as a potential extension to the e-government stage models.

Literature highlights that the effective implementation of the One Stop Shop (OSS) model in public services is dependent on a proper response to technological, organizational, and environmental factors. Technologically, robust ICT infrastructure and systems interoperability are essential since legacy systems can potentially compromise the effectiveness of OSS (Ribeiro et al., 2019). Governments should adopt common data standards and invest in IT support infrastructures that enable seamless data exchange (Pardalis et al., 2019; Profiroiu et al., 2023). Organizational fragmentation and service overlap can be overcome by simplification of the delivery of services, inter-agency collaboration, the culture of innovation, and shared responsibility, among others, organizationally- ensuring organizational readiness through resourcing, training, and clear implementing strategies (Fredriksson, 2020; Talal, 2023). The crucial aspects are effective legislation and public trust (Gashi and Krasniqi, 2019; Kolbenhayerova & Homa, 2022;). Governments should develop a uniform legal framework, which should unite the processes and prompt collaboration, supported by public education to instill trust in digital services among citizens (Grossman et al., 2017; Ribeiro, 2019). Thereby, political solid will and continuous monitoring, coupled with these factors, become essential for successful OSS implementation and its sustainability (Vashakidze, 2014; Rehimli, 2023).

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APPENDIX A

Interview Questions

Technological

1. What specific challenges did ASAN Service face regarding Information and Communication Technology (ICT) infrastructure? Which attempts were undertaken to overcome those challenges?
2. Can you discuss any investments or initiatives undertaken to improve ICT infrastructure and enhance service delivery capabilities?
3. From the perspective of innovation, what are some of the challenges ASAN Service has faced in implementing new technologies and innovative solutions?
4. In terms of technology adoption, how does the ASAN Service leverage emerging technologies to improve service delivery?
5. How does ASAN Service ensure interoperability and collaboration with various government agencies to provide seamless services to citizens? What measures has ASAN Service taken to ensure interoperability between different government systems and platforms?

Organizational

1. Looking back at the implementation process, what were some of the biggest challenges encountered in establishing ASAN Service in Azerbaijan, and how were they addressed?
2. How did ASAN service address the challenges of fragmented government units and overlapping service provision between them?
3. As a representative of ASAN Service, what key challenges have you encountered in delivering integrated services to citizens?
4. Can you discuss any measures taken to streamline services and reduce redundancy in service delivery?
5. What challenges were faced regarding human resources and training of staff to operate ASAN Service effectively? Can you discuss any organizational capacity-building initiatives or training programs implemented to equip staff with the necessary skills and knowledge?
6. What are some examples of services that overlap between government units, and how has this affected the implementation of ASAN Service?
7. Can you elaborate on ASAN Service's approach to developing clear strategies and plans for service delivery? How has data sharing and collaboration been promoted to ensure seamless integration of services?

Social

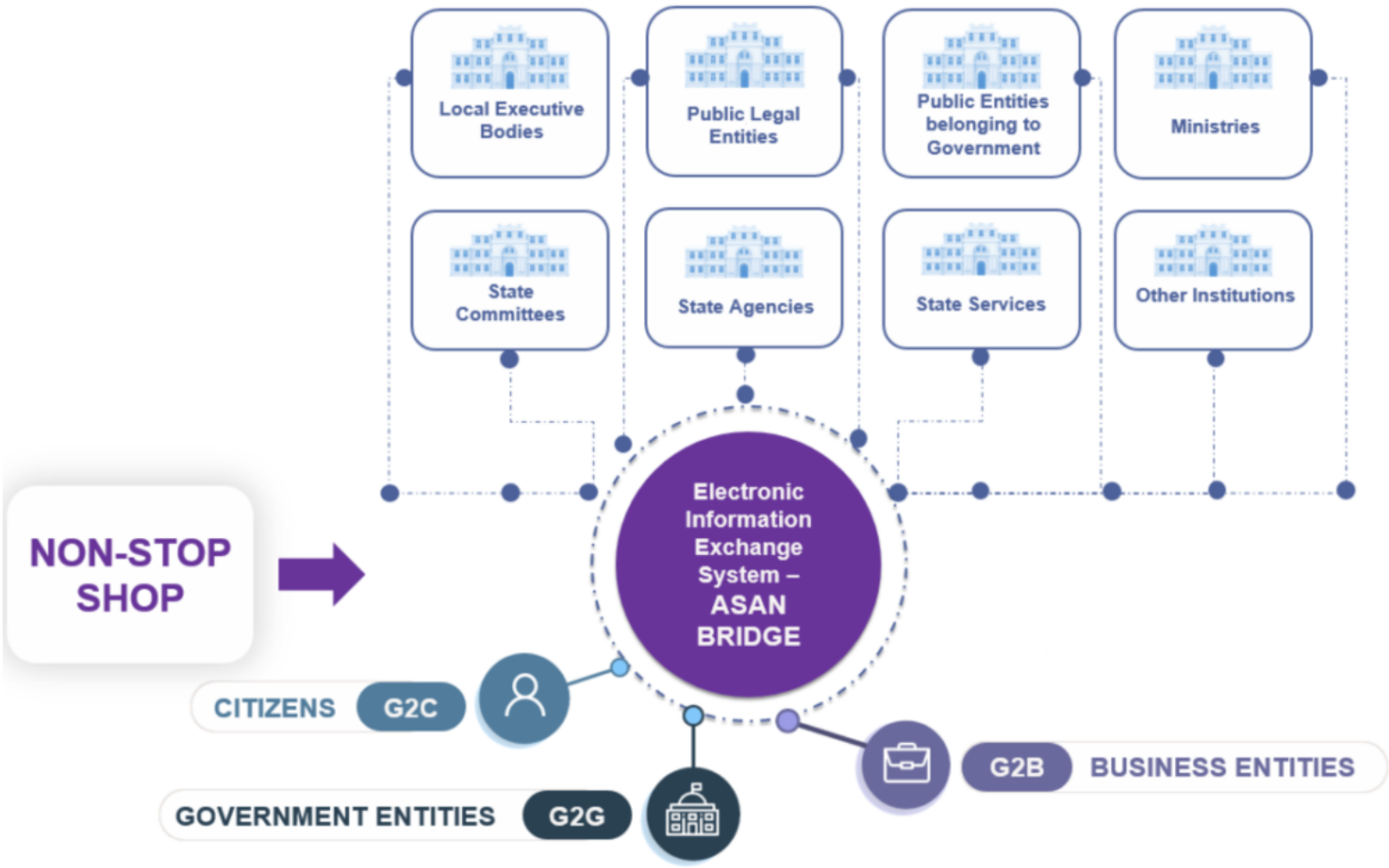
1. How did ASAN Service address the issue of citizen adaptation to the new system and build trust in its efficiency and security?
2. What are the key factors facilitating the successful implementation of ASAN Service in social manner?
3. In terms of data privacy and security, what measures does the ASAN Service implement to protect citizen information and ensure confidentiality and citizen trust?
4. Can you discuss any communication strategies or initiatives aimed at building trust and increasing citizen engagement with ASAN Service?

Legal

1. What are the main legal challenges ASAN Service faces in its operations, particularly regarding the implementation of the one-stop shop concept?
2. How does the ASAN Service Legal Department navigate regulatory and legislative barriers to ensure compliance and facilitate service delivery?
3. Can you discuss any specific legal reforms or initiatives undertaken by the ASAN Service Legal Department to address regulatory challenges?
4. How does the ASAN Service Legal Department ensure that ASAN Service operations align with national laws and regulations?
5. Can you elaborate on any legal strategies or approaches employed by the ASAN Service Legal Department to overcome legal obstacles and facilitate service integration?
6. What role does the ASAN Service Legal Department play in drafting policies and regulations to support the implementation of one-stop shop services?
7. How does the ASAN Service Legal Department collaborate with other departments and government entities to address legal challenges and promote legal compliance?
8. What measures does the ASAN Service Legal Department take to stay updated on changes in legislation and regulatory requirements relevant to ASAN Service operations?

APPENDIX B

ASAN BRIDGE



Declaration of Authorship

I hereby declare that, to the best of my knowledge and belief, this Master Thesis titled "Implementation of One Stop Shop (OSS): Case Study of ASAN Service OSS in Azerbaijan" is my own work. I confirm that each significant contribution to and quotation in this thesis that originates from the work or works of others is indicated by proper use of citation and references.

Munster, 05 July 2024

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