

READINESS PREREQUISITES FOR FINANCIAL INFORMATION SYSTEMS IMPLEMENTATION IN LOCAL GOVERNMENTS: A SYSTEMATIC LITERATURE REVIEW

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Abstract

Local governments worldwide face persistent challenges in implementing Financial Information Systems (FIS), with high rates of abandonment, underutilization, and resistance despite institutional mandates to adopt digital financial management. This study conducts a Systematic Literature Review (SLR) to synthesize empirical evidence on the readiness prerequisites and early-stage implementation challenges of FIS in local government contexts. Following PRISMA 2020 guidelines, a structured search across Scopus, Google Scholar, and ScienceDirect yielded 126 initial records. After deduplication, screening, and full-text eligibility assessment, 27 peer-reviewed empirical studies published between 2015 and 2025 were included in the final synthesis. Findings were analyzed using the extended Technology-Organization-Environment-Human (TOE-H) framework, which integrates the classical TOE model with an explicit Human dimension drawn from the HOT-fit perspective. Thematic coding across 27 studies produced 11 readiness constructs. Staff competence and training needs (HUM-COM; 88.9%) and institutional and regulatory pressure (ENV-INS; 81.5%) emerged as the most pervasive prerequisites, followed closely by IT infrastructure reliability (TEC-INF; 77.8%). The synthesis reveals a systemic pattern of institutional isomorphism: local governments formally adopt systems under coercive mandates while continuing parallel manual practices due to unresolved human, technological, and organizational deficits. This review contributes a structured TOE-H evidence map for sub-national FIS implementation research and offers actionable guidance for policymakers and practitioners designing readiness assessment frameworks for local government digitalization.

Keywords: financial information system; local government; implementation readiness; staff competence; TOE framework

INTRODUCTION

Background

The global transition toward e-government has fundamentally transformed public sector administration. At the core of this digital transformation is the implementation of Financial Information Systems (FIS), often interchangeably referred to as Financial Management Information Systems (FMIS) or Accounting Information Systems (AIS) (Dener et al., 2011). For local governments, these systems are not merely administrative tools but critical instruments for ensuring transparency, accountability, and efficient resource allocation (Dalloul et al., 2023; Setiawan et al., 2021). As decentralization policies progressively empower regional authorities, the demand for robust FIS adoption has become a universal mandate to improve public financial management standards at the sub-national level (Diamond & Khemani, 2006; World Bank, 2020).

The strategic importance of FIS at the sub-national level stems from the expanding role of local governments in public financial management (Sofyani, 2024). As fiscal decentralization

progresses in many developing nations, local administrations are increasingly responsible for executing substantial portions of public expenditures (Dener et al., 2011; Tetteh et al., 2021). Consequently, functional financial information systems are recognized as foundational prerequisites for ensuring budget transparency, intergovernmental accountability, and reliable audit compliance Diamond & Khemani (2006), including in the context of emerging digital technologies integrated into local government AIS (Sofyani et al., 2025). However, because local governments often operate under acute technical and human resource constraints, implementing these systems represents a highly complex socio-technical challenge rather than a mere technological upgrade (World Bank, 2020). Understanding the specific readiness conditions that enable or obstruct FIS adoption at this level is therefore crucial for preventing the implementation failures that frequently characterize such reforms.

Problem Statement

Despite the clear institutional and fiscal benefits, the adoption and assimilation of FIS in local governments are fraught with persistent complexities. Evidence indicates a significantly high rate of implementation failure or operational stagnation for these projects, particularly within developing nations (Diamond & Khemani, 2006; World Bank, 2020). Central governments frequently mandate the adoption of standardized digital systems without adequately assessing the readiness of local municipalities. This top-down institutional pressure routinely clashes with realities at the operational level, including inadequate IT infrastructure, severe budget constraints, and a critical shortage of technically and administratively competent personnel. Consequently, systems are either abandoned shortly after launch, remain chronically underutilized, or face substantial resistance from local administrative staff whose daily practices the systems are intended to transform.

Research Gap and Novelty

A substantial body of existing literature evaluates the post-adoption impacts of FIS, focusing on how these systems improve audit opinions, strengthen financial discipline, or reduce fiduciary risk. However, a fragmented and geographically dispersed understanding persists regarding the initial readiness prerequisites and early-stage implementation challenges that local governments encounter. Previous systematic reviews have rarely mapped these pre-adoption and adoption-stage factors through a comprehensive, multidimensional theoretical lens that simultaneously accounts for technological, organizational, environmental, and human dimensions. A structured synthesis is therefore needed to inform policymakers and practitioners on how to assess municipal readiness before deploying complex financial systems.

The novelty of this study lies in the explicit integration of a Human dimension into the TOE framework, producing an extended TOE-H analytical lens that has not previously been applied in a systematic, cross-national synthesis of local government FIS implementation literature. By treating human capacity, user attitudes, and behavioral dispositions as a distinct analytical category rather than a passive organizational variable, this study addresses a theoretical gap that adoption models have consistently underspecified.

Research Objectives and Questions

This study conducts a Systematic Literature Review (SLR) to identify and synthesize empirical evidence concerning FIS implementation in local governments. The review is guided by two primary research questions:

- RQ1: What are the readiness prerequisites and early implementation challenges of Financial Information Systems in local governments?
- RQ2: How can the determinants of implementation success and failure be mapped using the Technology-Organization-Environment (TOE) framework combined with a Human dimension (TOE-H)?

The study contributes theoretically by producing a structured TOE-H evidence map for sub-national FIS implementation research and practically by offering an empirically grounded basis for readiness assessment frameworks applicable to local government digitalization programs.

Together, these contributions address the dual need identified in the literature for both theoretically coherent synthesis tools and actionable decision-support instruments for public sector practitioners.

LITERATURE REVIEW

THEORETICAL BACKGROUND

Financial Information Systems in Local Government

Financial Information Systems in the public sector are integrated, computerized networks designed to handle budget preparation, execution, accounting, and financial reporting (Diamond & Khemani, 2006). Unlike their private sector counterparts, which prioritize profitability metrics and operational efficiency, local government FIS must simultaneously satisfy multiple institutional demands: regulatory compliance, budget realization reporting, and public accountability to legislative oversight bodies (Dener et al., 2011; Robalo & Moreira, 2020). This multiplicity of accountability obligations creates implementation dynamics that are qualitatively distinct from those encountered in corporate information systems adoption.

The bureaucratic nature of local government further conditions adoption in particular ways (Pasape & Godson, 2022). Implementation processes are heavily shaped by rigid hierarchical structures, complex political economies, and the adequacy of institutional and technical prerequisites that govern the pace and scope of digital transformation at the sub-national level (Diamond & Khemani, 2006). Because local governments operate within the normative and legal shadow of central government accounting standards and regulatory frameworks, their capacity to customize systems to local operational contexts remains structurally constrained (Dener et al., 2011). This institutional inflexibility means that the readiness of the local context cannot be assumed at the point of system deployment; it must be explicitly assessed and developed as a precondition for sustainable implementation (World Bank, 2020).

The TOE Framework and the Human Dimension

To systematically categorize the multidimensional determinants of FIS implementation, this study employs the Technology-Organization-Environment (TOE) framework developed by Tornatzky & Fleischer (1990). The TOE framework postulates that technology adoption and assimilation are simultaneously shaped by three distinct but interrelated contexts (Tornatzky & Fleischer, 1990). The technological context encompasses both internal and external technologies relevant to the organization, including available infrastructure, system usability, interoperability, and security provisions. The organizational context addresses managerial structure, resource availability, the competencies of organizational actors, and the degree of internal process alignment required to accommodate new systems (Mbelwa, 2015; Nuryati et al., 2020). The environmental context captures macro-level external pressures, including regulatory mandates, institutional norms, and political dynamics that drive or constrain adoption decisions (Pasape & Godson, 2022).

The TOE framework has been applied as an analytical lens in public sector technology adoption research across diverse national settings (Man & Fernandez, 2023). However, in its original formulation, the framework inherently subsumes individual user-level factors within the broader organizational context (Tornatzky & Fleischer, 1990). In local government settings, where daily operational outcomes depend critically on the discretion, competence, and behavioral dispositions of front-line administrative staff, this theoretical compression is insufficient (Kurniati & Suryanto, 2021; Laizer & Suomi, 2017; Lipsky, 1980). Individual human factors cannot be adequately represented by organizational-level constructs that treat personnel as homogeneous institutional actors rather than as agents whose attitudes and capabilities directly mediate implementation outcomes (Lipsky, 1980).

This study therefore explicitly extends the TOE framework by integrating a Human dimension drawn from the Human-Organization-Technology fit (HOT-fit) model (Yusof et al., 2006). The resulting TOE-H framework elevates staff competence, user attitudes, trust in digital systems, and

resistance to change from embedded organizational variables to a standalone analytical dimension. This extension is theoretically warranted for local government contexts, where the distance between mandated system requirements and actual user readiness is systematically wider than in private sector or central government settings (Setiawan et al., 2021; World Bank, 2020). The TOE-H framework thus provides the analytical architecture for this review, enabling a more granular and contextually sensitive mapping of the readiness prerequisites and implementation challenges identified across the 27 included studies. Figure 1 presents the conceptual structure of the extended TOE-H framework, illustrating how the four analytical dimensions collectively shape FIS implementation readiness in local government contexts.

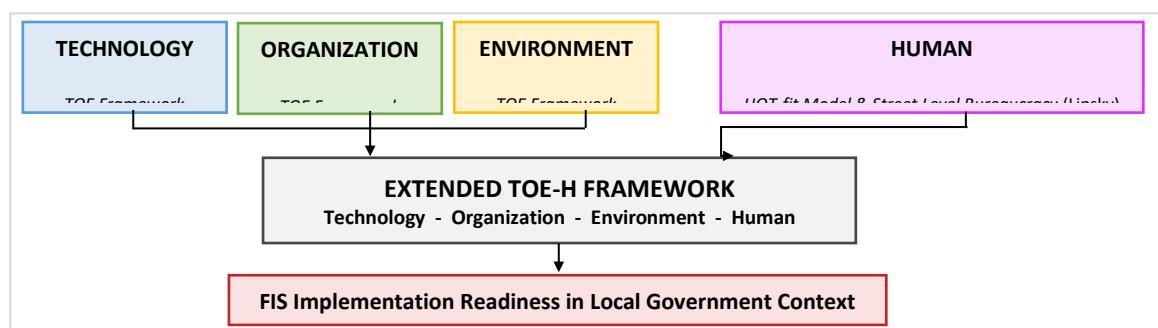


Figure 1. The Extended TOE-H Framework for FIS Implementation Readiness in Local Governments

RESEARCH METHODS

Research Design

This study employs a Systematic Literature Review (SLR) methodology to comprehensively identify, critically appraise, and synthesize existing empirical research on FIS implementation in local governments. The SLR design was selected because it provides a transparent, replicable, and auditable process for producing cumulative knowledge from dispersed primary studies, making it the most appropriate methodological choice for addressing the fragmented state of the literature identified in *Introduction* section. The review was designed and executed in strict accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines (Page et al., 2021) to ensure procedural rigor and completeness across all phases of the selection and reporting process.

Search Strategy

A systematic literature search was conducted across three major academic databases: Scopus, Google Scholar, and ScienceDirect. These databases were selected based on their broad and complementary coverage of peer-reviewed research in public sector management, accounting information systems, and e-government implementation. The search strategy was constructed using Boolean operators to capture all core conceptual dimensions of the review: system type, governance context, and implementation phenomena. The primary search string executed in Scopus was:

TITLE-ABS-KEY(("financial information system" OR "FMIS" OR "GFMIS" OR "IFMIS" OR "integrated financial management information system" OR "integrated financial management" OR "accounting information system") AND ("local government" OR "municipal" OR "regional government" OR "sub-national government" OR "public sector") AND ("readiness" OR "implementation" OR "prerequisites" OR "success factors" OR "adoption" OR "challenges" OR "critical factors")).

This string was subsequently adapted to meet the syntactical conventions and field-tagging requirements of ScienceDirect and Google Scholar while preserving full conceptual equivalence across all three databases. The search was conducted in February 2026 and was restricted to publications from 2015 to 2025. This ten-year window was deliberately chosen to ensure sufficient temporal depth for capturing contemporary FIS implementation experiences while maintaining

analytical focus on the current institutional and technological landscape. The period also coincides with the adoption of the 2030 Agenda for Sustainable Development and the Addis Ababa Action Agenda in 2015, both of which formally recognized the governance and financial management capacity needs of local and sub-national governments as integral to the global development framework, generating a measurable expansion of policy attention and research output in this domain.

Eligibility Criteria

Rigorous inclusion and exclusion criteria were applied at the screening stage to preserve the thematic coherence and empirical quality of the review corpus. Articles were eligible for inclusion if they satisfied all four of the following criteria: (1) primary empirical studies employing quantitative, qualitative, or mixed-methods research designs; (2) published in peer-reviewed journals or refereed conference proceedings in the English language; (3) explicitly focused on the adoption, implementation, or early assimilation phase of FIS, FMIS, or AIS at the local or regional government level; and (4) substantively addressing readiness factors, implementation challenges, or determinants of implementation success.

Articles were excluded if they met any of the following conditions: classified as secondary literature reviews, bibliometric analyses, or conceptual papers without primary empirical data; contextualized primarily within private sector organizations or central government institutions; focused exclusively on long-term post-implementation outcomes without examining conditions at the implementation stage; or published in languages other than English. These exclusion criteria were applied consistently at both the title-abstract screening and full-text assessment stages to ensure that the final corpus comprised only empirical primary studies examining pre-adoption or adoption-stage dynamics in local government FIS implementation.

Study Selection and Data Extraction

The initial database search yielded 126 articles in total (Scopus: 43; Google Scholar: 26; ScienceDirect: 57). Following the identification and removal of 12 duplicate records, 114 unique articles proceeded to abstract and title screening. At this stage, 49 articles were excluded for falling outside the defined thematic scope, lacking primary empirical data, or addressing institutional contexts beyond local government implementation. The remaining 65 articles were sought for full-text retrieval, of which 19 could not be obtained due to inaccessibility and are reported as not retrieved in accordance with PRISMA 2020 requirements (Page et al., 2021).

Full-text eligibility assessment was subsequently conducted on 46 articles. At this stage, 19 articles were excluded on the following grounds: four were literature reviews or bibliometric studies rather than primary empirical research; seven focused exclusively on long-term post-implementation impacts without examining implementation-stage readiness conditions; five addressed central government rather than local or regional government contexts; and three fell outside the thematic scope of the review. Ultimately, 27 articles satisfied all eligibility criteria and were included in the final qualitative synthesis, as illustrated in Figure 2.

Data extraction was performed using a predefined synthesis matrix. For each included study, the following information was systematically recorded: author(s) and year of publication, country of research context, research methodology, theoretical framework applied, type of FIS examined, implementation phase addressed, and key findings mapped against each dimension of the TOE-H framework. This structured extraction protocol ensured consistent cross-study comparability and provided the empirical foundation for the frequency-based thematic coding reported in *Results and Discussion* section.

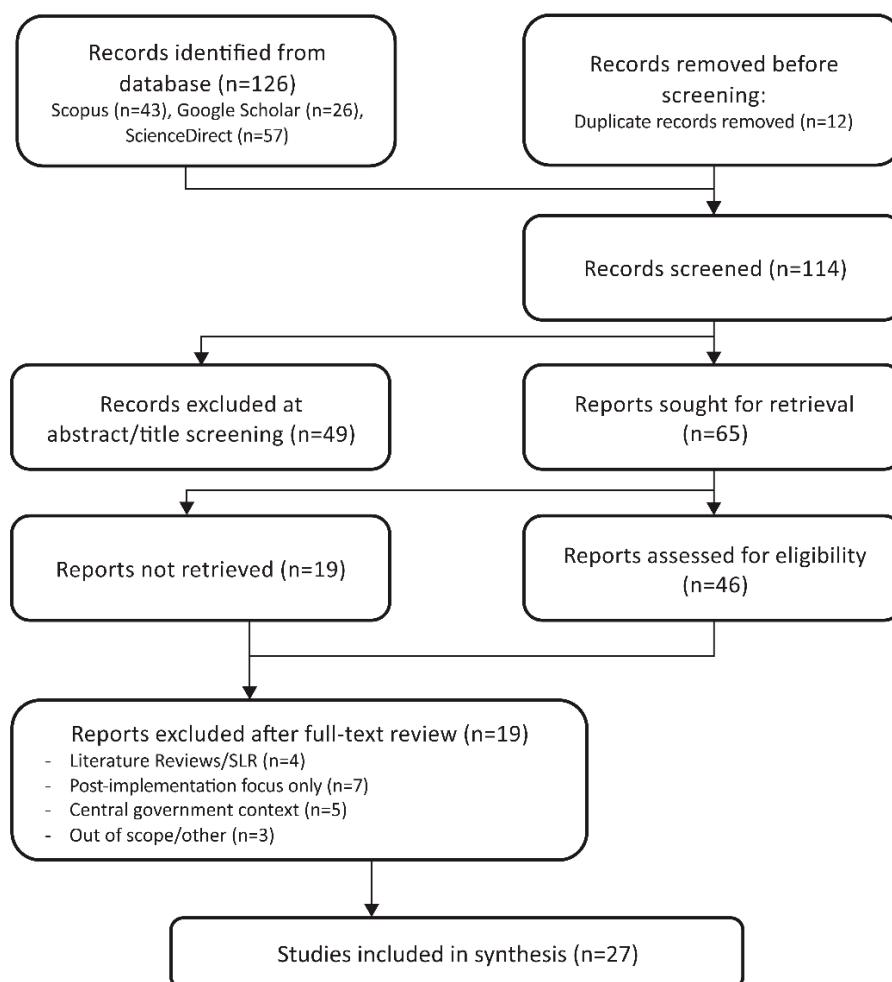


Figure 2. PRISMA 2020 Flow Diagram of Study Selection Process

RESULTS AND DISCUSSION

Descriptive Analysis

Publication Trends

The 27 included studies span a publication range of 2015 to 2025, reflecting more than a decade of sustained academic engagement with FIS implementation challenges at the sub-national level. Research output was not uniformly distributed across this period. Publication activity remained modest from 2015 through 2019, before accelerating from 2020 onward. The two most productive years were 2020 and 2023, each yielding five articles (18.5% each), a pattern that may reflect the convergence of pandemic-accelerated e-government reform pressures and the

intensification of public financial accountability mandates during this period. Activity remained substantive in the most recent years, with three articles published in 2024 (11.1%) and two in 2025 (7.4%), indicating that implementation challenges in local government financial systems remain an active and unresolved area of academic inquiry.

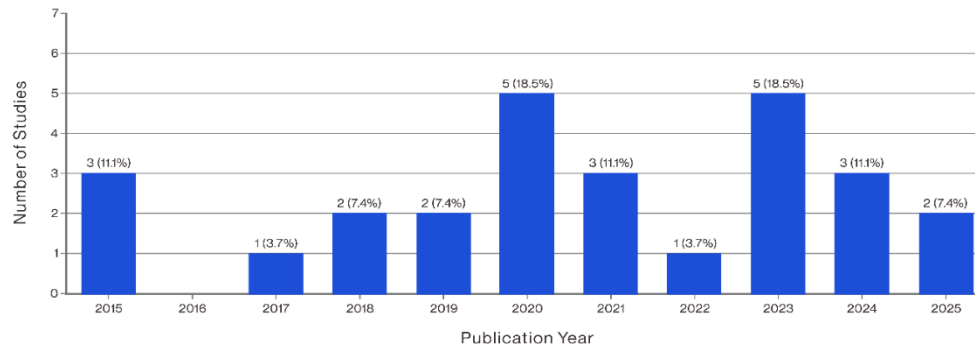


Figure 3. Annual Distribution of the 27 Included Studies (2015–2025)

Geographical Distribution

The geographical distribution of the 27 studies reveals a pronounced concentration in the Global South, with particular density in sub-Saharan Africa and Southeast Asia (see Figure 4). African contexts account for 15 studies (55.6%), driven by Ghana as the single most studied country at five studies, all of which examine the implementation dynamics of the Ghana Integrated Financial Management Information System (GIFMIS) across Metropolitan, Municipal, and District Assemblies (Alatarige, 2023; Attiogbe et al., 2025; Awudu et al., 2024; Simpson et al., 2020; Tetteh et al., 2021). The remaining ten African studies are distributed across Kenya at three studies (Iravonga et al., 2023; Lundu & Shale, 2015; Osano & Ngugi, 2018), Tanzania at three studies (Chalu, 2019; Mbelwa, 2015; Pasape & Godson, 2022), and one study each from South Africa (Gcora & Chigona, 2019), Uganda (Watuwa & Eilu, 2024), Malawi (Laizer & Suomi, 2017), and Somalia (Puntland) (Mohamud, 2018). Asian contexts contribute nine studies (33.3%), with Indonesia as the most heavily represented country across the entire dataset at seven studies (25.9%), collectively documenting FIS and AIS implementation challenges across multiple regional government units (Haryono, 2015; Karim et al., 2023; Kurniati & Suryanto, 2021; Nuryati et al., 2020; Setiawan et al., 2021; Sofyani, 2024; Sofyani et al., 2025), followed by one study from Malaysia (Man & Fernandez, 2023) and one study from Palestine (Dalloul et al., 2023), both examining FIS-related adoption and accountability governance challenges in their respective local government contexts. South America contributes two studies, both from Brazil (Azevedo, De Aquino, et al., 2020; Azevedo, Lino, et al., 2020), while Europe is represented by a single Portuguese study (Robalo & Moreira, 2020), together accounting for the remaining 11.1% of the corpus.



Figure 4. Geographical Distribution of Included Studies by Country (2015–2025)

This geographical pattern warrants substantive interpretation rather than purely descriptive acknowledgment. Prior scholarship has consistently documented that the structural conditions most detrimental to FIS implementation, including severe infrastructure deficits, acute capacity constraints, and the institutional gap between central mandates and sub-national operational realities, are most pronounced in developing country contexts (Chalu, 2019; Dener et al., 2011; Diamond & Khemani, 2006; World Bank, 2020). The concentration of studies in this corpus therefore mirrors the structural geography of the problem itself. This reading is further supported by the corpus's own thematic evidence: the three most frequently cited readiness deficits across the 27 studies, namely staff competence gaps (HUM-COM; 88.9%), coercive central mandates overriding local readiness (ENV-INS; 81.5%), and foundational infrastructure inadequacy (TEC-INF; 77.8%), are conditions empirically documented predominantly in developing country settings. The Global South thus emerges not merely as a geographical category but as the primary institutional site where the convergence of these conditions generates the most consequential implementation challenges.

Methodological Approaches

Quantitative methods dominate the reviewed literature, representing 51.9% of the dataset (n=14). These studies predominantly employed structured survey instruments analyzed through regression analysis or Structural Equation Modeling (SEM/PLS-SEM) to identify and quantify adoption determinants across samples of local government officials and system users. Qualitative approaches, utilizing in-depth interviews, single or multiple case studies, and document analysis, accounted for 33.3% of studies (n=9). Mixed-methods designs, integrating the statistical breadth of survey research with the contextual depth of qualitative inquiry, were present in 14.8% of the corpus (n=4).

The dominance of quantitative designs indicates that the field has advanced in broadly identifying and measuring adoption determinants at the organizational level. The relative underrepresentation of qualitative approaches, however, points to a methodological gap: the micro-level processes through which implementation unfolds within specific institutional, political, and operational environments remain insufficiently examined (Awudu et al., 2024). This gap carries direct implications for the future research directions elaborated in *Conclusion* section.

Thematic Synthesis

Findings from the 27 included studies were coded and synthesized using the extended TOE-H framework. The coding process produced 11 distinct readiness constructs, presented in Table 1 in descending order of frequency. Themes are reported from most to least prevalent to reflect an empirically grounded hierarchy of concern for both theory and practice.

Table 1. Frequency Distribution of TOE-H Thematic Codes Across 27 Included Studies

Code	Theme	Dimension	n	%
HUM-COM	Competence and Training Needs	Human	24	88.9%
ENV-INS	Institutional and Regulatory Pressure	Environment	22	81.5%
TEC-INF	IT Infrastructure and Reliability	Technology	21	77.8%
HUM-ATT	Trust, Attitudes, and Resistance to Change	Human	15	55.6%
ORG-MGT	Top Management Support and Commitment	Organization	14	51.9%
ORG-RES	Financial and Technical Resource Allocation	Organization	14	51.9%
TEC-USE	System Usability and Functionality	Technology	13	48.1%
TEC-INT	System Integration and Interoperability	Technology	10	37.0%
ENV-POL	Political Interference and Donor Dynamics	Environment	10	37.0%
ORG-STR	Organizational Structure and BPR	Organization	10	37.0%
TEC-SEC	Data Security and Privacy	Technology	7	25.9%

Source: Authors' thematic synthesis of 27 included studies

Human Dimension: Competence and Attitudes

The Human dimension produced the two highest-frequency themes in the entire synthesis, consistently outranking structural and technological factors across geographically and methodologically diverse studies. This pattern collectively confirms that individual-level factors constitute the most pervasive readiness prerequisites for local government FIS implementation.

Competence and Training Needs (HUM-COM; n=24; 88.9%). Present in nearly the entirety of the reviewed literature, this theme captures the urgent need for foundational reskilling, sustained structured training, and the development of both IT and accounting literacy among local administrative staff. The transition from manual bookkeeping routines to integrated digital financial environments routinely stalls because end-users lack the competencies required to operate new systems accurately and consistently. Across the literature, training delivered as a one-time orientation event rather than as a sustained, role-specific learning program was a consistent correlate of implementation deterioration over time. The recurrence of this theme at 88.9% across diverse study contexts establishes staff competence development not merely as a facilitating factor but as a foundational operational prerequisite.

Trust, Attitudes, and Resistance to Change (HUM-ATT; n=15; 55.6%). This theme encompasses psychological barriers including technophobia, fear of job displacement, low motivation, and institutionally entrenched resistance to procedural transformation. The introduction of FIS frequently disrupts deeply embedded bureaucratic work cultures. Rigorous audit

trails and transparent digital workflows provoke defensive responses among staff who perceive the system as a surveillance instrument designed to expose operational weaknesses rather than as an administrative facilitation tool. This dynamic is especially pronounced in contexts where accountability norms have historically been permissive and where digital transparency represents a structural departure from established institutional practice.

Environmental Context: Regulatory and Political Pressures

The Environmental dimension captures the macro-level external forces that compel or constrain local governments in initiating FIS adoption, operating largely independently of local readiness conditions. These forces include regulatory mandates from central governments, pressures from international donors, and political dynamics such as leadership turnover.

Institutional and Regulatory Pressure (ENV-INS; n=22; 81.5%). The second most prevalent theme in the synthesis, this construct refers to coercive mandates issued by central governments, binding e-government legislation, and normative pressures from national accounting standards bodies. FIS adoption at the local government level is rarely a voluntary, bottom-up initiative. The overwhelming majority of reviewed studies confirm that implementation is driven by top-down directives that compress local decision-making timelines and systematically override readiness considerations. The predictable outcome is institutional isomorphism: local governments formally install systems to satisfy central regulatory requirements while continuing to conduct substantive financial management through parallel manual practices (Karim et al., 2023; Simpson et al., 2020).

Political Interference and Donor Dynamics (ENV-POL; n=10; 37.0%). This theme captures the volatility introduced by local political leadership turnover, misalignment between donor agency priorities and local operational realities, and the instability arising from electoral cycles. In developing country contexts, changes in local political leadership frequently result in the displacement of existing systems in favor of new platforms selected on the basis of political visibility rather than technical suitability. Donor-funded implementations carry a structurally analogous risk: systems adopted under externally financed project cycles often lack the local institutional ownership required to sustain operations after funding concludes.

Technological Context: Infrastructure and System Quality

The Technological dimension addresses the physical, architectural, and design-level conditions that determine whether a deployed FIS can function reliably within the operational environment of local government. Across the reviewed literature, technological deficits frequently interact with human and organizational limitations to produce compounding implementation barriers rather than isolated technical failures.

IT Infrastructure and Reliability (TEC-INF; n=21; 77.8%). The third most prevalent theme overall, this construct encompasses the availability and reliability of hardware, servers, internet connectivity, power supply, and disaster recovery capacity. For local governments in the Global South, the absence of foundational infrastructure reliability negates the operational utility of even technically sophisticated FIS applications. Frequent power outages, unstable internet bandwidth, and obsolete hardware were identified across the literature as absolute barriers to real-time financial reporting and sustained system access. The evidence consistently positions infrastructure investment as a prerequisite to system deployment rather than a parallel or subsequent activity.

System Usability and Functionality (TEC-USE; n=13; 48.1%). This theme addresses the degree to which system interfaces are intuitive, performance expectations are met, and application features align with the actual administrative workflows of local government users. Systems that are technically sound but poorly aligned with local operational routines generate user friction and contribute to workaround practices and parallel manual recording, both of which undermine data integrity.

System Integration and Interoperability (TEC-INT; n=10; 37.0%). This construct captures the capacity of new FIS to interface with existing legacy applications without generating data fragmentation or operational discontinuity. A recurring structural challenge across the literature is the coexistence of siloed departmental systems, which obstructs data consolidation, reconciliation,

and government-wide financial reporting. Integration failures frequently compel local governments into duplicative data entry across multiple platforms, increasing workloads while reducing data reliability.

Data Security and Privacy (TEC-SEC; n=7; 25.9%). The least frequently cited technological theme, this construct addresses data protection protocols, access rights management, audit trail integrity, and risk mitigation against unauthorized manipulation of financial records. While comparatively low in frequency, data security concerns carry increasing operational salience in contexts characterized by low institutional trust and where systems manage sensitive public revenue and expenditure data under limited technical oversight capacity.

Organizational Context: Leadership and Resource Capacity

The Organizational dimension encompasses the internal structural and managerial conditions that either enable or obstruct the sustained implementation lifecycle within local government institutions. Unlike environmental pressures, which arrive from the outside, organizational conditions are shaped by institutional leadership, resource allocation decisions, and the degree to which bureaucratic structures are aligned with the operational requirements of integrated financial systems.

Top Management Support and Commitment (ORG-MGT; n=14; 51.9%). This theme captures the active and visible engagement of mayors, regents, secretaries-general, and department heads in enforcing implementation compliance, resolving cross-departmental coordination failures, and sustaining institutional momentum beyond the initial launch phase. The literature is consistent on this point: executive-level commitment is not merely facilitative but operationally necessary in bureaucratic environments where procedural compliance is conditioned by hierarchical authority rather than intrinsic user motivation.

Financial and Technical Resource Allocation (ORG-RES; n=14; 51.9%). This construct reflects the adequacy of budgetary allocations for IT capital expenditure, recurring training costs, vendor support contracts, and internal technical assistance. Local governments frequently underestimate the total cost of FIS ownership by treating initial procurement as the primary investment. The literature indicates that the recurring operational demands of hardware maintenance, connectivity, iterative staff upskilling, and post-launch technical support constitute ongoing expenditures that are a primary structural driver of implementation deterioration following initial deployment.

Organizational Structure and Business Process Reengineering (ORG-STR; n=10; 37.0%). This theme addresses the structural redesign of authority lines, inter-unit coordination mechanisms, and task responsibilities that must precede or accompany system deployment. Implementation consistently stalls when local governments attempt to digitalize structurally obsolete manual processes without first reforming the underlying bureaucratic workflows. Without adequate Business Process Reengineering (BPR), system adoption reproduces existing administrative inefficiencies in digital form rather than achieving authentic operational transformation.

Discussion

The Interplay of TOE-H Factors in Local Government Implementation

The thematic synthesis reveals that FIS implementation in local governments is not a discrete technical project but a complex socio-technical transformation in which the most critical risks arise at the intersections between analytical dimensions rather than within any single one. Understanding these cross-dimensional dynamics is essential for both theoretical development and practical intervention design.

The most structurally consequential pattern across the literature is the friction between top-down environmental mandates and local human resource unreadiness. Central regulatory pressure (ENV-INS) accelerates adoption timelines, but these directives are routinely executed in environments where local administrative staff lack the foundational competencies required for functional system operation (HUM-COM). When complex systems are imposed on underprepared users operating under institutional time pressure, the predictable behavioral outcome is pronounced resistance to change (HUM-ATT), as users come to perceive the system not as an

administrative tool but as a mechanism for exposing operational vulnerabilities or reducing discretionary authority over financial processes. This three-way dynamic between ENV-INS, HUM-COM, and HUM-ATT constitutes the central failure pathway identified with the greatest consistency across the reviewed literature.

This human-level resistance is further compounded by organizational and technological deficits. Even in cases where local leadership demonstrates genuine commitment to implementation (ORG-MGT), the ability to sustain momentum is constrained by chronic resource limitations (ORG-RES) and the inability to maintain reliable foundational infrastructure (TEC-INF). The literature makes clear that software procurement represents only the most visible fraction of the total cost of implementation. The recurring operational demands of hardware maintenance, connectivity, and continuous staff upskilling constitute ongoing expenditures that strain local government budgets and are a primary structural driver of the pattern the literature consistently documents: formal adoption without functional assimilation, where systems are installed to satisfy central regulators while parallel manual practices continue in daily operations.

Figure 5 maps the cross-dimensional interplay of TOE-H factors as synthesized across the 27 included studies, tracing the central failure pathway from the initial trigger of coercive institutional pressure (ENV-INS) through the compounding dynamics of staff competence deficits (HUM-COM), user resistance (HUM-ATT), infrastructure inadequacy (TEC-INF), and resource constraints (ORG-MGT/ORG-RES) toward the recurrent outcome of institutional isomorphism. The diagram makes visible the cross-dimensional structure of the problem that no single-dimension analysis can adequately capture.

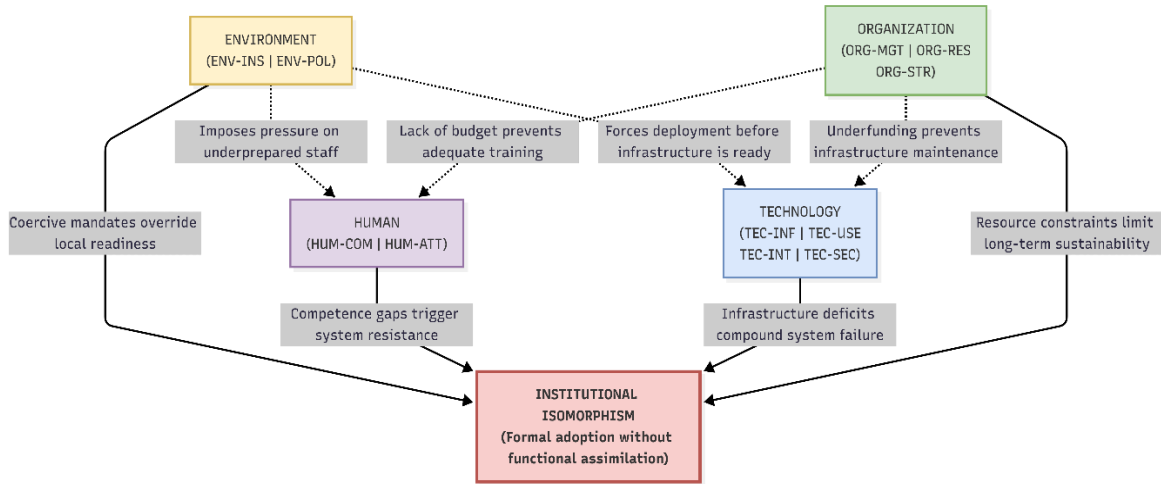


Figure 5. Cross-Dimensional Interplay of TOE-H Factors in Local Government FIS Implementation

The Global South as the Primary Site of Implementation Challenge

The pronounced geographic concentration of the literature in sub-Saharan Africa and Southeast Asia is analytically significant. Prior scholarship has established that FIS implementation failure is most acute in developing country contexts, where infrastructure deficits, human capacity constraints, and the distance between central mandates and local institutional realities are structurally greatest (Dener et al., 2011; Diamond & Khemani, 2006; World Bank, 2020). The distribution of this corpus reflects that structural reality directly. Indonesia contributes seven studies, representing 25.9% of the entire corpus and the largest single national share in the dataset, illustrating this condition: implementation efforts at the local government level are frequently initiated under national regulatory mandates while local infrastructure, human capacity, and organizational workflows remain substantively underprepared for full operational assimilation.

FIS solutions architected for environments that assume reliable connectivity, high-literacy users, and stable vendor ecosystems are structurally mismatched to the operational realities of local governments functioning under intermittent power supply, constrained bandwidth, and limited internal technical expertise. This mismatch points to a design and deployment problem that extends beyond any single country: sub-national FIS implementations in developing regions require explicit contextual adaptation, including prioritization of offline functionality, low-bandwidth operation, and locally sustainable technical support models.

Implications for Policy and Practice

The convergent findings across TOE-H dimensions yield three substantive implications. These implications are directed at policymakers, system developers, and local government administrators.

First, local governments and central regulatory bodies must reframe FIS adoption as a socio-technical transformation program rather than a procurement and installation project. Before any system is deployed, a structured baseline assessment of staff competencies in both accounting practice and digital literacy must serve as a mandatory precondition. Systems should proceed to deployment only when minimum human readiness thresholds are demonstrably met, not merely when regulatory deadlines impose pressure to do so.

Second, training must be embedded within the total cost of ownership framework as a recurring operational expenditure rather than a one-time orientation cost. Context-specific curricula designed around the actual role profiles and financial workflows of local government staff have proven substantially more effective than generic IT training programs. Sustained, role-differentiated training delivered across the full implementation lifecycle is the most consistently evidence-supported intervention for closing the competence gap identified across 88.9% of the reviewed literature.

Third, central government agencies and system developers must incorporate structural flexibility into implementation design. Imposing uniform, monolithic systems across local governments with widely varying levels of infrastructure maturity, organizational capacity, and human readiness is a structurally predictable pathway to formal compliance without functional assimilation. Phased implementation models, in which system modules are activated progressively as local infrastructure reliability and user competence reach demonstrable thresholds, represent the most evidence-consistent approach to sustained FIS assimilation at the sub-national level.

CONCLUSION

Summary of Findings

This study conducted a Systematic Literature Review of 27 peer-reviewed empirical studies to identify and synthesize the readiness prerequisites and early-stage implementation challenges of Financial Information Systems in local governments, and to map these determinants through the extended TOE-H framework. The synthesis confirms that implementation outcomes are shaped by a tightly interrelated set of human, environmental, technological, and organizational conditions rather than by isolated technical variables.

Regarding RQ1, the most pervasive readiness prerequisites are located in the Human dimension. Staff competence and training needs (HUM-COM; n=24; 88.9%) constitute the single most consistently documented prerequisite across the entire corpus, followed by attitudinal constraints encompassing low institutional trust, technophobia, and resistance to change (HUM-ATT; n=15; 55.6%). On the environmental side, institutional and regulatory pressure (ENV-INS; n=22; 81.5%) emerged as the dominant external force compelling adoption, frequently irrespective of local readiness conditions. Technological readiness is most critically anchored in foundational infrastructure reliability (TEC-INF; n=21; 77.8%), while organizational prerequisites are defined by top management commitment (ORG-MGT; n=14; 51.9%) and the adequacy of resource allocation (ORG-RES; n=14; 51.9%).

Regarding RQ2, mapping findings onto the TOE-H framework reveals that FIS adoption in local governments is primarily initiated by external institutional pressure rather than by organic internal readiness. Sustained functional assimilation, however, depends on the simultaneous alignment of reliable infrastructure, managerial commitment, adequate resource provision, and a user population with sufficient competence and institutional trust in digital processes. When regulatory mandates accelerate adoption timelines while human and technological readiness remain immature, implementation characteristically moves toward formal compliance without authentic operational assimilation, producing the institutional isomorphism pattern identified with particular consistency across Global South contexts in this review.

Theoretical and Practical Contributions

This review makes two primary theoretical contributions. First, it provides a structured cross-national synthesis of dispersed empirical findings organized through the TOE-H framework, producing the first systematic frequency-based evidence map of readiness constructs for local government FIS implementation. This mapping offers an empirically grounded basis for prioritizing constructs in future measurement model development and theory testing in sub-national public sector information systems research. Second, the explicit integration of the Human dimension as a standalone analytical category, drawn from the HOT-fit model (Yusof et al., 2006) and operationally grounded in the street-level bureaucracy perspective (Lipsky, 1980), strengthens the explanatory sufficiency of the TOE framework for local government contexts where front-line staff discretion and capacity directly mediate implementation outcomes. The TOE-H configuration developed in this study offers a replicable analytical architecture for future SLR and primary research in this domain.

Practically, the findings collectively call on local governments, central regulatory bodies, and system developers to treat FIS adoption as a structured socio-technical transformation program. Such a program should be governed by mandatory baseline readiness assessments, sustained and role-differentiated training, and phased implementation designs that activate system modules progressively as local infrastructure and human capacity reach demonstrable thresholds.

Limitations and Future Research

This review carries several limitations that should inform the interpretation of its findings. First, the synthesis is bounded by the scope and reporting quality of the 27 included studies, which vary across methodological designs, national contexts, and levels of analytical depth. Second, the thematic frequency counts reflect the prevalence of readiness constructs across the literature but do not represent causal effect sizes or magnitudes, particularly given the methodological heterogeneity of the underlying studies. Third, the review focuses specifically on implementation readiness and early-stage challenges; its conclusions should not be read as a comprehensive evaluation of long-term post-implementation outcomes.

Future research should prioritize in-depth qualitative case studies that examine how local actors translate formal adoption mandates into daily practice under the real constraints of infrastructure scarcity, staff capacity deficits, and political-administrative pressures. Studies on implementation discontinuities are especially needed, investigating why systems become inactive following initial launch, which operational barriers trigger cessation, and how reactivation can be managed without reinitializing the full project cycle. Multi-site comparative research across different public service delivery domains would help clarify which TOE-H readiness prerequisites are universal and which are system-specific. Productive comparisons might include, for example, core FMIS budget execution modules alongside narrower revenue collection digitalization instruments deployed at the sub-national level, where differences in system scope, user base, and institutional context may yield meaningfully distinct readiness profiles. Finally, future research may operationalize the TOE-H thematic codes identified in this review into structured readiness diagnostic instruments suitable for pre-deployment assessment in local government contexts.

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