

Public Value Loss in E-Government in Developing Countries: A Systematic Literature Review

¹Nuwan Hettiarachchi, ²Dr. Sirilal Warnakula

¹Girne American University, Cyprus

²Dean, Pioneer International Campus, Sri Lanka

Abstract: The study aims to explore the dimensions that contribute to public value loss in e-government in developing countries, filling a gap in the literature by critically reviewing existing research. Two research questions were formulated to guide the research: (1) What is the public value loss in e-government? (2) What are the key dimensions that contribute to the public value loss? The review synthesizes literature from public administration, information systems, digital governance, and e-government studies to identify technological, organizational, institutional, ethical, political, and social dimensions that negatively affect the public value creation through ten major thematic clusters and four global themes. Although e-government initiatives are more commonly associated with transparency, efficiency, accessibility, citizen participation, and accountability, empirical evidence suggests poorly implemented digital governance systems may also generate adverse societal consequences. The review adopts a systematic literature methodology and analyses scholarly studies published between 2000 and 2026. The findings indicate that public value loss is a multidimensional phenomenon influenced by complex interactions among technology, institutions, governance structures, and citizens' experiences.

Index Terms - e-government, public value loss, developing countries, thematic analysis, ICT

I. INTRODUCTION

E-government has emerged as one of the most influential transformations in contemporary public administration. It has evolved in terms of conceptualization and implementation since the 1980s. Though e-government has become increasingly complex with the advent of emerging technologies, the concept is no longer novel. Governments across the world increasingly utilize digital technologies to improve administrative efficiency, enhance transparency, reduce bureaucratic delays, strengthen citizen participation, and improve access to public services. Digital transformation initiatives have become central to governance modernization strategies in both developed and developing countries. The rapid expansion of internet technologies, mobile platforms, cloud computing, big data analytics, artificial intelligence, and digital service delivery systems has fundamentally reshaped the relationship between governments and citizens (United Nations Department for Economic and Social Affairs, 2024).

E-government is commonly described as the adoption of information and communication technology (ICT) by a government to deliver effective, efficient services to citizens and business (Simonofski et al., 2020; Mensah et al., 2022). The public value is the emerging trend in assessing e-government, conceptualized as the collective expectations of citizens regarding public services offered by a government (Moore, 1995, 2021), where the public or citizens are stakeholders of a society representing various roles, such as taxpayers, customers of public services, or policy makers (Andersen et al., 2021).

The e-government developments indicate an upward trend. Globally, there is a noticeable increase in investment in digital infrastructure to promote efficient public service delivery and greater public inclusion in public decision making (Andersen et al., 2021; Maragno et al., 2021; Song et al., 2024; United Nations Department for Economic and Social Affairs, 2024).

The concept of public value is highly relevant in understanding the societal implications of digital governance. Moore (Moore, 1995) conceptualized public value as the collective benefits generated by public-sector actions that improve citizen welfare and societal well-being. Within e-government contexts, public value is generated when digital technologies improve governance outcomes and strengthen citizen experiences. However, the digital transformation initiatives may also generate unintended negative consequences that reduce public trust, exacerbate inequalities, compromise privacy, weaken democratic accountability, and undermine institutional legitimacy, resulting in public value loss when digital governance systems fail to achieve intended societal outcomes or generate adverse consequences that undermine trust, accessibility, transparency, equity, accountability, and democratic participation. Consequently, public value loss represents the erosion or failure of these governance outcomes (Bozeman, 2023; Cui & Osborne, 2023).

Public value loss therefore occurs when e-government systems fail to deliver intended benefits or societal outcomes. The literature increasingly demonstrates that digital transformation does not automatically produce positive governance outcomes. Instead, technological innovations can pose significant challenges to institutional structures, governance mechanisms, legal frameworks, and citizens' needs when inadequately addressed. Therefore, scholars (Engen et al., 2021; Cui & Osborne, 2023; Weigl et al., 2024; Chan et al., 2025) emphasized the necessity and significance of critically examining the risks and negative consequences associated with e-government implementations. Consequently, public value loss is defined in this review as the erosion, non-realization, or destruction of societal benefits that governments are expected to create through digital public services.

Evidence from the literature indicates that risks are more severe in developing countries because digitalization often occurs amid unequal connectivity, limited digital literacy, weak institutional capacity, fragmented information systems, and underdeveloped regulatory safeguards.

This research aims to understand the public loss in e-government through a critical analysis of emerging research and to propose a conceptual framework for measuring public value loss.

Accordingly, research questions are formulated as follows:

1. What is the public value loss in e-government?
2. What are the key dimensions that contribute to the public value loss?

This systematic literature review critically examines the dimensions that contribute to public value loss in e-government systems. The review is structured around ten major thematic clusters identified through thematic synthesis: (1) digital exclusion and unequal access, (2) service quality degradation and administrative burden, (3) trust erosion and institutional legitimacy, (4) privacy, surveillance and data protection risks, (5) cybersecurity vulnerabilities and systemic risk, (6) transparency, accountability and opacity, (7) institutional capacity and governance weaknesses, (8) interoperability failure and fragmented systems, (9) algorithmic bias, artificial intelligence and automated decision-making and (10) value co-destruction and citizen experience. Each thematic cluster contains multiple dimensions identified in prior literature as contributing to negative governance outcomes.

Followed by sections that describe the theoretical background, methodology, results analysis, discussion, recommendations, and conclusion.

II. THEORETICAL BACKGROUND

The primary enabler and driver of public value is information and communication technology (United Nations Department for Economic and Social Affairs, 2024). Therefore, value creation in systems related to digital transformation requires focusing on activities and actions related (European Commission. Directorate General for Communications Networks, Content and Technology. et al., 2024). It's a fact that the values created and perceived in societies differ from one another. Though both public and private sectors exist to serve citizens of a society, they have very different focus (Andersen et al., 2021; Maragno et al., 2021; MacLean & Titah, 2022). The public sector serves citizens with a service mindset, viewing people as constituents, while the private sector is profit-oriented and views citizens as customers (Maragno et al., 2021; Scupola & Mergel, 2022). Despite the contrasting views, the core idea is simple: create public value. In essence, public managers are more concerned with public value. They should create public value from the assets entrusted to them by the public, which is expected by modern society (Moore, 2021).

The strategic triangle concept is taught and applied to guide this value-creating discipline in government management. Similar to various strategy models applied in the private sector, Moore's (Moore, 1995, 2021) strategic triangle is a strategy model for the public sector. The core idea behind the strategic triangle concept is to exploit value-creating opportunities in the public sector based on their position in a triangle, with the public manager resting at the center, and the triangle is conceptualized with three core dimensions: public value, organizational capacity, and legitimacy and support (Moore, 2021). The concept of public value has been further advanced by various scholarly contributions (MacLean & Titah, 2022; Song et al., 2024).

Today, public value creation increasingly emphasizes value co-creation, which refers to collaboration among government, citizens, and private actors (Sancino, 2022). Limited studies often emphasize the benefits of examining the risks, imbalances, and sustainability challenges (Bentzen et al., 2020; Tommasetti et al., 2020; Ansell & Torfing, 2021; Naveed et al., 2025). Structural constraints, organizational culture impact, and behavioral resistance remain empirically unexplored. Emerging research also suggests that text analytics, big data, and data-driven participation remain in the early stages of value co-creation (Sancino, 2022; Ojasalo & Kauppinen, 2024; Skälén & Trischler, 2024; Hancu-Budui & Zorio-Grima, 2024; Kurkela et al., 2025; Ongaro et al., 2025). These implications further underscore the absence of prescriptive governance that reflects systematic empirical evidence on how value co-creation collaborates to produce measurable results in public value creation.

Further, there is a renewed and increased attention to the state's capabilities to be potentially a business and its ability to create new markets, which assumes an active role, departing from the passive role of the state as a fixer in market failures to co-creation of public value (Mazzucato & Ryan-Collins, 2022; Sancino, 2022). In line with these emerging arguments, Bryson et al. (Bryson et al., 2015) proposed a revised model based on Moore's (Moore, 1995) original concept of the public value theory. In this conceptualized model, instead of placing public managers at the center of the strategic triangle, other elements such as actors, practices, arenas, and spheres in action, public problems and challenges, and functions are represented at the center to reflect the multi-actor nature of the value co-creation. The idea is to facilitate innovating public service provision through the various stakeholder involvement in planning of public policies, design and delivery of public services, resource allocations, reporting, evaluating public resources aimed at value co-creation to that reflect in public value creation (Cluley & Radnor, 2021; Muller et al., 2021; Osborne et al., 2021; Scupola & Mergel, 2022; Conteh & Harding, 2023; Ofoma, 2024; Naveed et al., 2025).

In the e-government context, digital technologies are expected to enhance elements of Moore's (Moore, 1995) strategic triangle by improving service delivery, strengthening citizen-government interactions, and increasing the effectiveness of public service organizations. However, failure in any of these elements can lead to a loss of public value. For instance, inadequate operational capacity may lead to system failures, and a lack of legitimacy and public trust may erode public confidence, undermining service adaptation.

The public value concept provides an important lens in understanding public value loss because it simultaneously recognizes value creation and value destruction. Though digital government transformations often aim to generate efficiency gains and service improvements, they may still lead to negative outcomes, including digital exclusion, privacy violations, trust erosion, and unequal access to services (Cordella & Bonina, 2012). Consequently, the public value loss can best be described as the reduction, erosion, or destruction of the benefits that citizens or society expects from the government's digitalization initiatives.

A key theoretical contribution to understanding the public value loss emerges from the literature on value co-creation and value co-destruction (Osborne et al., 2021). As such, public value is increasingly viewed as co-created through interactions among governments, citizens, businesses, and other stakeholders in e-government environments. The public actively participates in value creation through online services, digital engagement, and collaborative governance mechanisms. Yet, when these inactions fail, value destruction may occur, in which value co-creation refers to processes whereby interactions between stakeholders diminish, or public expectations are reduced (Plé & Cáceres, 2010). For example, poorly designed systems, service inaccessibility, privacy and cybersecurity breaches, and ineffective public engagement mechanisms (Deng et al., 2018). These failures lead to mistrust and dissatisfaction or reduce the utilization of e-government services, thereby contributing to public value loss.

DeLone and McLean's Information Systems Success (ISS) Model (Nkanata, 2020; Magsamen - Conrad et al., 2022; Nnaji et al., 2023; De Vinci Research Center et al., 2025) also provides useful theoretical insights for examining public value loss. The model proposes that system quality, information quality, and service quality influence system use, user satisfaction, and net benefits. In the context of e-government, deficiencies in any of these dimensions can reduce the intended public benefits. Poor system reliability, inadequate or inaccurate information, and a lack of service support may decrease public satisfaction and further discourage service adaptation. Therefore, these lapses or lags may prevent the delivery of socially desirable outcomes, and the transparency and accessibility of digital services may not materialize, leading to a loss of public value.

Institutional Theory (Wu & Y. Choi, 2022) further explains why public value loss may occur despite increased investments in digital government. According to the theory, organizations often adopt technologies to achieve legitimacy rather than improve actual performance. Governments may implement systems in response to donor requirements, international obligations, or modernization efforts, without adequately accounting for important dimensions such as organizational capabilities and readiness, as well as citizens' actual needs. As a result, such symbolic adaptations can fail to generate socially desirable outcomes while appearing successful on paper, thereby contributing to the public value loss (Ramirez-Madrid et al., 2022; Agyei-Ababio et al., 2023; Mosleh Zeebaree et al., 2023; Omweri, 2024; Temitayo Oluwaseun Jejenewa et al., 2024).

Digital Divide Theory (Singh & Chobotaru, 2022; Masadeh et al., 2023) also offers critical insights into negative societal outcomes generated by e-government initiatives, particularly regarding inequalities in access to information and communication technologies, internet connectivity, and digital skills. Though e-government aims to improve service accessibility, dependencies created on digital channels may unintentionally exclude vulnerable population segments of a society that include the elderly, rural communities, low-income groups, and individuals with limited digital literacy (Macaya et al., 2021; Apriliyanti et al., 2021; Reynolds et al., 2022; Lybeck et al., 2024; Djatmiko et al., 2025). These exclusions undermine the principles of inclusiveness and equity, which constitute an essential dimension of public value. In this sense, digital inequality represents a significant source of public value loss in any e-government system.

Another important theoretical lens for understanding public value loss is Trust Theory (Guo, 2022). Trust is widely accepted as a crucial determinant of e-government adaptation and citizens' engagement. Digital services require citizens to share personal information and conduct election transactions, making trust in government institutions and digital platforms essential (Gil-Garcia et al., 2021; Lai & Lobo Marques, 2023; Legood et al., 2023). Cybersecurity incidents, data privacy breaches and violations, and a lack of transparency may reduce public trust in e-government. When trust erodes, citizens may avoid using digital services, leading to lower service utilization and contributing to public value loss (Pribadi et al., 2021; Luo et al., 2024; Maulan & Fitriani, 2025).

E-government initiatives often involve complex networks of public agencies, private-sector actors, partnerships, and technology providers. Poor inter-agency coordination, insufficient stakeholder participation, weak governance structures, and lack of accountability may undermine the success of the e-government. Such failures may result in cost overruns, project delays, reduced public confidence, and system inefficiencies, all of which contribute to public value loss (Deng et al., 2018; Hettiarachchi & Wanigasekara, 2025).

Overall, the theoretical literature suggests that public value loss in e-government is a multidimensional phenomenon arising from social, technological, organizational, and institutional factors (Plé & Cáceres, 2010; Engen et al., 2021; Weigl et al., 2024; Chan et al., 2025). Further, the public value framework provides the overarching framework, while value co-destruction theory, Information Systems Success Theory, Institutional Theory, Digital Divide Theory, and Trust Theory collectively explain how intended benefits of digital government may fail to materialize or may even produce adverse outcomes. This study builds upon earlier studies in this field and is underpinned by a theoretical lens.

III. DIMENSIONS OF PUBLIC VALUE LOSS

3.1 Technological Dimensions of Public Value Loss

Technological factors remain among the most significant contributors to the loss of public value in e-government initiatives. Though digital transformations provide opportunities to enhance efficiency and accessibility, technological limitations and failures can still significantly undermine governance outcomes. Digital exclusion is one of the most frequently discussed dimensions of technology. The digital divide reinforces socio-economic inequalities by excluding marginalized populations, impeding access to online information and services. Similarly, digital exclusion extends beyond internet access and encompasses disparities in digital skills, usage, and technological literacy (Helbig et al., 2005; Van Dijk, 2017).

Digital exclusion particularly affects rural populations, elderly citizens, persons with disabilities, and low-income communities. In many developing countries, limited internet connectivity and inadequate ICT infrastructure further aggravate these challenges. Therefore, though e-government initiatives intended to improve accessibility may also unintentionally increase social marginalization and inequity (Carter et al., 2016; Van Dijk, 2017).

Another major technological concern associated with the loss of public value is privacy violations. Belanger and Carter found that privacy concerns significantly reduce citizen trust and willingness to adopt e-government services. E-government initiatives increasingly collect and store large volumes of citizens' personal data through online service portals, biometric systems, surveillance technologies, and digital identity platforms. While these systems may improve administrative efficiency, they still pose risks of unauthorized access, misuse of personal information, and erosion of citizen privacy (Pardo et al., 2012; Deng et al., 2018; Hettiarachchi & Wanigasekara, 2025).

Cybersecurity vulnerabilities also pose a critical risk, leading to loss of public value and affecting governance systems. Public institutions face threats from hacking, ransomware attacks, data breaches, malicious software, and cyber espionage. Failure to address these vulnerabilities can disrupt essential public services, weaken institutional legitimacy, and compromise sensitive information (Abdou Hussien, 2021; Sambana et al., 2021; Raza, 2024). Consequently, it's argued that cybersecurity has now become a strategic governance issue rather than merely a technical concern.

Further, public institutions often operate fragmented information systems that are unable to effectively exchange or integrate data, a technological concern that ultimately destroys public value. Lack of interoperability reduces administrative efficiency, limits coordinated public service delivery efforts, and increases supplication. Similarly, outdated legacy systems and obsolescence reduce scalability, sustainability, and long-term effectiveness, acting as barriers to delivering socially desirable outcomes (Helbig et al., 2005; Pardo et al., 2012; Uddin, 2023).

3.2 Organizational and Institutional Dimensions

Organizational and institutional dimension factors further influence the success or failure of e-government. Digital transformation requires substantial organizational restructuring rather than simple technological adaptation. However, many public service institutions continue to rely heavily on traditional hierarchical bureaucratic models that are ill-suited to increasingly dynamic modern governance environments (Cordella & Tempini, 2015).

Weak accountability mechanisms are another contributor to the loss of public value in e-government. Digital governance systems frequently involve various stakeholders, including government agencies, external service providers, private entities, and other actors of interest. Muglan (Mulgan, 2000) notes that accountability is increasingly complex within technologically mediated electronic governance systems. At the outset, it could be argued that ambiguity regarding institutional responsibilities may reduce transparency and hinder effective oversight.

Though transparency is often considered one of the primary benefits of e-government, it could be argued that transparency initiatives may have unintended consequences, such as information overload, a lack of clarity, and reduced meaningful accountability (Department of Economics and Social Affairs, 2022; OECD, 2024). These results show that citizens have access to information without the capacity to interpret or use it effectively.

Furthermore, financial stability is a significant institutional concern. E-government projects require substantial investments in infrastructure, systems, training, cybersecurity, and maintenance. At large, financial constraints limit the long-term sustainability of digital transformation initiatives in developing countries. Heeks studies (Heeks, 2006, 2020) highlight that many e-government projects fail due to unrealistic planning and lack of alignment with local governance conditions.

3.3 Social and Citizen-Centric Dimensions

One of the primary concerns in public value loss is the social dimension, which encompasses citizen trust, participation, inclusiveness, and social equity. Citizens' trust remains one of the most critical determinants of successful e-government adaptation. It's widely accepted that trust significantly influences citizens' willingness to engage with government services, as it shapes perceptions of reliability, security, responsiveness, competence, and ethical behavior. Herein, when the government fails to protect citizens' personal information or deliver reliable digital services, citizens' trust declines significantly. Public value loss, therefore, occurs when digital governance systems undermine confidence in public service institutions (Deng et al., 2018; Fadrial et al., 2024; Maulan & Fitriani, 2025). Low or eroded trust may reduce citizen participation, weaken institutional legitimacy, and hinder long-term transformation.

Limited citizen participation also reduces the creation of democratic value, thereby undermining participatory democracy in digital governance. Consequently, it could be argued that the e-participation mechanism should empower citizens to contribute meaningfully to participative decision-making processes. Otherwise, many digital participation initiatives remain symbolic rather than genuinely participatory (Macintosh, 2004; Carter et al., 2016; Deng et al., 2018; Hettiarachchi & Wanigasekara, 2025).

Social inequity further complicates the creation of public value. The digital transformation may unintentionally reinforce socioeconomic disparities when adequate attention is not paid to service design and to the needs of vulnerable populations. Limited digital literacy, disabilities, legal barriers, or inadequate access to technology may lead to exclusion from public services (Department of Economics and Social Affairs, 2022).

Low public awareness regarding digital services also negatively affects citizens' engagement. Shareef et al. found that many citizens remain unaware of available e-government services due to inadequate awareness (Deng et al., 2018; Hettiarachchi, 2025). Consequently, the government may fail to achieve the intended outcomes of adaptation and participation.

3.4 Ethical and Political Dimensions

Ethical and political dimensions further shape public value outcomes in any digital governance system (Uddin, 2023). The government increasingly utilizes artificial intelligence, predictive analytics, biometric systems, facial recognition technologies, and automated decision-making tools to improve administrative efficiency. However, these adaptations raise ethical concerns about surveillance, algorithmic bias, discrimination, and loss of transparency that may ultimately erode public trust and confidence, leading to a loss of public value.

Scholars (Lindblad-Gidlund & Giritli-Nygren, 2009) emphasize that information should guide technological governance to protect citizens' rights and democratic values, since automated systems trained on biased datasets may unintentionally discriminate against vulnerable populations, thereby reinforcing structural inequalities. Therefore, ethical governance frameworks are essential for ensuring fairness and stability in digital governance and avoiding public value destruction.

Another aspect of public value loss emerges from increased surveillance in recent years (Maulan & Fitriani, 2025; Setyarto et al., 2025). Surveillance-oriented governance systems may undermine democratic freedoms and individual autonomy in a society where excessive monitoring and data collection practices erode public trust and create perceptions of state overreach, thereby reducing public adoption of e-government initiatives.

Government reforms are often influenced by political agendas rather than citizen centricity (Plé & Cáceres, 2010; Weigl et al., 2024). These interferences also affect digital governance outcomes and further impede the creation of public value through e-government. Frequent policy changes, political instability, or leadership transitions may disrupt the continuity of digital transformation efforts and, in fact, erode public confidence in allocating public funds for future e-government transformation, as trust erodes and leads to a loss of public value.

Corruption risk remains highly relevant in the developing-country context (Zhao et al., 2021; Weerasinghe et al., 2023; Ramadhan & Purnomo, 2025). Even though digital governance is often promoted as a tool to increase transparency and reduce corruption, technological systems themselves may be manipulated for political gain in these countries due to weak legal and accountability mechanisms.

IV. RESEARCH METHODOLOGY

The study adopts a systematic literature review methodology to synthesize existing knowledge on public value loss in e-government. The review followed a systematic and transparent logic, inspired by PRISMA principles. The objective was not to perform a bibliometric census of all publications on e-government, but to construct a thesis-oriented synthesis of recent literature that directly informs the concept of public value loss. The approach is widely merited (Lame, 2019; Booth et al., 2022; Paul & Barari, 2022; Sauer & Seuring, 2023) due to its rigorous and transparent methods for identifying, evaluating, and integrating evidence from prior scholarly studies. The review focused on peer-reviewed journal articles, conference papers, policy reports, books, and institutional publications published between 2000 and 2026. Relevant literature was identified using academic databases including Scopus, Web of Science, Google Scholar, JSTOR, IEEE Xplore, ScienceDirect, SpringerLink, and Emerald Insight by using key words and combinations that include: "public value," "public value loss," "e-government failure," "value destruction", "value co-destruction", "digital governance risks," "digital divide," "cybersecurity," "privacy concerns," "algorithmic governance," "citizen trust," "service quality," "digital exclusion," and "public sector digital transformation".

Thematic synthesis was used to analyze the literature. Identified themes were grouped into four main thematic clusters based on conceptual similarity and recurring patterns in the literature. These thematic clusters provide a structured framework for understanding multidimensional public value loss in digital governance systems.

First, relevant studies were screened for recurring public value risks. Second, similar concepts were grouped into preliminary codes, including exclusion, trust, privacy, transparency, cybersecurity, service quality, data governance, interoperability, and institutional capacity. Third, codes were aggregated into broader themes of public value loss. Fourth, the themes were interpreted through public value theory, socio-technical systems theory, and value co-destruction.

Thematic analysis has become one of the most widely used qualitative data analysis techniques across public administration, information systems, social sciences, and e-government studies due to its flexibility, rigor, and ability to generate rich insights from complex qualitative data sets. The method is widely regarded as suitable for exploring perceptions, experiences, attitudes, meanings, and interpretations, making it highly relevant to investigating public value-related studies, which often involve complex contexts. Moreover, unlike highly perspective-specific qualitative methodologies tied to philosophical assumptions, thematic analysis offers a theoretically flexible approach applicable across positivist, interpretivist, critical realist, pragmatic, and mixed-methods paradigms (Nowell et al., 2017; Braun & Clarke, 2022).

One of the principal rationales for selecting thematic analysis is its capacity to identify systematically, organize, analyze, and report patterns of meaning within focused qualitative data (Braun & Clarke, 2006). Braun and Clarke (Braun & Clarke, 2012, 2022) define thematic analysis as a method for identifying and analyzing recurring themes that represent significant aspects of participants' experiences in relation to the research questions. This representative makes thematic analysis especially valuable in studies where researchers seek to understand how stakeholders perceive digital government initiatives and public value loss outcomes.

Unlike grounded theory, which focuses on theory generation, or phenomenology, which seeks to understand lived experience, thematic analysis can be employed across various research objectives without strict adherence to a specific theoretical orientation (Braun & Clarke, 2022). Such feasibility allows researchers to examine qualitative data inductively, in which themes emerge from the data, or deductively, in which the analysis is guided by existing theoretical constructs (Proudfoot, 2023). Studies investigating the public value of e-government often begin with already established theoretical constructs. Therefore, thematic analysis provides a

suitable technique for exploring how theoretically informed dimensions establish insights while remaining open to emerging new insights.

Another key strength of thematic analysis is its suitability for handling large and diverse qualitative datasets (Zairul, 2025). Public value-related studies may contain substantial contextual information that requires systematic coding and interpretation. Thematic analysis provides a structured analytical process through familiar stages, including data familiarization, initial coding, theme generation, theme review, theme definition, and report writing. The systematic process further enhances analytical transparency and methodological rigor while enabling efficient, effective management of large volumes of qualitative data (Nowell et al., 2017; Braun & Clarke, 2012).

Lincoln and Guba (1988) argue that qualitative studies should demonstrate credibility, transferability, dependability, and confirmability. Thematic analysis contributes significantly to these aspects of qualitative research. Here, the systematic coding procedures associated with thematic analysis facilitate the creation of an audit trail documenting analytical decisions and theme development. The researcher can further strengthen trustworthiness through techniques such as member checking, peer debriefing, reflexive journaling, and triangulation. Therefore, it could be argued that thematic analysis provides a transparent methodological framework that enhances the reliability and validity of qualitative findings (Miles et al., 2014; Nowell et al., 2017; Zairul, 2025).

More significantly, the method is highly suitable for policy-oriented research because it facilitates the identification of actionable themes that can inform decision-making and public-sector reforms (Braun & Clarke, 2006, 2012, 2022). Public institutions often require practical recommendations derived from the stakeholder perspective to make informed decisions. Thematic analysis enables researchers to translate participants' experiences into meaningful themes that can guide strategies, policy interventions, service improvements, and digital transformation initiatives.

More recent methodological developments have further strengthened the academic credibility of thematic analysis, with Braun and Clarke (Braun & Clarke, 2006, 2012, 2022) emphasizing researcher reflexivity and active engagement in theory development. Themes are not simply discovered within the data but are constructed through the interaction between the researcher and the dataset. Such an approach aligns particularly well with pragmatic research philosophies, in which the primary objective is to generate meaningful, useful knowledge that addresses real-world problems.

In summary, methodological flexibility, systematic analytical procedures, theoretical adaptability, and practical applicability, which enable the identification of meaningful patterns within qualitative data while maintaining analytical rigor and transparency, emerged as the rationale for selecting thematic analysis for data analysis in the study.

V. RESULTS ANALYSIS AND DISCUSSION

The study findings are organized into ten thematic clusters and further discussed in the sections below.

Theme 1: Digital Exclusion and Unequal Access

Digital exclusion is the most visible and widely documented dimension of public value loss in developing countries. Any digital initiatives and transformations assume that citizens have affordable connectivity, appropriate devices, digital literacy, language capability, and confidence to interact with online systems. In developing countries, low-income households, rural communities, persons with disabilities, women in restrictive social contexts, and citizens with limited literacy or education often risk digital exclusion (Cruz-Jesus et al., 2018; Department of Economics and Social Affairs, 2022; Nguyen, 2022; United Nations Department for Economic and Social Affairs, 2024) consequently, when public services are designed or redesigned around digital channels without adequate attention to these factors, selective access results, in contrast to the universal objective of any e-government.

Public value loss from digital exclusion is multidimensional (Engen et al., 2021; Weigl et al., 2024). First, exclusion reduces service equity because the benefits of e-government go to the public who already possess digital resources and skills. Second, the exclusion undermines social justice for vulnerable populations in a society where these groups may lose access to digital services intended to enhance quality of life. Third, exclusion may also damage legitimacy, since citizens perceive e-government as serving urban and more educated groups rather than the entire population. Fourth, exclusions increase informal dependency, as citizens unable to access digital services may rely on intermediaries, creating privacy risks and leaving them vulnerable to exploitation.

Digital exclusion is not exclusively a connectivity problem. A United Nations study (United Nations Department for Economic and Social Affairs, 2024) argues that digital inclusion must shift from access to empowerment, with the government considering safety, affordability, skills, confidence, content relevance, and institutional support. Similarly, the World Bank's GovTech framework (Institutions Global Department, World Bank, 2025) emphasizes digital skills, legal frameworks, institutions, and citizen engagement as enablers of digital government maturity rather than optional add-ons. This is a significant focus, as many e-government projects in developing countries have prioritized digital portals while underinvesting in human capital and support systems for sustainability.

As a result, public value loss occurs when governments overestimate digital readiness and underestimate citizen diversity. Digital-first strategies may, therefore, be efficient from a government perspective, but undermine marginal population segments of a society, resulting in value destruction. Therefore, an approach that serves public value preservation requires multi-channel service delivery, inclusive design, local language support, assisted digital access, disability accessibility, affordability policies, and continuous monitoring.

Theme 2: Service Quality Degradation and Administrative Burden

E-government is often cited as a means of providing more convenient services. However, unreliable digital services, usability issues, and poorly designed, poorly integrated services that prioritize administrative efficiency over citizens' needs result in a loss of public value. Service quality degradation is common when governments digitize bureaucratic procedures without simplifying the

rules and regulations that pertain. As a result, citizens may encounter complex online interactions, digital portal failures under high demand, unclear instructions, redundant document uploads, slow backend processing, and limited client service support mechanisms.

Studies on digital public services (Xin et al., 2022; Asmawanti-S et al., 2025) emphasize that information quality, systems quality, and service quality drive satisfaction and adoption. Poor quality not only reduces satisfaction but also shifts the administrative burden onto the public (Mensah et al., 2022). In contrast to effort reduction, digital systems may require citizens to troubleshoot technical problems, remember passwords, resolve authentication errors, navigate single-language interfaces, or repeatedly contact public service institutions. These interactions may be particularly harmful to citizens with limited access to devices or low literacy, leading to a loss of public value.

Administrative burden also creates unintended inequality. Here, the citizens with high digital skills can overcome complex online procedures, whereas less literate individuals may abandon digital applications or rely on intermediaries. In such situations, e-government may improve measured efficiency for public service institutions while hindering real access for citizens. Therefore, the public value loss remains hidden if the focus is solely on online transactions or cost savings. As such, a more appropriate evaluation should not be limited to examining completion rates and should instead focus on failed attempts, user effort, support requests, abandonment, feedback resolutions, and distributional impacts across various social groups (Weigl et al., 2024; Chan et al., 2025).

In developing countries, service quality degradation is linked to inadequate maintenance budgets and fragmented ownership. Digital transformation initiatives are sometimes launched as high profile reforms but receive less attention to long-term support and maintenance (Deng et al., 2018; Twizeyimana & Andersson, 2019; Tennakoon, 2020; Huda et al., 2022; Sheoran & Vij, 2022; Twizeyimana, 2023; Omweri, 2024; Ahmed et al., 2025; Hettiarachchi & Wanigasekara, 2025). Without continuous process redesigns, digital portals can become symbolic rather than transformative, destroying public value. Public value of e-government initiatives is perceived only when digital services are reliable, understandable, accessible, and responsive to socially desirable outcomes.

Theme 3: Trust Erosion and Institutional Legitimacy

Trust is a core dimension of e-government success (Deng et al., 2018; Mensah et al., 2022). Public trust must be placed in digital platforms to ensure that they are reliable, that personal data will be protected, that online transactions will be secure and recognized, and that decisions related to them will be fair. In developing countries, where governance structures are fragile, failures in digital systems can quickly translate into broader distrust of the e-government. Herein, public value loss occurs when citizens experience system interruptions, breakdowns, data misuse, service inconsistencies, communication failures, and poor feedback handling (Calzada & Almirall, 2020; Lee-Geiller, 2024; Fahmi, 2025; Nasution, 2025).

E-government strengthens trust by improving transparency and responsiveness. However, public trust erodes if digital transformation initiatives are perceived as insecure, unclear, or unevenly distributed (Maulan & Fitriani, 2025). For instance, a citizen who fails to receive a welfare payment due to an authentication error, or a user who is prevented from obtaining digital services due to complex user interfaces, or is prevented from obtaining services as a result of inadequate ICT infrastructure or poor feedback for public grievances or lack of local language support in digital initiatives may interpret the problem as not solely technical but as government negligence. Similarly, citizens may avoid online health-related services and services related to identity or tax filing due to mistrust (Fadrial et al., 2024; Virnandes et al., 2025). Trust erosion, therefore, is a primary outcome and a central form of public value loss, as legitimacy is a primary value of public service institutions (Abdulkareem et al., 2022).

Recent studies (Abdulkareem et al., 2022; Fahmi, 2025; Kaplale & Yoernaldi, 2025; Maulan & Fitriani, 2025) further emphasize the crucial relationship between digital literacy and trust. Citizens with low literacy may be less able to evaluate digital risks. Conversely, digitally skilled citizens may still distrust digital initiatives if privacy and accountability are weak. Thus, trust is not produced through the technology alone. Thus, it requires institutional competency, regulatory frameworks, service reliability, proactive and meaningful support, and demonstrated responsiveness. Therefore, the public value loss framework should make efforts to distinguish trust in digital platforms from trust in government (Mensah et al., 2022; Xin et al., 2022; Fadrial et al., 2024), where these digital platforms may be technically functional; hence, public trust may remain in government motives, particularly relevant to digital identity, taxation, surveillance and social protection systems. Developing countries, therefore, should treat trust as an outcome to be governed, measured, and protected through independent oversight, transparent communication, privacy protections, cybersecurity readiness, and accessible public grievance mechanisms.

Theme 4: Privacy, Surveillance, and Data Protection Risks

E-government increasingly depends on data. Governments collect and integrate public data for identification, taxation, licensing, health, education, and law enforcement, as well as for citizens' welfare, to improve administrative accuracy and effectiveness and reduce fraud, while also posing risks to privacy and surveillance. As such, the public value loss occurs when citizens of a society lose control of personal information when data is collected beyond intended legitimate purposes due to excessive monitoring or inadequate transparency (Barati, 2023; Benmohamed et al., 2024; Grossi & Vakkuri, 2024; OECD, 2024; United Nations Department for Economic and Social Affairs, 2024).

Privacy concerns are amplified in developing-country settings where data and privacy protection laws are institutionally fragmented, weakly enforced, or still new. In these environments, even where laws exist, regulatory authorities may lack technical expertise or resources, or be free from interference. Furthermore, public awareness of these mechanisms remains low. This creates an imbalance between the government and the citizens, resulting in a loss of public value.

For instance, digital identity systems renew tension between public value creation and destruction. Though these initiatives enable service access, reduce duplication, and support financial inclusion, they may still exclude certain segments of society who cannot enroll, increase surveillance, or create centralized data repositories that are vulnerable to misuse, which in contrast to international organizations emphasis on data minimization, inclusion, security and accountability in digital public infrastructure (Institutions Global Department, World Bank, 2025; WorldBankGroup, 2025). These principles are important because payments,

data exchange, and citizens' identity systems are foundational to shaping citizens' relationships with the government. Additionally, privacy and surveillance concerns require sensitive public governance. Therefore, governments should implement privacy by design, purpose limitation, data minimization, independent oversight, data access logs, citizen rights to correction and deletion, and clear rules for inter-agency data sharing (Reedijk, 2017; Nookhao & Kiattisin, 2023; Paguay-Chimarro et al., 2025; Chan et al., 2025). The absence of such focus may enhance administrative efficiency while weakening rights-based public value, resulting in value destruction.

Theme 5: Cybersecurity Vulnerabilities and Systemic Risk

Today, cybersecurity is a major source of potential loss of public value because e-government systems collect and manage sensitive public data for essential services. Cyberattacks, ransomware, identity theft, website defacement, service disruption, and unauthorized access can directly harm citizens and undermine institutional credibility (Agawu, 2017; Sambana et al., 2021; Ziyokulova & Egamberdiev, 2026). Cybersecurity risks intensified in the developing-country context by fiscal constraints, resource limitations, outdated legacy systems, fragmented institutional arrangements, and weak incident response capacity (AL-Zahrani, 2020; Al - ma' aithah, 2022; Bencsik et al., 2024; United Nations Department for Economic and Social Affairs, 2024; WorldBankGroup, 2025).

The public value loss implications of cybersecurity are greater than the technical loss (Raza, 2024). A breach may expose citizens to financial fraud or discrimination. Further, a service outage may prevent access to benefits, health records, tax or revenue services. A compromised identity may also cause long-term harm. Cybersecurity breaches also may reduce public trust and discourage citizens from using digital services. Therefore, cybersecurity may be limited not only to operational risks but also to public protection issue (Li & Liao, 2016; Abdelhamid et al., 2019; Erfan Wahyudi & Wirearme, 2026).

Developing countries face contradictory digital dependencies, in which governments' digitalization efforts depend on secure infrastructure (Kumar et al., 2025). However, the cybersecurity concerns often lag behind these digital transformations. Public value loss occurs when digital transformations expand faster than associated risk governance, particularly a concern for integrated digital platforms and digital public infrastructure, where failures in one component can affect multiple services (Jha & Jha, 2024; Bencsik et al., 2024; Awan & Alam, 2025; Figueroa et al., 2025).

At the outset, it would require national cybersecurity strategies, regular audits, incident reporting mechanisms, citizen awareness, staff training, secure authentication, data encryption, and international cooperation to mitigate cybersecurity-related public value loss (Bokhari & Myeong, 2023; Bencsik et al., 2024; Jha & Jha, 2024; Figueroa et al., 2025). In essence, public value should treat cybersecurity readiness as a core dimension, because a convenient service cannot be considered successful unless it is secure from the public's perspective.

Theme 6: Transparency, Accountability, and Opacity

A key expectation of any e-government is to increase transparency by making information available online, reduce face-to-face discretion, and enable citizens to track services in real time online. However, digitalization efforts can also create new forms of impenetrability where citizens may not understand how decisions are made, which is the responsibility of public services organizations, how data is shared, or why applications are rejected. Public value loss occurs when systems are not demonstrating sufficient transparency, engage in hidden decision making, and reduce opportunities for explanation and accountability (Harrison et al., 2012; OECD, 2024).

Transparency deficits are particularly crucial when digital systems are used for taxation, risk scoring, policing, or welfare targeting. If the public is unable to understand or challenge automated decisions, efforts to ensure procedural fairness in digitalization may be impeded, eroding public trust in e-government services. Developing countries often lack strong administrative mechanisms, making it harder for the public to appeal digital oversights (Chuangkrai, 2025; Setyanto et al., 2025, 2025). This digital opacity could result in an imbalance of public state power in public administration, further contributing to public value loss.

Accountability is another dimension often complicated by outsourcing and public-private partnerships. Increasingly, many e-government systems are designed, hosted, and maintained by the private sector. However, when failures occur, the responsibilities between public service institutions, regulators, political authorities, government ministries, and service providers are unclear. Related procurement contracts limit transparency; while citizens may have no direct channels to interact, public value may be lost when accountability becomes distributed without enforce (Espinosa & Pino, 2025; Srivastava & Sharma, 2025; Eizaguirre et al., 2026).

Therefore, transparency in e-government should extend beyond the availability of information online (Sari & Muslim, 2023; OECD, 2024). It should facilitate explainable processes, decision notices, clear ownership, audit trails, performance reporting and monitoring, accessible governance mechanisms, open standards, and public participation in design.

Theme 7: Institutional Capacity and Governance Weaknesses

Institutional capacity is one of the key determinants of public value creation or loss. Developing countries frequently face shortages of digital skills, weak project management, budget constraints, political discontinuity, and fragmented processes and practices. These conditions can lead to project delays, duplication, poor maintenance, unsustainable systems, and low public adaptation (Mergel et al., 2021; OECD, 2024; WorldBankGroup, 2025).

Apart from that, public value loss occurs when digital reforms prioritize technological projects over government transformations. For instance, the launch of a digital portal without process redesigns, clear data-sharing mechanisms, or coordinated responsibilities increases bureaucratic complexity for the public. Similarly, digital strategies may be limited to paper but fail in implementation due to fiscal constraints, weak leadership, or inadequate inter-agency authority, resulting in a policy performance gap (Amaral et al., 2026; Choi & Chandler, 2020), ultimately leading to public value destruction.

Further, governance weaknesses also influence the distribution of digital benefits within society (Bhatti et al., 2025; Rusmini et al., 2025). As such, local governments remain under-resourced, while central agencies may prioritize flagship services. This creates an uneven distribution of digital benefits within society, as urban populations may receive better digital services compared to rural populations. Additionally, donor funding for digital transformation initiatives may be unevenly distributed, creating fragmented public value that leaves certain segments of society behind and results in value destruction.

To reduce institutional sources of public value loss, governments need to adopt realistic financing, whole-of-government coordination between public service institutions, change management, policy reforms, and political commitment (Mergel et al., 2021).

Theme 8: Interoperability Failure and Fragmented Systems

It's essential for integrated service delivery for successful e-government. Interoperability is described as the ability of government information systems to exchange, interpret, and use data across public service institutions. In many developing-country contexts, public service institutions still operate isolated databases, incompatible legacy platforms, and various authentication methods. As a result, the public must repeatedly submit the same documents, visit multiple agencies, or spend time reconciling inconsistent records. These fragmentations therefore lead to public value loss in e-government due to reduced efficiency and prevent the state from facilitating seamless services (World Bank, 2020; Department of Economics and Social Affairs, 2022; OECD, 2024).

Interoperability failures are not limited to technical issues. It reflects regulatory barriers, data ownership conflicts, institutional silos and weak standards. Also, due to limited trust among service institutions, agencies may resist data sharing because of bureaucratic incentives, policy concerns, or a lack of mandate (Campmas et al., 2022; Madaki et al., 2024; Hettiarachchi & Wanigasekara, 2025). Therefore, governance arrangements, regulatory frameworks, authority, standards, and accountability are required to address interoperability issues and prevent value destruction.

Further, fragmented, siloed systems also pose a risk to data quality. Different institutions may hold data in different formats. As a result, citizens may encounter multiple service failures. Integration systems' data quality is critical, as it may be shared among systems. Therefore, public value loss includes not only inefficiency but also uneven outcomes caused by inaccurate or outdated data (Paradkar, 2021).

In essence, to address public value-sensitive interoperability concerns, governments need clear data governance frameworks, purpose limitation, audit logs, and mechanisms to facilitate record correct (Madaki et al., 2024; Kasiwi et al., 2025). Further, it should be evaluated based on both service value and rights protection (Thela et al., 2025).

Theme 9: Algorithmic Bias, Artificial Intelligence, and Automated Decision-Making

Automated decision-making and artificial intelligence are becoming increasingly prominent in today's e-government. Governments increasingly use data analytics for fraud detection, resource allocation, chatbots, risk assessment, document processing, and even process automation. While these technologies may improve efficiency, they may still introduce risks of bias, discrimination or accountability gaps. Public value loss occurs when automated systems or digital platforms in e-government reproduce social inequalities, make erroneous decisions, and reduce citizens' ability to contest outcomes (Guenduez et al., 2020, 2020; Vida Fernández, 2023).

Particularly in developing countries, AI governance challenges are hindering the development of e-government. As such, data used to train or operate these systems may be incomplete, biased, or under-representative. As a result, marginalized population segments of these societies may be underrepresented in administrative data. Furthermore, the capacity for auditing and the necessary legal frameworks for automated decisions remain underdeveloped (Luncă & Onufreiciuc, 2025; Mahant, 2025; Savveli et al., 2025). Therefore, these conditions increase the risk of unintended socially desirable outcomes rather than appearing as an objective result of public value loss.

Algorithmic bias further affects fairness, equity, and trust, which erode public value (Hakimi et al., 2023; Presuel & Sierra, 2024; Hedström, 2026). For instance, if automated welfare eligibility systems incorrectly exclude households due to incorrect data, the expected efficiency gains from e-government are achieved at the expense of a certain segment of society. Furthermore, if virtual service agents provide incorrect information, citizens may be misled, eroding public trust. If the risk rating system is not transparent, the public may be unable to understand and challenge the decision outcomes of these systems, further contributing to public value loss. Therefore, these concerns require critical attention, as the narratives discussed are not limited to technical errors and thus represent significant public value loss.

Public value concerns whether AI can be governed in ways that preserve equity, accountability, and citizens' rights (Hakimi et al., 2023; Presuel & Sierra, 2024). As such, governments should avoid premature automation to mitigate AI-related value loss, a risk that requires human oversight, algorithmic impact assessments, audits, appeal mechanisms, and inclusive data governance.

Theme 10: Value Co-Destruction and Citizen Experience

In e-government systems, citizens are not passive participants (Plé & Cáceres, 2010; Sancino, 2022; Chan et al., 2025). They provide data, navigate platforms, interpret requirements, report issues, and adapt to changing service rules. As such, when these interactions are poorly designed or not adequately addressed, public value is lost through exclusion, wasted time, distrust, and frustration. Value co-destruction, in contrast to value co-creation, occurs when interactions among the public, government institutions, and digital systems produce negative outcomes rather than shared value.

Citizens' experience is therefore central to public value creation or loss (Engen et al., 2021; Cui & Osborne, 2023; Naveed et al., 2025) as a technically available service may still produce negative value if citizens are unable to interact as expected, understand the instructions, or obtain support. In a developing-country context, public experience is shaped by literacy, language diversity, device constraints, connectivity, distrust, and reliance on intermediaries. This is mainly because digital services are designed around ideal users rather than ordinary users.

The value co-destruction perspective is particularly useful for its emphasis on public value loss even in the absence of technical failures (Cui & Osborne, 2023; Weigl et al., 2024; Chan et al., 2025). Typically, e-government services may operate exactly as designed yet still cause harm if the design does not align with public expectations. For instance, mandatory tax filing may reduce queues for citizens with digital skills while excluding those without access to mobile devices or facing connectivity constraints. Automated services may help certain segments of society; however, they may still fail those with low literacy. Herein, online service delivery platforms may appear participatory yet remain ineffective, resulting in a loss of public value.

Therefore, citizen-centered and participatory design is crucial from the public value perspective. In that sense, government should involve different user segments in service design, application testing, provide assisted digital support, monitor complaints, maintain offline alternatives, and focus on measuring use efforts (Cluley & Radnor, 2021; Jaspers & Steen, 2021; Osborne et al., 2021; Sancino, 2022; Parker et al., 2023). Value destruction can be reduced when the public is treated as co-designers and participants rather than transaction endpoints.

5.1 Thematic Synthesis

The literature review (Alexander & Vallström, 2023; Savveli et al., 2025; Mergel et al., 2026) suggests that public value loss in e-government is not limited to a single failure aspect. It's a cumulative outcome that emerges through the interaction among citizens, institutions, and technology. As such, digital exclusion reduces equity; poor service quality increases administrative burden; trust erosion weakens legitimacy; privacy and cybersecurity failures threaten rights and safety; transparency deficits weaken accountability; institutional weaknesses reduce sustainability; interoperability failure undermines integration; algorithmic bias threatens fairness; and poor citizen experience produces value co-destruction.

Furthermore, these themes are mutually reinforcing. For instance, digital exclusion can erode trust when vulnerable or marginalized citizens perceive e-government as inaccessible. Also, cybersecurity breaches can exacerbate privacy concerns and hinder adoption. Interoperability failures may degrade service quality and further increase operational and administrative burdens. Algorithmic unclarity may also weaken trust and accountability. Institutional weakness may further worsen all other themes, as it is essential to the design of government capacity and regulation, and to the maintenance of digital systems.

Another central finding is that public value loss is often unnoticed, uncaptured, or largely invisible in conventional government evaluations. The standard, mostly focused indicators, such as transaction volume, number of online services, online digital portal availability, or cost-ownership approaches, may not capture exclusions, data at risk, experience burden, or those who are unable to challenge decisions in society. Therefore, public value loss frameworks should be inclusive of both objective system indicators and citizen-centric indicators, such as perceived trust, fairness, accessibility, privacy and security confidence, inclusion, and governance management.

However, it further shows that, from a developing country's perspective, the context of public value is a primary dimension (Hettiarachchi & Wanigasekara, 2025). In these country settings, digital initiatives may produce different outcomes depending on the availability of ICT infrastructure, literacy, public institutions, regulatory safeguards, and social inequalities. Consequently, policy transfer and adaptation from higher-income economies to developing countries can create public value losses if contextual differences are ignored. E-government strategies, therefore, must be locally grounded and institutionally feasible to produce socially desirable outcomes.

5.2 Thematic Analysis Table

Table 1 synthesizes observed thematic clusters into basic and global themes that underpin public value loss criteria, along with the associated mechanisms and risks of public value loss for developing countries

Table 1: Synthesis of thematic clusters

Basic themes	Global themes	Underlying Public Value Loss	Public value loss mechanism	Typical developing-country risk	Indicative citations
Digital exclusion	Digital Inclusion Challenges	-Reduced accessibility -Unequal service delivery -Increased citizen effort -Exclusion of vulnerable population	Citizens cannot access or use digital services	Rural, low-income, older, and low-literacy groups are excluded	(Cruz-Jesus et al., 2018; Department of Economics and Social Affairs, 2022; Nguyen, 2022; United Nations Department for Economic and Social Affairs, 2024) (Engen et al., 2021; Weigl et al., 2024) (Institutions Global Department, World Bank, 2025)

Basic themes	Global themes	Underlying Public Value Loss	Public value loss mechanism	Typical developing-country risk	Indicative citations
Service quality degradation			Digital systems increase user effort instead of reducing it	Complex portals, unreliable systems, and weak support	(Xin et al., 2022; Asmawanti-S et al., 2025) (Weigl et al., 2024; Chan et al., 2025) (Deng et al., 2018; Twizeyimana & Andersson, 2019; Tennakoon, 2020; Huda et al., 2022; Sheoran & Vij, 2022; Twizeyimana, 2023; Omweri, 2024; Ahmed et al., 2025; Hettiarachchi & Wanigasekara, 2025)
Trust erosion	Governance and Accountability Deficits	-Declining institutional legitimacy -Reduced citizen confidence -Loss of informational self-determination Reduced accountability	Citizens lose confidence in platforms and institutions	System failures, data misuse, and weak responsiveness	(Calzada & Almirall, 2020; Lee-Geiller, 2024; Fahmi, 2025; Nasution, 2025) (Fadrial et al., 2024; Virnandes et al., 2025) (Abdulkareem et al., 2022; Fahmi, 2025; Kaplale & Yoernaldi, 2025; Maulan & Fitriani, 2025)(Mensah et al., 2022; Xin et al., 2022; Fadrial et al., 2024)
Privacy and surveillance			Citizens lose control over personal information.	Weak data protection and excessive data collection	(Barati, 2023; Benmohamed et al., 2024; Grossi & Vakkuri, 2024; OECD, 2024; United Nations Department for Economic and Social Affairs, 2024) (Institutions Global Department, World Bank, 2025; WorldBankGroup, 2025) (Reedijk, 2017; Nookhao & Kiattisin, 2023;aguay-Chimarro et al., 2025; Chan et al., 2025)
Transparency deficits			Digital systems obscure decision-making and responsibility	Opaque eligibility rules and limited appeal mechanisms	(Harrison et al., 2012; OECD, 2024) (Chuangkrai, 2025; Setyarto et al., 2025) (Espinosa & Pino, 2025; Srivastava & Sharma, 2025;

Basic themes	Global themes	Underlying Public Value Loss	Public value loss mechanism	Typical developing-country risk	Indicative citations
					Eizaguirre et al., 2026) (Sari & Muslim, 2023; OECD, 2024)
Institutional weakness	Institutional and Organizational Weaknesses	-Poor implementation capacity -Fragmented service delivery -Administrative inefficiency Sustainability challenges	Limited capacity undermines implementation and sustainability	Fragmented mandates, weak skills, and inadequate budgets	(Mergel et al., 2021; OECD, 2024; WorldBankGroup, 2025) (Amaral et al., 2026; Choi & Chandler, 2020) (Bhatti et al., 2025; Rusmini et al., 2025)
Interoperability failure			Agencies cannot share and use data effectively	Repeated document submission and inconsistent records	(World Bank, 2020; Department of Economics and Social Affairs, 2022; OECD, 2024) (Campmas et al., 2022; Madaki et al., 2024; Hettiarachchi & Wanigasekara, 2025) (Paradkar, 2021) (Madaki et al., 2024; Kasiwi et al., 2025) (Thela et al., 2025)
Cybersecurity vulnerabilities	Technological and Socio-Technical Risks	-Exposure to cyber threats -Automated discrimination -Negative citizen experiences -Failed co-production and engagement	Digital services expose citizens and state systems to cyber risk	Limited cyber capacity and high dependence on digital infrastructure	(Agawu, 2017; Sambana et al., 2021; Ziyuqulova & Egamberdiev, 2026) (AL-Zahrani, 2020; Al-Malaita, 2022; Bencsik et al., 2024; United Nations Department for Economic and Social Affairs, 2024; WorldBankGroup, 2025) (Li & Liao, 2016; Abdelhamid et al., 2019; Erfan Wahyudi & Wiredarme, 2026) (Kumar et al., 2025) (Jha & Jha, 2024; Bencsik et al., 2024; Awan & Alam, 2025; Figueroa et al., 2025) (Bokhari & Myeong, 2023; Bencsik et al., 2024; Jha & Jha, 2024; Figueroa et al., 2025)
Algorithmic bias			Automated systems reproduce inequality or error.	Weak AI governance,	(Guenduez et al., 2020, 2020; Vida Fernández, 2023)

Basic themes	Global themes	Underlying Public Value Loss	Public value loss mechanism	Typical developing-country risk	Indicative citations
				biased data, and limited auditing	(Luncă & Onufreiciuc, 2025; Mahant, 2025; Savelli et al., 2025) (Hakimi et al., 2023; Presuel & Sierra, 2024; Hedström, 2026) (Hakimi et al., 2023; Presuel & Sierra, 2024)
Value co-destruction			Citizen-government-platform interactions generate negative experiences.	Dependency on intermediaries, frustration, and grievance failure	(Engen et al., 2021; Naveed et al., 2025) (Cui & Osborne, 2023; Weigl et al., 2024; Chan et al., 2025) (Cluley & Radnor, 2021; Jaspers & Steen, 2021; Osborne et al., 2021; Sancino, 2022; Parker et al., 2023)

5.2.1 Global Theme One: Digital Inclusion Challenges

Digital inclusion challenges remain a fundamental global theme, contributing to the public value loss dimension of e-government, encompassing interrelated issues of digital exclusion and service quality degradation. Digital exclusion occurs when a population is unable to access or effectively use digital public services due to barriers such as limited internet connectivity, lack of ICT infrastructure, low digital literacy, affordability constraints, or geographic isolation (Department of Economics and Social Affairs, 2022; OECD, 2024). These impediments disproportionately affect vulnerable populations, rural communities, and lower-income populations, thereby limiting equal access to government services (United Nations Department for Economic and Social Affairs, 2024). This contrasts with the objectives of any e-government that promotes universal access.

Service quality degradation further complicates digital exclusion by failing usability, reliability, and responsiveness of e-government initiatives. Poor system design, system interruptions, slow response times, fragmented service delivery, and inadequate user support increase citizens' effort to access digital services, thereby reducing user satisfaction and discouraging continuous engagement (Mensah et al., 2022; Asmawanti-S et al., 2025). According to DeLone and McLean's Information Systems Success Model (De Vinci Research Center et al., 2025), deficiencies in system quality and service quality have a direct impact on user satisfaction; system use ultimately reduces public value outcomes of e-government initiatives (Moore, 1995; Twizeyimana & Andersson, 2019). Therefore, from a public value perspective, these challenges result in reduced accessibility, uneven service delivery, population exclusion, and a weakened ability of governments to deliver services, requiring renewed attention to address public value loss.

5.2.2 Global Theme Two: Governance and Accountability Deficits

Governance and accountability deficits also constitute a critical global theme underlying public value loss in e-government, which encompasses interconnected dimensions such as trust erosion, privacy and surveillance, and transparency deficits. E-government depends on citizens' confidence, and public service institutions need to demonstrate not only technological capabilities but also transparency, ethical practices, and responsibility. Public trust erodes when citizens perceive government service platforms as unreliable and unresponsive, with data breaches or misuse concerns, service failures, and a lack of governance (Kassen, 2024; Lee-Geiller, 2024). Reduced institutional trust weakens citizen engagement and limits the successful adaptation of digital public services.

Public value may be further undermined by privacy and surveillance concerns, which reduce citizens' sense of control over their personal information. Though e-government expansions often require extensive data collection, weak data protection frameworks, excessive surveillance practices, and unauthorized access still increase public perception of risk (OECD, 2024). Such concerns diminish public confidence in the government's ability to protect individual rights. Further, transparency deficits result from obscure government decision-making processes, algorithmic operational outcomes, and unclear administrative accountability. Inadequate mechanisms to address citizens' grievances and limited disclosures may further weaken accountability, which is a key intended purpose of any e-government (Harrison et al., 2012).

These governance and accountability deficits collectively reduce citizens' confidence, institutional legitimacy, and informational self-determination, and compromise the intended benefits of e-government (Moore, 1995), further preventing public engagement with digital services and resulting in public value destruction.

5.2.3 Global Theme Three: Institutional and Organizational Weaknesses

Institutional and organizational weaknesses contribute to public value loss in e-government by limiting government capacity to design, implement, and sustain effective digital public services, representing a significant global theme. This encompasses interrelated basic themes of institutional weakness and interoperability failure, both of which undermine the administrative effectiveness and public value outcomes. These include institutional weakness, which refers to inadequate organizational capacity, fragmented public institutions and governance structures, fiscal and human resource limitations, and limited technical expertise required to manage complex digital solutions (Mergel et al., 2021; OECD, 2024). Such deficiencies impede planning, policy implementation, and continuous service improvements, thereby reducing the government's ability to respond to public needs.

Interoperability failures further aggravate these challenges by limiting or preventing seamless communication and data exchange across public service institutions. Still, many public service organizations in most developing countries operate with isolated information systems, outdated technologies, fragmented service delivery, redundant tasks, and ineffective resource utilization (World Bank, 2020; OECD, 2021). The absence of interoperability among public service institutions limits the government's capacity to deliver citizen-centric public services. Result: increased administrative burden, delayed services, and inconsistent service quality, with diminishing perceived public value.

Therefore, institutional weakness and interoperability failures collectively contribute to fragmented service delivery, administrative inefficiency, and sustainability challenges, further reducing the government's ability to create responsive and equitable public services, leading to public value loss.

5.2.4 Global Theme Four: Technological and Socio-Technical Risks

Additionally, technological and socio-technical risks further constitute a critical global theme contributing to the public value loss dimension of e-government due to the unintended consequences of digital technologies on citizens, public service institutions, and society, which encompasses interconnected dimensions of cyber security vulnerabilities, algorithmic bias, and value co-destruction, which undermine fairness, reliability, and the legitimacy of e-government initiatives. Cybersecurity vulnerabilities arise when inadequate security governance, infrastructure deficits, and limited or weak organizational capacity expose government systems and public data to cyber threats, leading to service disruptions (World Bank, 2020; Mushtaq & Shah, 2025). Such occurrences compromise integrity, confidentiality and public trust in e-government services and reduce willingness to engage with online platforms.

Algorithmic bias further constrains public value outcomes when automated decision-making systems reproduce or amplify existing social inequalities through biased data, non-transparent algorithms or insufficient oversight. Moreover, poorly governed AI applications may produce discriminatory outcomes in areas such as welfare allocation, recruitment, law enforcement, and eligibility for public services, thereby undermining fairness and equal treatment. Lack of algorithmic transparency and accountability could further weaken citizens' confidence in government decision making (Guenduez et al., 2020; Misuraca & Viscusi, 2020).

Also, value co-destruction occurs when public and e-government systems generate unintended negative experiences, rather than creating mutual value. Unreliable systems, complex interfaces, ineffective grievance mechanisms, and limited opportunities for citizen participation in public decision-making produce dissatisfaction and disengagement, resulting in reduced societal benefits from e-government (Alexander & Vallström, 2023; Mergel et al., 2026). In essence, these technological and socio-technical risks contribute to increased cyber threats, automated discrimination, negative citizen experiences, and failed co-production, thereby diminishing public value creation.

Annexure 1.0 of the document describe the preparation of literature for thematic analysis in ALTAS ti qualitative software. Thematic analysis performed referring 63 related peer reviewed journals based on earlier discussed criteria.

VI. RESEARCH GAPS

Few studies exclusively operationalize public value loss as a multidimensional construct. Much of the literature focuses on satisfaction, adaptation, service quality, and efficiency. While these outcomes are important, they do not fully capture the loss of public value. Therefore, there is a need for conceptual models that address the measurement of public value loss alongside value creation.

The second gap is methodological. Many studies rely on cross-sectional surveys of users with ready access to digital services. While such approaches have their own merits, designs may exclude digitally excluded population segments, and vulnerable groups may be underrepresented, resulting in selection bias because the public most likely to experience public value loss may not be included in the sample. Future research therefore needs to combine user surveys with non-user studies, qualitative interviews, service journey mapping, and administrative journey data analysis.

Developing countries are most often treated as a broad category, but deficits in infrastructure, governance, legal systems, political context, digital literacy, and administrative approaches reflect a contextual gap. It's necessary to perform comparative studies across regions such as South Asia, Sub-Saharan Africa, Southeast Asia, the Middle East, and Latin America. Such studies further advance to identify sources of value loss and those that are context-specific

Emerging technologies are the fourth gap. Empirical evidence on the effects of public value loss remains limited, though studies on AI, digital identity, data exchange platforms, and digital public infrastructure are growing. Future studies, therefore, should examine algorithmic decision-making, biometric exclusion, data protection implementation, cybersecurity incidents, and citizen redress mechanisms.

Longitudinal outcomes are another gap. Public value loss may emerge over time as systems scale, institutions change, or the public increasingly resorts to digital channels. Cross-sectional evaluations, therefore, may miss delayed harmful outcomes such as trust erosion, exclusion from automated systems, or increased administrative burden. Longitudinal studies are therefore crucial to assess sustained public value outcomes.

VII. A CONCEPTUAL FRAMEWORK TO EVALUATE THE PUBLIC VALUE LOSS IN E-GOVERNMENT IN DEVELOPING COUNTRIES

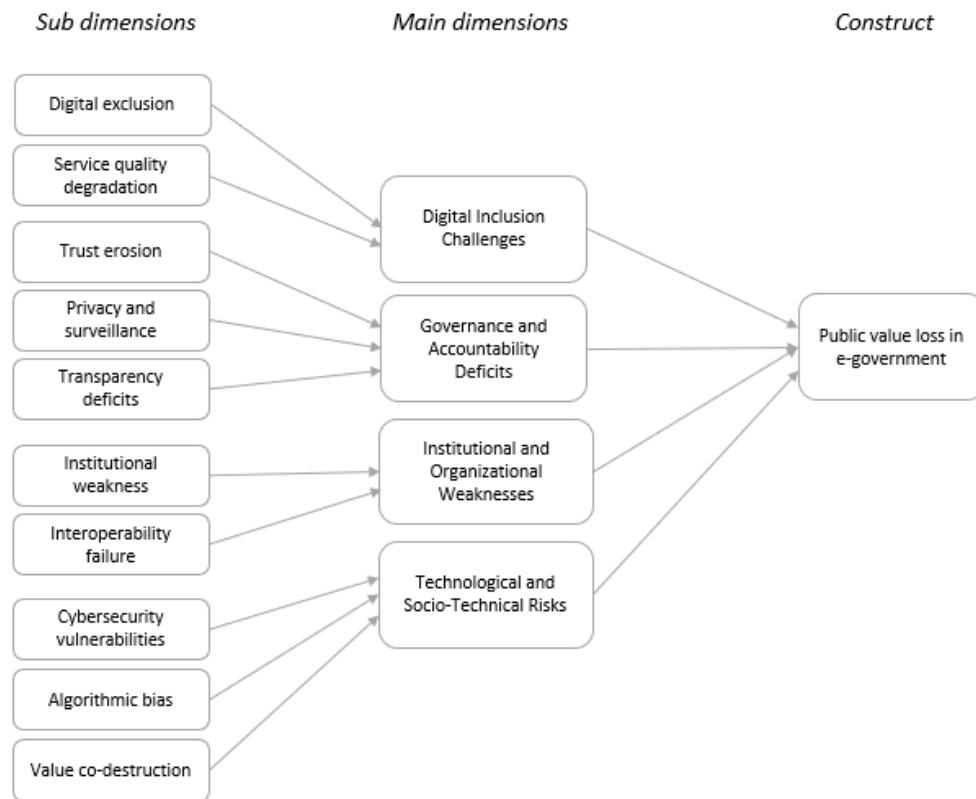


Figure 1: Author's illustration | Proposed conceptual framework to evaluate the public value loss of e-government

At large, emerging literature suggests renewed concern about the public value loss dimensions of e-government, where most existing public value measurement frameworks ignore crucial dimensions such as value co-creation and public value loss. Further, addressing public value loss is equally critical, especially in developing-country settings, where digital initiatives are often rated less mature and struggle with conflicting fiscal priorities. Thus, it is necessary to focus equally on public value and public value loss.

Figure 1 outlines the proposal to adopt a new conceptual framework for assessing public value loss in developing countries that incorporates dimensions relevant to developed countries.

The proposed framework posits a public value loss in e-government, represented by the following dimensions: Digital Inclusion Challenges, Governance and Accountability Deficits, Institutional and Organizational Weaknesses, and Technological and Socio-Technical Risks. It is further hypothesized these main dimensions represent ten sub dimensions such as (a) Digital Inclusion Challenges: Digital exclusion, Service quality degradation, (b) Governance and Accountability Deficits: Trust erosion, Privacy and surveillance, Transparency deficits (c) Institutional and Organizational Weaknesses: Institutional weakness, Interoperability failure and (d) Technological and Socio-Technical Risks: Cybersecurity vulnerabilities, Algorithmic bias and Value co-destruction.

A self-administered structured questionnaire consisting of 40 items is being developed as a measurement instrument to validate the proposed framework. Each item uses a 5-point Likert scale, with 5 representing "highly valuable" and 0 "not valuable at all"; a pilot study with 40 participants assessed the instrument's relevance before deployment.

Further, e-government service users across urban and suburban areas of Sri Lanka would be the focus of the sample population, with a sample size of 1,500—using a simple random sampling technique. IBM SPSS 25.0 statistical software will be utilized to screen the collected data. Quantitative data collected from the survey were analyzed using structural equation modeling (SEM) to examine the critical attributes by analyzing the structural relationships of the proposed framework and testing relationships between measured variables and unobserved model constructs. Additionally, confirmatory factor analysis (CFA) and analysis of moment structures (AMOS) were performed to assess the constructs. The best-fit model was assessed using the Chi-square (χ^2) statistic and the ratio of χ^2 to degrees of freedom (χ^2/df). Root mean square error of approximation (RMSEA) and standardized root mean residual (SRMR) were used to assess the absolute fit of the framework. Comparative fit index (CFI), Goodness of fit index (GFI), Adjusted goodness of fit (AGFI), and Tucker-Lewis's index (TLI) are statistical measures used to assess model fit. The maximum-likelihood statistical technique is used to estimate the model parameters. To assess the convergent validity of hypothesized constructs through the

significance of factor loading of all items, utilizing average variance extracted (AVE) and the reliability of constructs. Also, the significance of factor loadings of the model items to assess through SFL for each observed item.

VIII. CONCLUSION

The study organized the emerging literature on public value loss in e-government in developing countries through a hybrid thematic analysis approach. Overall, ten basic themes are grouped into four global themes describing the loss of public value in e-government. The literature further suggests that the public value loss dimension of e-government remains under-researched. This implies an urgent and important need for further empirical studies on this critical dimension of the public value of e-government.

IX. ACKNOWLEDGMENT

The author wishes to express his deep appreciation to Dr. Sirilal Warankula for his enthusiastic encouragement, assistance, and constructive critiques in the development of the study.

X. REFERENCES

1. Abdelhamid, M., Kisekka, V., & Samonas, S. (2019). Mitigating e-services avoidance: The role of government cybersecurity preparedness. *Information & Computer Security*, 27(1), 26–46. <https://doi.org/10.1108/ICS-02-2018-0024>
2. Abdou Hussien, A. (2021). Cyber Security Crimes, Ethics and a Suggested Algorithm to Overcome Cyber-Physical Systems Problems (CybSec1). *Journal of Information Security*, 12(01), 56–78. <https://doi.org/10.4236/jis.2021.121003>
3. Abdulkareem, A. K., Abdulkareem, Z. J., Ishola, A. A., & Akindele, I. T. (2022). Does e-government impact e-participation? The influence of trust in e-government. *International Review of Public Administration*, 27(2), 91–110. <https://doi.org/10.1080/12294659.2022.2071540>
4. Agawu, E. (2017). *What's Next for E-Government? Innovations in E-Government Through a Cybersecurity*.
5. Agyei-Ababio, N., Ansong, E., & Assa-Agyei, K. (2023). Digitalization of revenue mobilization in an emerging economy: The new Institutional Theory perspective. *International Journal of Information Systems and Project Management*, 11(2), 5–22. <https://doi.org/10.12821/ijispm110201>
6. Ahmed, M. A., Kaya, T., & Karanfiller, T. (2025). Developing a sustainability strategy for e-government system in regional government: Case of Northern Iraq. *Information Development*, 02666669251334135. <https://doi.org/10.1177/02666669251334135>
7. Alexander, M., & Vallström, N. (2023). Value co-destruction: Problems and solutions. *AMS Review*, 13(3–4), 200–210. <https://doi.org/10.1007/s13162-023-00269-z>
8. Al-ma'aitah, M. A. (2022). Investigating the drivers of cybersecurity enhancement in public organizations: The case of Jordan. *THE ELECTRONIC JOURNAL OF INFORMATION SYSTEMS IN DEVELOPING COUNTRIES*, 88(5), e12223. <https://doi.org/10.1002/isd2.12223>
9. AL-Zahrani, M. (2020). Integrating IS success model with cybersecurity factors for e-government implementation in the Kingdom of Saudi Arabia. *International Journal of Electrical and Computer Engineering (IJECE)*, 10(5), 4937. <https://doi.org/10.11591/ijece.v10i5.pp4937-4955>
10. Amaral, E., Naranjo-Zolotov, M., & Bação, F. (2026). Unequal AI readiness: Institutional and digital disparities in e-government across the European Union. *Telematics and Informatics*, 107, 102400. <https://doi.org/10.1016/j.tele.2026.102400>
11. Andersen, Brewer, G. A., & Leisink, P. (2021). Stakeholders, Public Value(s), and Public Service Performance. In P. Leisink, L. B. Andersen, G. A. Brewer, C. B. Jacobsen, E. Knies, & W. Vandenabeele (Eds.), *Managing for Public Service Performance* (1st ed., pp. 25–44). Oxford University Press Oxford. <https://doi.org/10.1093/oso/9780192893420.003.0002>

12. Ansell, C., & Torfing, J. (2021). Co-creation: The new kid on the block in public governance. *Policy & Politics*, 49(2), 211–230. <https://doi.org/10.1332/030557321x16115951196045>
13. Apriliyanti, I. D., Kusumasari, B., Pramusinto, A., & Setianto, W. A. (2021). Digital divide in ASEAN member states: Analyzing the critical factors for successful e-government programs. *Online Information Review*, 45(2), 440–460. <https://doi.org/10.1108/OIR-05-2020-0158>
14. Asmawanti-S, D., Afiah, N. N., Ritchi, H., & Suharman, H. (2025). Literature review of government digital services based on public value theory and citizen perspectives. *Cogent Business & Management*, 12(1), 2518494. <https://doi.org/10.1080/23311975.2025.2518494>
15. Awan, M., & Alam, A. (2025). Cybersecurity Threats and Defensive Strategies for Small and Medium Firms: A Systematic Mapping Study. *Administrative Sciences*, 15(12), 481. <https://doi.org/10.3390/admsci15120481>
16. Barati, M. (2023). Open Government Data Programs and Information Privacy Concerns: A Literature Review. *JeDEM - eJournal of eDemocracy and Open Government*, 15(1), 73–123. <https://doi.org/10.29379/jedem.v15i1.759>
17. Bencsik, A., Karpiuk, M., & Strizzolo, N. (2024). Cybersecurity of E-government. *Cybersecurity and Law*, 11(2), 146–160. <https://doi.org/10.35467/cal/188565>
18. Benmohamed, N., Shen, J., & Vlahu-Gjorgievska, E. (2024). Public value creation through the use of open government data in Australian public sector: A quantitative study from employees' perspective. *Government Information Quarterly*, 41(2), 101930. <https://doi.org/10.1016/j.giq.2024.101930>
19. Bentzen, T. Ø., Sørensen, E., & Torfing, J. (2020). *Strengthening public service production, administrative problem solving, and political leadership through co-creation of innovative public value outcomes?* 25.
20. Bhatti, M. A., Hussain, A., Ahmad, T. I., & Nawaz, M. A. (2025). E-Government Development and its Role in Enhancing Government Effectiveness and Public Sector Governance. *Review of Applied Management and Social Sciences*, 8(1), 375–389. <https://doi.org/10.47067/ramss.v8i1.467>
21. Bokhari, S. A. A., & Myeong, S. (2023). The Influence of Artificial Intelligence on E-Governance and Cybersecurity in Smart Cities: A Stakeholder's Perspective. *IEEE Access*, 11, 69783–69797. <https://doi.org/10.1109/ACCESS.2023.3293480>
22. Booth, A., Sutton, A., Clowes, M., & Martyn-St James, M. (2022). *Systematic approaches to a successful literature review* (Third edition). SAGE.
23. Bozeman, B. (2023). What is public about public research? The case of COVID-19 RD. In B. Lepori, B. Jongbloed, & D. Hicks (Eds.), *Handbook of Public Funding of Research* (pp. 21–37). Edward Elgar Publishing. <https://doi.org/10.4337/9781800883086.00007>
24. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
25. Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological*. (pp. 57–71). American Psychological Association. <https://doi.org/10.1037/13620-004>
26. Braun, V., & Clarke, V. (2022). Thematic Analysis. A Practical Guide. In *Thematic Analysis. A Practical Guide* (pp. 470–474). SAGE Publications Ltd.
27. Bryson, J. M., Crosby, B. C., & Bloomberg, L. (Eds.). (2015). *Public value and public administration*. Georgetown University Press.
28. Calzada, I., & Almirall, E. (2020). Data ecosystems for protecting European citizens' digital rights. *Transforming Government: People, Process and Policy*, 14(2), 133–147. <https://doi.org/10.1108/TG-03-2020-0047>

29. Campmas, A., Iacob, N., & Simonelli, F. (2022). How can interoperability stimulate the use of digital public services? An analysis of national interoperability frameworks and e-Government in the European Union. *Data & Policy*, 4, e19. <https://doi.org/10.1017/dap.2022.11>
30. Carter, L., Weerakkody, V., Phillips, B., & Dwivedi, Y. K. (2016). Citizen Adoption of E-Government Services: Exploring Citizen Perceptions of Online Services in the United States and United Kingdom. *Information Systems Management*, 33(2), 124–140. <https://doi.org/10.1080/10580530.2016.1155948>
31. Chan, F. K. Y., Thong, J. Y. L., Brown, S. A., & Venkatesh, V. (2025). Design characteristics and service experience with e-government services: A public value perspective. *International Journal of Information Management*, 80, 102834. <https://doi.org/10.1016/j.ijinfomgt.2024.102834>
32. Choi, T., & Chandler, S. M. (2020). Knowledge vacuum: An organizational learning dynamic of how e-government innovations fail. *Government Information Quarterly*, 37(1), 101416. <https://doi.org/10.1016/j.giq.2019.101416>
33. Chuangkrai, R. (2025). ENHANCING TRANSPARENCY AND ENGAGEMENT: THE ROLE OF E-GOVERNMENT INITIATIVES IN FOSTERING INCLUSIVE GOVERNANCE IN THE DIGITAL AGE. *Proceeding of International Conference on Social Science and Humanity*, 2(2), 15–25. <https://doi.org/10.61796/icossh.v2i2.28>
34. Cluley, V., & Radnor, Z. (2021). Rethinking co-creation: The fluid and relational process of value co-creation in public service organizations. *Public Money & Management*, 41(7), 563–572. <https://doi.org/10.1080/09540962.2020.1719672>
35. Conteh, C., & Harding, B. (2023). Boundary-spanning in public value co-creation through the lens of multilevel governance. *Public Management Review*, 25(1), 104–128. <https://doi.org/10.1080/14719037.2021.1942529>
36. Cordella, A., & Bonina, C. M. (2012). A public value perspective for ICT enabled public sector reforms: A theoretical reflection. *Government Information Quarterly*, 29(4), 512–520. <https://doi.org/10.1016/j.giq.2012.03.004>
37. Cordella, A., & Tempini, N. (2015). E-government and organizational change: Reappraising the role of ICT and bureaucracy in public service delivery. *Government Information Quarterly*, 32(3), 279–286. <https://doi.org/10.1016/j.giq.2015.03.005>
38. Cruz-Jesus, F., Oliveira, T., & Bacao, F. (2018). The Global Digital Divide: Evidence and Drivers. *Journal of Global Information Management*, 26(2), 1–26. <https://doi.org/10.4018/JGIM.2018040101>
39. Cui, T., & Osborne, S. P. (2023). Unpacking value destruction at the intersection between public and private value. *Public Administration*, 101(4), 1207–1226. <https://doi.org/10.1111/padm.12850>
40. De Vinci Research Center, Saba, P., DeLone, W., American University, Ul-Ain, N., De Vinci Research Center, Harfouche, A., Université Paris Nanterre, Ben Nasr, I., CERIIM, Excelia Group, Biot-Paquerot, G., Burgundy School of Business, Mallek, S., & Université de Lorraine. (2025). The DeLone and McLean Information Systems Success Model: What is the Future Evolution for Its Foundations, Components, and Applications? *Communications of the Association for Information Systems*, 57(1), 878–898. <https://doi.org/10.17705/1CAIS.05738>
41. Deng, H., Karunasena, K., & Xu, W. (2018). Evaluating the performance of e-government in developing countries: A public value perspective. *Internet Research*, 28(1), 169–190. <https://doi.org/10.1108/IntR-10-2016-0296>
42. Department of Economics and Social Affairs. (2022). *United Nations e-Government Survey 2022: The Future of Digital Government* (1st ed). United Nations Publications.
43. Djatmiko, G. H., Sinaga, O., & Pawirosumarto, S. (2025). Digital Transformation and Social Inclusion in Public Services: A Qualitative Analysis of E-Government Adoption for Marginalized Communities in Sustainable Governance. *Sustainability*, 17(7), 2908. <https://doi.org/10.3390/su17072908>
44. Eizaguirre, M., Gómez Funes, A., García-Monleón, F., & Carrero, O. (2026). Bridging digital divides: Infrastructure, transparency and mobile compatibility in citizen-centric e-governance across the EU.

European Journal of Innovation Management, 29(1), 1–22. <https://doi.org/10.1108/EJIM-05-2025-0670>

45. Engen, M., Fransson, M., Quist, J., & Skålén, P. (2021). Continuing the development of the public service logic: A study of value co-destruction in public services. *Public Management Review*, 23(6), 886–905. <https://doi.org/10.1080/14719037.2020.1720354>
46. Erfan Wahyudi & Wiredarme. (2026). LITERATURE ANALYSIS ON THE ROLE OF ARTIFICIAL INTELLIGENCE IN STRENGTHENING CYBERSECURITY IN E-GOVERNMENT SERVICES. *Jurnal Kecerdasan Buatan Dan Teknologi Informasi*, 5(2), 226–234. <https://doi.org/10.69916/jkbt.v5i2.455>
47. Espinosa, V. I., & Pino, A. (2025). E-government, inclusive growth, and the legitimacy of capitalism: Lessons from estonia. *Journal of Economic Behavior & Organization*, 238, 107248. <https://doi.org/10.1016/j.jebo.2025.107248>
48. European Commission. Directorate General for Communications Networks, Content and Technology., Capgemini., Sogeti., IDC., & Politecnico di Milano. (2024). *eGovernment benchmark 2024: Advancing pillars in digital public service delivery: background report*. Publications Office. <https://data.europa.eu/doi/10.2759/726556>
49. Fadrial, R., Sujianto, S., Tua Ricky Freddy Simanjuntak, H., Wirman, W., & Setiawan Wibowo, W. (2024). Fostering Trust Through Bytes: Unravelling the Impact of E-Government on Public Trust in Indonesian Local Government. *Interdisciplinary Journal of Information, Knowledge, and Management*, 19, 015. <https://doi.org/10.28945/5317>
50. Fahmi, A. R. (2025). *DIGITAL PUBLIC SERVICES AND CITIZEN TRUST IN GOVERNMENT*. 17(2).
51. Figueroa, V., Sánchez Crespo, L. E., Santos-Olmo, A., Rosado, D. G., & Fernández-Medina, E. (2025). Building a holistic cybersecurity framework for e-Government based on a systematic analysis of proposals. *International Journal of Information Security*, 24(3), 121. <https://doi.org/10.1007/s10207-025-01024-0>
52. Gil-Garcia, J. R., Dawes, S. S., & Pardo, T. A. (2021). *Digital Government and Public Management: Generating Public Sector Innovation at the Crossroads of Research and Practice* (1st ed.). Routledge. <https://doi.org/10.4324/9781003258742>
53. Grossi, G., & Vakkuri, J. (Eds.). (2024). *Handbook of Accounting and Public Governance: Exploring Hybridizations*. Edward Elgar Publishing. <https://doi.org/10.4337/9781800888456>
54. Guba, E. G. (1988). *Yvonna S. Lincoln Vanderbilt University*.
55. Guenduez, A. A., Mettler, T., & Schedler, K. (2020). Citizen Participation in Smart Government: A Conceptual Model and Two IoT Case Studies. In J. R. Gil-Garcia, T. A. Pardo, & M. Gasco-Hernandez (Eds.), *Beyond Smart and Connected Governments* (Vol. 30, pp. 189–209). Springer International Publishing. https://doi.org/10.1007/978-3-030-37464-8_9
56. Guo, Y. (2022). Digital Trust and the Reconstruction of Trust in the Digital Society: An Integrated Model based on Trust Theory and Expectation Confirmation Theory. *Digital Government: Research and Practice*, 3(4), 1–19. <https://doi.org/10.1145/3543860>
57. Hakimi, M., Hamidi, M. S., Miskinyar, M. S., & Sazish, B. (2023). *Integrating Artificial Intelligence into E-Government: Navigating Challenges, Opportunities, and Policy Implications*. <https://doi.org/10.5281/ZENODO.13142637>
58. Hancu-Budui, A., & Zorio-Grima, A. (2024). New Public Governance and Public Value Co-creation: The Case of the European Court of Auditors Environmental Audits. *Revista de Contabilidad*, 27(2), 275–287. <https://doi.org/10.6018/rcsar.519241>
59. Harrison, T. M., Pardo, T. A., & Cook, M. (2012). Creating Open Government Ecosystems: A Research and Development Agenda. *Future Internet*, 4(4), 900–928. <https://doi.org/10.3390/fi4040900>
60. Hedström, K. (2026). *The different roles of algorithms in research on governmental decision-making for citizen services*.

61. Heeks, R. (2006). Understanding and Measuring eGovernment: International Benchmarking Studies. *UNDESA*, 1–39.
62. Heeks, R. (2020). ICT4D 3.0? Part 2—The patterns of an emerging “digital-for-development” paradigm. *THE ELECTRONIC JOURNAL OF INFORMATION SYSTEMS IN DEVELOPING COUNTRIES*, 86(3), e12123. <https://doi.org/10.1002/isd2.12123>
63. Helbig, N. C., Gil-García, J. R., & Ferro, E. (2005). *Understanding the Complexity in Electronic Government: Implications from the Digital Divide literature*.
64. Hettiarachchi, N. (2025). *The influence of electronic government on Sri Lanka's Digital Economy*. 10(9).
65. Hettiarachchi, N., & Wanigasekara, J. (2025). *Exploring the Public Value of Electronic Government in Sri Lanka: A Critical Analysis of Emerging Research*. 10(7).
66. Huda, M. N., Kurniasari, E. N., & Ruroh, S. M. (2022). A Systematic Literature Review of E-Government Evaluation. *Journal of Local Government Issues*, 5(1), 32–48. <https://doi.org/10.22219/logos.v5i1.19784>
67. Institutions Global Department, World Bank. (2025). *2025-gtmi-WorldBank*. World bank.
68. Jaspers, S., & Steen, T. (2021). Does Co-Production Lead to the Creation of Public Value? Balancing the Dimensions of Public Value Creation in Urban Mobility Planning. *Administration & Society*, 53(4), 619–646. <https://doi.org/10.1177/0095399720957613>
69. Jha, R. K., & Jha, M. (2024). Optimizing E-Government Cybersecurity through Artificial Intelligence Integration. *Journal of Trends in Computer Science and Smart Technology*, 6(1), 67–87. <https://doi.org/10.36548/jtcsst.2024.1.005>
70. Kaplale, M. I., & Yoernaldi, Y. (2025). E-Government Implementation and Public Trust in Local Government Evidence from Indonesia. *Journal of Public Policy and Society*, 1(2). <https://doi.org/10.54268/jpps.v1i2.30613>
71. Kasiwi, A. N., Wahyuni, H. I., & Ratminto. (2025). DIGITAL TRANSFORMATION AND CROSS-ORGANIZATIONAL INTEROPERABILITY IN ELECTRONIC-BASED GOVERNMENT SYSTEMS. *Journal of Governance and Development (JGD)*, 21(2), 64–76. <https://doi.org/10.32890/jgd2025.21.2.5>
72. Kassen, M. (2024). Prospects of blockchain governance: Understanding key public values, principles, challenges, and opportunities. *Policy & Internet*, 16(1), 33–64. <https://doi.org/10.1002/poi3.365>
73. Kumar, S., Garg, A., & Niranjana, M. (2025). Enhancing Government Efficiency Through Cybersecurity Hardening. *Conference on Digital Government Research*, 1. <https://doi.org/10.59490/dgo.2025.1047>
74. Kurkela, K., Maijala, S., Tuurnas, S., & Jalonen, H. (2025). Citizen agency in value co-creation processes – a literature review. *International Journal of Public Sector Management*. <https://doi.org/10.1108/ijpsm-06-2024-0203>
75. Lai, C., & Lobo Marques, A. J. (2023). Aspects that constitute citizens' trust in e-government—A review and framework development. *Multidisciplinary Reviews*, 7(2), 2024023. <https://doi.org/10.31893/multirev.2024023>
76. Lame, G. (2019). Systematic Literature Reviews: An Introduction. *Proceedings of the Design Society: International Conference on Engineering Design*, 1(1), 1633–1642. <https://doi.org/10.1017/dsi.2019.169>
77. Lee-Geiller, S. (2024). The moderating effect of digital literacy on the link between e-government effectiveness and trust in government. *Journal of Policy Studies*, 39(4), 77–101. <https://doi.org/10.52372/jps.e672>
78. Legood, A., Van Der Werff, L., Lee, A., Den Hartog, D., & Van Knippenberg, D. (2023). A Critical Review of the Conceptualization, Operationalization, and Empirical Literature on Cognition-Based

- and Affect-Based Trust. *Journal of Management Studies*, 60(2), 495–537. <https://doi.org/10.1111/joms.12811>
79. Li, Z., & Liao, Q. (2016). An Economic Alternative to Improve Cybersecurity of E-government and Smart Cities. *Proceedings of the 17th International Digital Government Research Conference on Digital Government Research*, 455–464. <https://doi.org/10.1145/2912160.2912170>
80. Lindblad-Gidlund, K., & Giritli-Nygren, K. (2009). *The Myth of E-Government*.
81. Luncă, D., & Onufreiciuc, R. (2025). The Role of Artificial Intelligence in Strengthening Civic Participation in the European Union: Ensuring Administrative Transparency and Accessibility in Algorithmic E-Consultation. *European Journal of Law and Public Administration*, 12(2), 88–120. <https://doi.org/10.18662/eljpa/12.2/268>
82. Luo, C., Hasan, N. A. M., & Zamri Bin Ahmad, A. M. (2024). Exploring Satisfaction and Trust as Key Drivers of e-Government Continuance Intention: Evidence from China for Sustainable Digital Governance. *Sustainability*, 16(24), 11068. <https://doi.org/10.3390/su162411068>
83. Lybeck, R., Koiranen, I., & Koivula, A. (2024). From digital divide to digital capital: The role of education and digital skills in social media participation. *Universal Access in the Information Society*, 23(4), 1657–1669. <https://doi.org/10.1007/s10209-022-00961-0>
84. Macaya, J. F. M., Ribeiro, M. M., Jereissati, T., Dos Reis Lima, C., & Cunha, M. A. (2021). Gendering the digital divide: The use of electronic government services and implications for the digital gender gap. *Information Polity*, 26(2), 131–146. <https://doi.org/10.3233/IP-200307>
85. Macintosh, A. (2004). Characterizing e-participation in policy-making. *37th Annual Hawaii International Conference on System Sciences, 2004. Proceedings of The*, 10 pp. <https://doi.org/10.1109/HICSS.2004.1265300>
86. MacLean, D., & Titah, R. (2022). A Systematic Literature Review of Empirical Research on the Impacts of e-Government: A Public Value Perspective. *Public Administration Review*, 82(1), 23–38. <https://doi.org/10.1111/puar.13413>
87. Madaki, A. S., Ahmad, K., & Singh, D. (2024). IT integration implementation in e-government public sector in developing countries: A systematic literature review and model development. *Transforming Government: People, Process and Policy*, 18(3), 451–472. <https://doi.org/10.1108/TG-02-2024-0043>
88. Magsamen-Conrad, K., Billotte Verhoff, C. C., & Dillon, J. M. (2022). Technology Acceptance Models. In E. Y. Ho, C. L. Bylund, & J. C. M. Van Weert (Eds.), *The International Encyclopedia of Health Communication* (1st ed., pp. 1–8). Wiley. <https://doi.org/10.1002/9781119678816.ieh0776>
89. Mahant, R. (2025). *ARTIFICIAL INTELLIGENCE IN PUBLIC ADMINISTRATION: A DISRUPTIVE FORCE FOR EFFICIENT E-GOVERNANCE*. 19(01).
90. Maragno, G., Gastaldi, L., & Corso, M. (2021). e-Government for Public Values creation: A systematic literature review. *DG.O2021: The 22nd Annual International Conference on Digital Government Research*, 386–397. <https://doi.org/10.1145/3463677.3463692>
91. Masadeh, R., Almajal, D., Majali, T., Majali, S. A., & Al-Sherideh, A. S. (2023). An empirical study into the effect of the digital divide on the intention to adopt e-government. *International Journal of Data and Network Science*, 7(4), 1581–1594. <https://doi.org/10.5267/j.ijdns.2023.8.005>
92. Maulan, P. A., & Fitriani, N. (2025). E-Government and Public Trust: Examining the Impact of Digital Transparency on Citizen Engagement in Southeast Asia. *Dinamika: Jurnal Manajemen Sosial Ekonomi*, 4(2).
93. Mazzucato, M., & Ryan-Collins, J. (2022). Putting value creation back into “public value”: From market-fixing to market-shaping. *Journal of Economic Policy Reform*, 25(4), 345–360. <https://doi.org/10.1080/17487870.2022.2053537>
94. Mensah, I. K., Zeng, G., & Mwakapesa, D. S. (2022). Understanding the drivers of the public value of e-government: Validation of a public value e-government adoption model. *Frontiers in Psychology*, 13, 962615. <https://doi.org/10.3389/fpsyg.2022.962615>

95. Mergel, I., Edelmann, N., & Haug, N. (2026). Outcomes of Value Co-Creation and Co-Destruction in the Digital Transformation of Public Services. *Digital Government: Research and Practice*, 7(1), 1–19. <https://doi.org/10.1145/3743148>
96. Mergel, I., Ganapati, S., & Whitford, A. B. (2021). Agile: A New Way of Governing. *Public Administration Review*, 81(1), 161–165. <https://doi.org/10.1111/puar.13202>
97. Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (Edition 3). Sage.
98. Misuraca, G., & Viscusi, G. (2020). AI-Enabled Innovation in the Public Sector: A Framework for Digital Governance and Resilience. In G. Viale Pereira, M. Janssen, H. Lee, I. Lindgren, M. P. Rodríguez Bolívar, H. J. Scholl, & A. Zuiderwijk (Eds.), *Electronic Government* (Vol. 12219, pp. 110–120). Springer International Publishing. https://doi.org/10.1007/978-3-030-57599-1_9
99. Moore, M. H. (1995). *Creating public value: Strategic management in government*.
100. Moore, M. H. (2021). Creating Public Value: The Core Idea of Strategic Management in Government. *International Journal of Professional Business Review*, 6(1), e219. <https://doi.org/10.26668/businessreview/2021.v6i1.219>
101. Mosleh Zeebaree, M. Z., Mosleh Zeebaree, M. A., & Musbah Aqel, M. A. (2023). Challenges facing E-government implementation and adoption in the Era of 5G, 6G. *Jorunal of Internet Technology*, 24(1), 173–184. <https://doi.org/10.53106/160792642023012401016>
102. Mulgan, R. (2000). ‘Accountability’: An Ever-Expanding Concept? *Public Administration*, 78(3), 555–573. <https://doi.org/10.1111/1467-9299.00218>
103. Muller, S. H. A., Kalkman, S., Van Thiel, G. J. M. W., Mostert, M., & Van Delden, J. J. M. (2021). The social licence for data-intensive health research: Towards co-creation, public value and trust. *BMC Medical Ethics*, 22(1). <https://doi.org/10.1186/s12910-021-00677-5>
104. Mushtaq, S., & Shah, M. (2025). Mitigating Cybercrimes in E-Government Services: A Systematic Review and Bibliometric Analysis. *Digital*, 5(1), 3. <https://doi.org/10.3390/digital5010003>
105. Nasution, N. H. A. (2025). Digital Governance and Citizen Trust: Analyzing the Efficacy of E-Government Services in Mitigating Administrative Corruption in Southeast Asia. *International Journal of Educational Research Excellence (IJERE)*, 4(2), 818–828. <https://doi.org/10.55299/ijere.v4i2.1568>
106. Naveed, S., Farooqi, M. R., & Rehman, M. A. (2025). UNLOCKING SYNERGIES THROUGH PUBLIC VALUECO-CREATION A HOLISTIC EXAMINATION OF PUBLIC-PRIVATE PARTNERSHIPS IN PUNJAB’S EDUCATIONAL LANDSCAPE.
107. Nguyen, A. (2022). Digital Inclusion: Social Inclusion in the Digital Age.
108. Nkanata, M. G. (2020). Applying DeLone and McLean information systems success model in the evaluation of e-government initiatives: A literature review.
109. Nnaji, C., Okpala, I., Awolusi, I., & Gambatese, J. (2023). A systematic review of technology acceptance models and theories in construction research. *Journal of Information Technology in Construction*, 28, 39–69. <https://doi.org/10.36680/j.itcon.2023.003>
110. Nookhao, S., & Kiattisin, S. (2023). Achieving a successful e-government: Determinants of behavioral intention from Thai citizens’ perspective. *Heliyon*, 9(8), e18944. <https://doi.org/10.1016/j.heliyon.2023.e18944>
111. Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16(1), 1609406917733847. <https://doi.org/10.1177/1609406917733847>
112. OECD. (2021). Development Co-operation Report 2021: Shaping a Just Digital Transformation. OECD. <https://doi.org/10.1787/ce08832f-en>
113. OECD. (2024). OECD Digital Economy Outlook 2024 (Volume 2): Strengthening Connectivity, Innovation and Trust. OECD Publishing. <https://doi.org/10.1787/3adf705b-en>

114. Ofoma, C. (2024). Digitalization and Public Value Co-Creation in Public Sector Organizations: The Citizens as Co-Creators. *Institutiones Administrationis*, 4(2), 92–103. <https://doi.org/10.54201/iajas.98>
115. Ojasalo, J., & Kauppinen, S. (2024). Public Value in Public Service Ecosystems. *Journal of Nonprofit & Public Sector Marketing*, 36(2), 179–207. <https://doi.org/10.1080/10495142.2022.2133063>
116. Omweri, F. S. (2024). A Systematic Literature Review of E-Government Implementation in Developing Countries: Examining Urban-Rural Disparities, Institutional Capacity, and Socio-Cultural Factors in the Context of Local Governance and Progress towards SDG 16.6. *International Journal of Research and Innovation in Social Science*.
117. Ongaro, E., Rubalcaba, L., & Solano, E. (2025). The ideational bases of public value co-creation and the philosophy of personalism: Why a relational conception of person matters for solving public problems. *Public Policy and Administration*, 40(3), 429–451. <https://doi.org/10.1177/09520767251318127>
118. Osborne, S. P., Nasi, G., & Powell, M. (2021). Beyond co-production: Value creation and public services. *Public Administration*, 99(4), 641–657. <https://doi.org/10.1111/padm.12718>
119. Paguay-Chimarro, C., Cevallos-Salas, D., Rodríguez-Hoyos, A., & Estrada-Jiménez, J. (2025). Transparency Unleashed: Privacy Risks in the Age of E-Government. *Informatics*, 12(2), 39. <https://doi.org/10.3390/informatics12020039>
120. Paradkar, S. S. (2021). eGovernment Integration Framework for Fragmented Systems. *International Journal of Computer Sciences and Engineering*, 9(1), 51–55. <https://doi.org/10.26438/ijcse/v9i1.5155>
121. Pardo, T. A., Nam, T., & Burke, G. B. (2012). E-Government Interoperability: Interaction of Policy, Management, and Technology Dimensions. *Social Science Computer Review*, 30(1), 7–23. <https://doi.org/10.1177/0894439310392184>
122. Parker, S., Cluley, V., & Radnor, Z. (2023). A typology of dis/value in public service delivery. *Public Money & Management*, 43(1), 8–16. <https://doi.org/10.1080/09540962.2022.2124758>
123. Paul, J., & Barari, M. (2022). Meta-analysis and traditional systematic literature reviews—What, why, when, where, and how? *Psychology & Marketing*, 39(6), 1099–1115. <https://doi.org/10.1002/mar.21657>
124. Plé, L., & Cáceres, R. C. (2010). Not always co-creation: Introducing interactional co-destruction of value in service-dominant logic. *Journal of Services Marketing*, 24(6), 430–437. <https://doi.org/10.1108/08876041011072546>
125. Presuel, R. C., & Sierra, J. M. M. (2024). The Adoption of Artificial Intelligence in Bureaucratic Decision-making: A Weberian Perspective. *Digital Government: Research and Practice*, 5(1), 1–20. <https://doi.org/10.1145/3609861>
126. Pribadi, U., Iqbal, M., & Restiane, F. (2021). Factors Affecting Trust in E-Government. *Journal of Government and Civil Society*, 5(2), 263. <https://doi.org/10.31000/jgcs.v5i2.4848>
127. Proudfoot, K. (2023). Inductive/Deductive Hybrid Thematic Analysis in Mixed Methods Research. *Journal of Mixed Methods Research*, 17(3), 308–326. <https://doi.org/10.1177/15586898221126816>
128. Ramadhan, S. A., & Purnomo, E. P. (2025). COMPARATIVE ANALYSIS OF THE E-GOVERNMENT DEVELOPMENT INDEX: A CASE STUDY OF SINGAPORE AND AFGHANISTAN. *Sosiohumaniora*, 26(3), 439–452. <https://doi.org/10.24198/sosiohumaniora.v26i3.56427>
129. Ramirez-Madrid, J. P., Escobar-Sierra, M., Lans-Vargas, I., & Montes Hincapie, J. M. (2022). Government influence on e-government adoption by citizens in Colombia: Empirical evidence in a Latin American context. *PLOS ONE*, 17(2), e0264495. <https://doi.org/10.1371/journal.pone.0264495>
130. Raza, D. A. (2024). A REVIEW OF CYBERSECURITY THREATS IN E- GOVERNMENT SYSTEMS: TOWARDS SECURE DIGITAL GOVERNANCE.
131. Reedijk, M. (2017). Privacy in e-government 2.0. The case of Utrecht.

132. Reynolds, R., Aromi, J., McGowan, C., & Paris, B. (2022). Digital divide, critical-, and crisis-informatics perspectives on K-12 emergency remote teaching during the pandemic. *Journal of the Association for Information Science and Technology*, 73(12), 1665–1680. <https://doi.org/10.1002/asi.24654>
133. Rusmini, R., Alamsah Deliarnoor, N., Yuningsih, N. Y., & Sagita, N. I. (2025). Rethinking e-government failure: A readiness-based assessment of Indonesia's digitalization efforts. *Cogent Social Sciences*, 11(1), 2559867. <https://doi.org/10.1080/23311886.2025.2559867>
134. Sambana, B., Raju, K. N., Dekka, S., Sagiraju, S. R., & Penmesta, V. K. R. (2021). Impact of Cyber Security in e-Governance and e-Commerce.
135. Sancino, A. (2022). Public Value Co-Creation: A Multi-Actor & Multi-Sector Perspective. Emerald Publishing Limited. <https://doi.org/10.1108/9781803829616>
136. Sari, R., & Muslim, M. (2023). Accountability and Transparency in Public Sector Accounting: A Systematic Review. *Amkop Management Accounting Review (AMAR)*, 3(2), 90–106. <https://doi.org/10.37531/amar.v3i2.1440>
137. Sauer, P. C., & Seuring, S. (2023). How to conduct systematic literature reviews in management research: A guide in 6 steps and 14 decisions. *Review of Managerial Science*, 17(5), 1899–1933. <https://doi.org/10.1007/s11846-023-00668-3>
138. Savveli, I., Rigou, M., & Balaskas, S. (2025). From E-Government to AI E-Government: A Systematic Review of Citizen Attitudes. *Informatics*, 12(3), 98. <https://doi.org/10.3390/informatics12030098>
139. Scupola, A., & Mergel, I. (2022). Co-production in digital transformation of public administration and public value creation: The case of Denmark. *Government Information Quarterly*, 39(1), 101650. <https://doi.org/10.1016/j.giq.2021.101650>
140. Setyarto, D. B., Alimuddin, A., Mulyaningsih, M., & Judijanto, L. (2025). The role of e-government in increasing transparency and accountability of public administration in the digital era. *Edelweiss Applied Science and Technology*, 9(2), 1771–1783. <https://doi.org/10.55214/25768484.v9i2.4908>
141. Sheoran, S., & Vij, S. (2022). A Review of E-Government Assessment Frameworks: E-Readiness, Adoption, Citizen Engagement and Quality. *JeDEM - eJournal of eDemocracy and Open Government*, 14(2), 197–213. <https://doi.org/10.29379/jedem.v14i2.717>
142. Simonofski, A., Chantillon, M., & Cromptvoets, J. (2020). The Influence of Public Values on User Participation in e-Government: An Exploratory Study.
143. Singh, V., & Chobotaru, J. (2022). Digital Divide: Barriers to Accessing Online Government Services in Canada. *Administrative Sciences*, 12(3), 112. <https://doi.org/10.3390/admsci12030112>
144. Skálén, P., & Trischler, J. (2024). Public services as practices: Towards a framework for understanding co-creation and co-destruction of private and public value. *Public Management Review*, 1–20. <https://doi.org/10.1080/14719037.2024.2418376>
145. Song, Y., Natori, T., & Yu, X. (2024). Tracing the Evolution of E-Government: A Visual Bibliometric Analysis from 2000 to 2023. *Administrative Sciences*, 14(7), 133. <https://doi.org/10.3390/admsci14070133>
146. Srivastava, M., & Sharma, N. (2025). E-Governance and AI Integration: A Roadmap for Smart Governance Practices. *Samsad Journal संसद जर्नल*, 2(1), 160–195. <https://doi.org/10.3126/sj.v2i1.79853>
147. Temitayo Oluwaseun Jejenewa, Noluthando Zamanjomane Mhlono, & Titilola Olaide Jejenewa. (2024). CONCEPTUALIZING E-GOVERNMENT INITIATIVES: LESSONS LEARNED FROM AFRICA-US COLLABORATIONS IN DIGITAL GOVERNANCE. *International Journal of Applied Research in Social Sciences*, 6(4), 759–769. <https://doi.org/10.51594/ijarss.v6i4.1066>

148. Tennakoon, W. (2020). E-GOVERNANCE WAY FORWARD: CHALLENGES AND OPPORTUNITIES FOR DEVELOPING COUNTRIES. EVIDENCES FROM SRI LANKA. 21(2).
149. Thela, B., Zlotnikova, I., Galani, M., & Sigwele, T. (2025). Development of a Service-Oriented Interoperability Framework: The Botswana E-Government System Case Study. *Digital Government: Research and Practice*, 6(3), 1–32. <https://doi.org/10.1145/3712706>
150. Tommasetti, A., Mussari, R., Maione, G., & Sorrentino, D. (2020). Sustainability Accounting and Reporting in the Public Sector: Towards Public Value Co-Creation? *Sustainability*, 12(5), 1909. <https://doi.org/10.3390/su12051909>
151. Twizeyimana, J. D. (2023). Towards realisation of the public value of e-government: Anticipation-reality gap and critical success factors in the context of Rwanda. 11(1), 123–147.
152. Twizeyimana, J. D., & Andersson, A. (2019). The public value of E-Government – A literature review. *Government Information Quarterly*, 36(2), 167–178. <https://doi.org/10.1016/j.giq.2019.01.001>
153. Uddin, A. S. M. A. (2023). The Era of AI: Upholding Ethical Leadership. *Open Journal of Leadership*, 12(04), 400–417. <https://doi.org/10.4236/ojl.2023.124019>
154. United Nations Department for Economic and Social Affairs. (2024). UNITED NATIONS E-GOVERNMENT SURVEY 2024: Accelerating digital transformation for... sustainable development - with the addendum on art. UNITED NATIONS.
155. Van Dijk, J. A. G. M. (2017). Digital Divide: Impact of Access. In P. Rössler, C. A. Hoffner, & L. Zoonen (Eds.), *The International Encyclopedia of Media Effects* (1st ed., pp. 1–11). Wiley. <https://doi.org/10.1002/9781118783764.wbieme0043>
156. Vida Fernández, J. (2023). Artificial Intelligence in Government: Risks and Challenges of Algorithmic Governance in the Administrative State. *Indiana Journal of Global Legal Studies*, 30(1), 65–95. <https://doi.org/10.2979/gls.2023.a886163>
157. Virnandes, S. R., Shen, J., & Vlahu-Gjorgievska, E. (2025). Demystifying the Relationship between Digitalization of Government Services and Public Trust: A Scoping Review. *Digital Government: Research and Practice*, 6(3), 1–18. <https://doi.org/10.1145/3716172>
158. Weerasinghe, W. L. G. D., KanaheraArachchi, B. J., Jayaweera, L. P. M. I., Aryaratne, I. A., Samarasinghe, U., & Karunarathna, W. A. S. N. (2023). Critical Success Factors in the Implementation of Electronic Government Procurement in Sri Lanka. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4454031>
159. Weigl, L., Roth, T., Amard, A., & Zavolokina, L. (2024). When public values and user-centricity in e-government collide – A systematic review. *Government Information Quarterly*, 41(3), 101956. <https://doi.org/10.1016/j.giq.2024.101956>
160. World Bank. (2020, November 1). GovTech: The New Frontier in Digital Government Transformation. World Bank.
161. WorldBankGroup. (2025). GovTech Maturity Index 2025 [Research Document].
162. Wu, Z., & Y. Choi, T. (2022). Supply networks: Dyads, triads and networks. Edward Elgar Publishing. <https://doi.org/10.4337/9781839104503.00023>
163. Xin, Y., Dilanchiev, A., Ali, M., Irfan, M., & Hong, Y. (2022). Assessing Citizens' Attitudes and Intentions to Adopt E-Government Services: A Roadmap toward Sustainable Development. *Sustainability*, 14(22), 15183. <https://doi.org/10.3390/su142215183>
164. Zairul, M. (2025). Mastering Thematic Analysis: A Step-by-step Guide for Beginners With Tips for Systematic Analysis Using ATLAS.ti 25. *International Journal of Qualitative Methods*, 24, 16094069251384401. <https://doi.org/10.1177/16094069251384401>
165. Zhao, H., Ahn, M. J., & Manoharan, A. P. (2021). E-Government, Corruption Reduction and the Role of Culture: A Study Based on Panel Data of 57 Countries. *International Journal of E-Planning Research*, 10(3), 86–104. <https://doi.org/10.4018/IJEPR.20210701.oa6>

166. Ziyogulova, A., & Egamberdiev, B. (2026). Digital Literacy and E-Government: Evidence from Central Asia.

XI. ANNEXURE 1.0

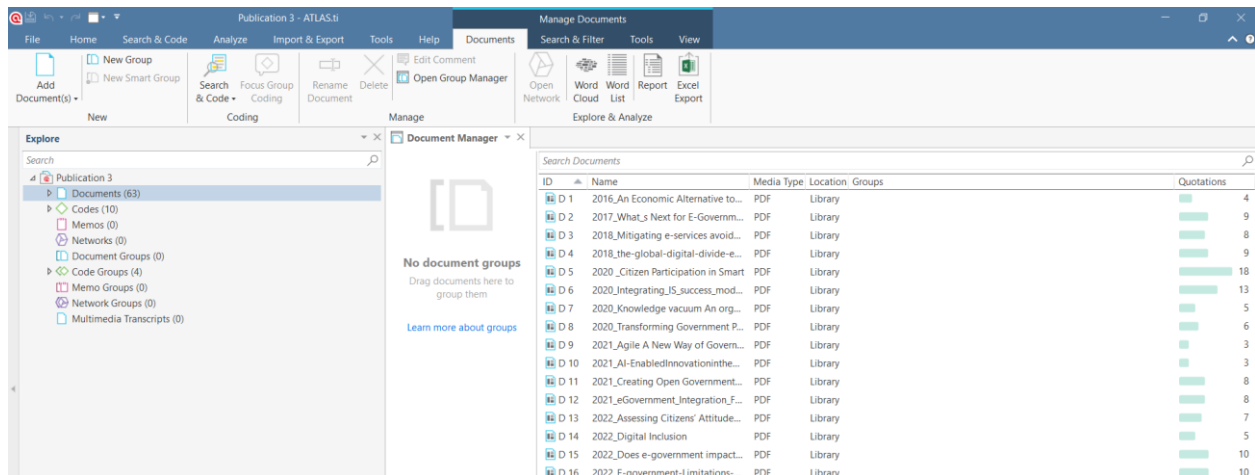


Figure 2 : Preparation of identified academic journals for thematic analysis

Figure 2 illustrate the preparation of literature for thematic analysis in ALTAS ti qualitative software. Accordingly, Thematic analysis performed referring 63 related peer reviewed journals.

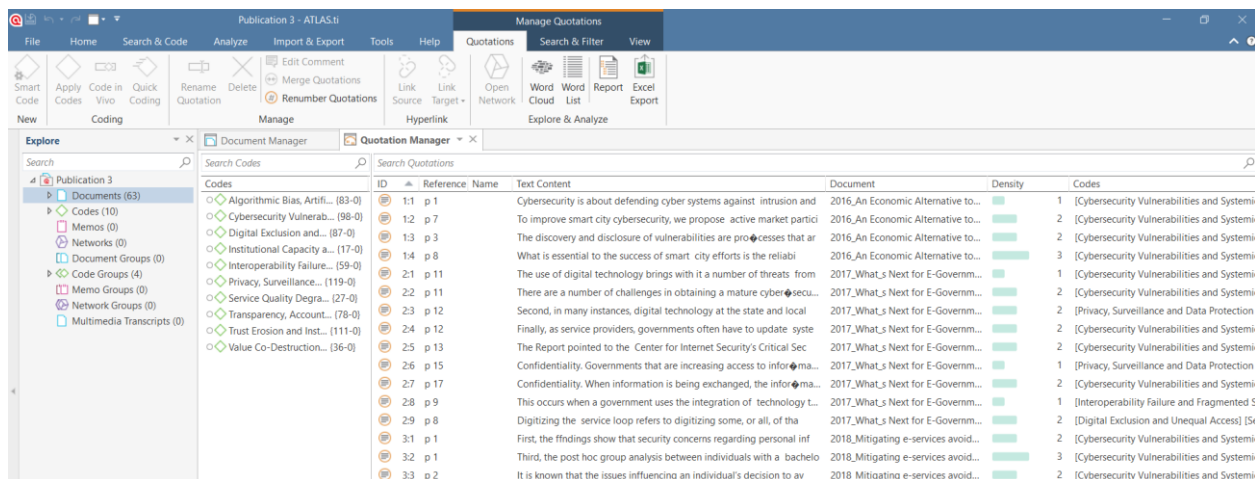


Figure 3 : Quotations generation from the literature

Figure 3 presents identified quotations from the literature. Total 497 quotations emerged that include 119 quotations for Privacy, Surveillance and Data Protection Risks most quoted followed by 111 quotes for Trust Erosion and Institutional Legitimacy and 87 quotes for Digital Exclusion and Unequal Access.

Codes

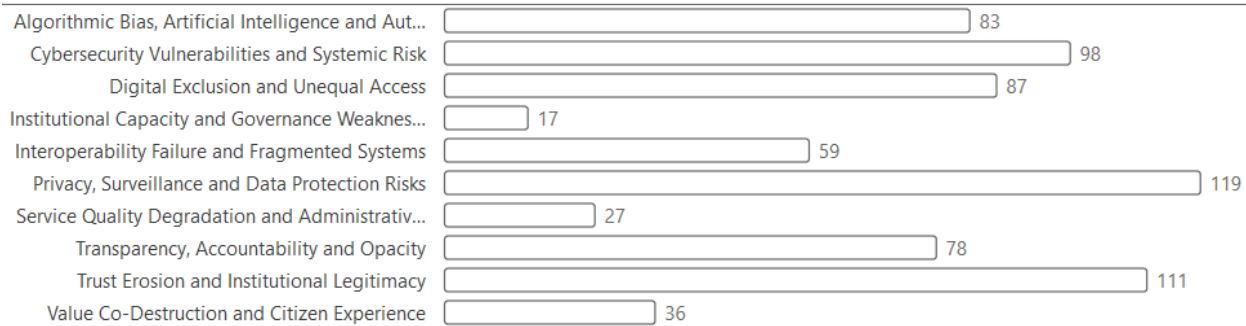


Figure 4: Coding for thematic mapping

Figure 4 is the graphical representation of grounded basic themes arrangements related to referred literature. Details suggest Privacy, Surveillance and Data Protection Risks is the most grounded theme related to the public value loss in e-government.

Table 2: Code grouping basic themes

Code	Grounded	Code Groups
Algorithmic Bias, Artificial Intelligence and Automated Decision-Making	83	Technological and Socio-Technical Risks
Cybersecurity Vulnerabilities and Systemic Risk	98	Technological and Socio-Technical Risks
Digital Exclusion and Unequal Access	87	Digital Inclusion Challenges
Institutional Capacity and Governance Weaknesses	17	Institutional and Organizational Weaknesses
Interoperability Failure and Fragmented Systems	59	Institutional and Organizational Weaknesses
Privacy, Surveillance and Data Protection Risks	119	Governance and Accountability Deficits
Service Quality Degradation and Administrative Burden	27	Digital Inclusion Challenges
Transparency, Accountability and Opacity	78	Governance and Accountability Deficits
Trust Erosion and Institutional Legitimacy	111	Governance and Accountability Deficits
Value Co-Destruction and Citizen Experience	36	Technological and Socio-Technical Risks

Table 2 describe the identified basic themes and categorization of these themes in to four global themes. The synthesized details suggest Privacy, Surveillance and Data Protection Risks grounded as the most significant public value loss dimension in the e-government.

Copyright & License:

© Authors retain the copyright of this article. This work is published under the Creative Commons Attribution 4.0 International License (CC BY 4.0), permitting unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.