



Article

A SYSTEMATIC REVIEW OF PUBLIC BUDGETING STRATEGIES IN DEVELOPING ECONOMIES: TOOLS FOR TRANSPARENT FISCAL GOVERNANCE

Sazzad Islam¹;

¹Master in Public Budgeting and Finance, Murray State University, Kentucky, USA
Email: sislam4@murraystate.edu

Citation:

Islam, S. (2025). A systematic review of public budgeting strategies in developing economies: Tools for transparent fiscal governance. American Journal of Advanced Technology and Engineering Solutions, 2(2), 348–381.
<https://doi.org/10.63125/wm547117>

Received:

January 17, 2025

Revised:

February 15, 2025

Accepted:

March 19, 2025

Published:

April 29, 2025



Copyright:

© 2025 by the author. This article is published under the license of American Scholarly Publishing Group Inc and is available for open access.

ABSTRACT

This systematic review investigates the evolution, implementation, and effectiveness of public budgeting strategies in developing economies, with a particular focus on transparency, equity, and institutional accountability. Drawing on a total of 94 peer-reviewed articles and high-quality institutional studies published between 2015 and 2025, the study examines the adoption and outcomes of key budgeting reforms, including participatory budgeting, performance-based budgeting, gender-responsive budgeting, and donor-supported fiscal initiatives. Employing the PRISMA 2020 guidelines, the review followed a rigorous multi-stage process involving identification, screening, eligibility assessment, and synthesis, resulting in a thematically structured evaluation of reform models across diverse regional contexts. The findings demonstrate that while budgeting innovations such as participatory budgeting in Sub-Saharan Africa and Latin America, performance-based budgeting in Southeast Asia, and gender-responsive budgeting in South Asia have produced measurable improvements in service delivery and transparency, their effectiveness remains uneven and highly context-dependent. Key barriers to sustained reform include limited administrative capacity, fragmented inter-ministerial coordination, weak political will, and the pervasive influence of informal institutions such as clientelism and patronage networks. Furthermore, donor-driven reforms, while often effective in catalyzing change, frequently suffer from limited local ownership and post-project sustainability challenges. The review also identifies critical gaps in the existing literature, including a dearth of longitudinal impact assessments, insufficient multi-country comparative analyses, and limited empirical work on the integration of digital platforms for budget transparency and citizen engagement. The study contributes to the growing body of public financial management scholarship by offering a comparative, evidence-based synthesis that highlights both the opportunities and systemic constraints shaping fiscal governance in the Global South. Ultimately, the review underscores the need for adaptive, politically aware, and institutionally grounded approaches to public budgeting reform that align with local governance realities and long-term development goals.

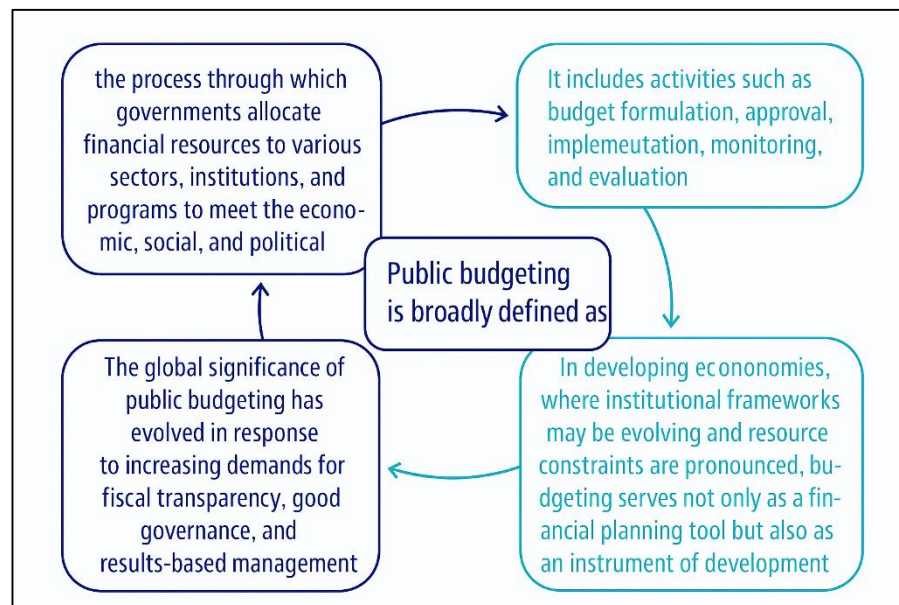
KEYWORDS

Public Budgeting; Developing Economies; Fiscal Transparency; Participatory Budgeting; Performance-Based Budgeting;

INTRODUCTION

Public budgeting is broadly defined as the process through which governments allocate financial resources to various sectors, institutions, and programs to meet the economic, social, and political needs of a nation (Neves & Carvalho, 2025; Valle-Cruz et al., 2024). It includes activities such as budget formulation, approval, implementation, monitoring, and evaluation (Turley et al., 2020). In developing economies, where institutional frameworks may be evolving and resource constraints are pronounced, budgeting serves not only as a financial planning tool but also as an instrument of development strategy and social equity (Borges et al., 2024; Park & Shin, 2005). Public budgeting thus plays a critical role in aligning limited public resources with national development priorities, guiding the operationalization of policy decisions, and enabling oversight bodies to monitor resource utilization (Mergel, 2013; Yang et al., 2023). The centrality of budgeting to governance underscores the need for transparent, accountable, and efficient mechanisms that are both institutionally grounded and socially responsive (Mkude et al., 2014; Wang & Li, 2023). The global significance of public budgeting has evolved in response to increasing demands for fiscal transparency, good governance, and results-based management. International organizations such as the International Monetary Fund (IMF), World Bank, and United Nations have consistently promoted budgetary reforms in developing countries to support macroeconomic stability, reduce corruption, and improve service delivery (Neves & Carvalho, 2025; Tummers et al., 2015). The introduction of the Public Expenditure and Financial Accountability (PEFA) framework has institutionalized comprehensive performance assessments of public financial management (Bovens, 2007). Furthermore, regional initiatives such as the African Peer Review Mechanism (APRM) and Latin America's Open Budget Index have contributed to the global movement for open budgeting (Guariso, Guerrero, et al., 2023; Meijer et al., 2015). Within this context, developing economies are encouraged to adopt reforms that promote fiscal discipline, allocate public spending based on strategic priorities, and institutionalize mechanisms for public accountability (Bracci et al., 2015; Neves & Carvalho, 2025). These developments reveal that budgeting is no longer an isolated fiscal exercise but a global governance tool shaping how governments operate, deliver services, and interact with citizens.

Figure 1: Integrated Framework of Public Budgeting in Developing Economies



Many developing countries inherited budget systems from colonial administrations that were designed more for control than for strategic development planning (Clark, 2015; Guariso, Guerrero, et al., 2023). These systems often emphasized rigid line-item budgeting, limiting flexibility and responsiveness to dynamic development needs. The incremental nature of these traditional practices, where budgets are based on historical allocations with minor adjustments, constrained innovation and discouraged outcome-oriented spending (Guariso, Castañeda, et al., 2023; Himmelweit, 2002). Moreover, political interference, bureaucratic inertia, and lack of institutional

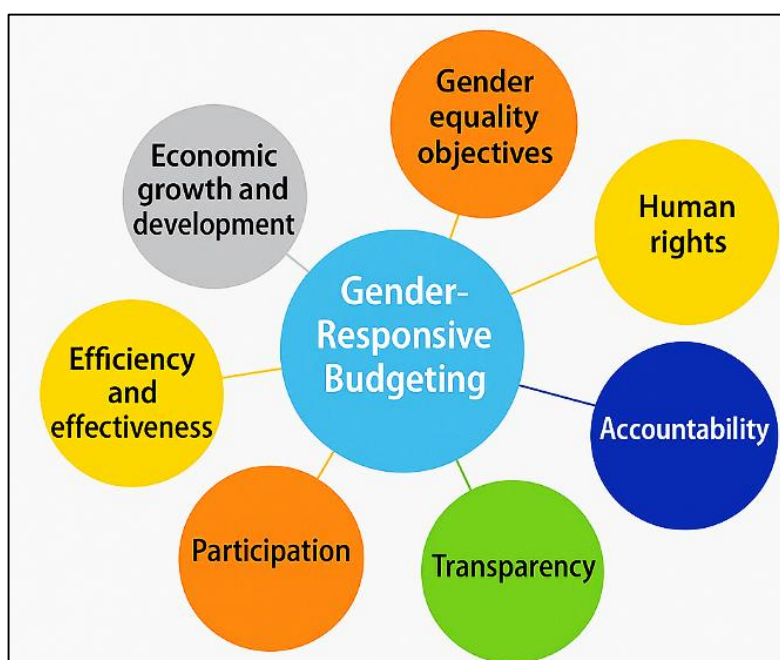
capacity further contributed to misallocation, inefficiency, and opacity in budget execution (Benito & Bastida, 2009; Valle-Cruz, Fernandez-Cortez, López-Chau, et al., 2022). To address these issues, governments in developing economies have pursued budgeting reforms that incorporate participatory, performance-based, and gender-responsive mechanisms. These strategies aim to improve transparency, enhance citizen engagement, and create a results-oriented culture within public finance management systems (Valle-Cruz, Fernandez-Cortez, & Gil-Garcia, 2022; Zhao et al., 2014).

Participatory budgeting (PB) represents one of the most innovative fiscal reforms implemented in recent decades. First popularized in Brazil in the 1980s, PB allows ordinary citizens to participate directly in the budgeting process by identifying priorities and allocating resources (Sharp, 2003). In developing countries, PB has been implemented in countries such as Kenya, India, Indonesia, and the Philippines with the goal of reducing elite capture, promoting local development, and increasing transparency (Lourenço, 2015). Studies have shown that participatory budgeting can strengthen trust in public institutions, improve service delivery outcomes, and increase budget literacy among citizens (Corrêa et al., 2014; Iacuzzi, 2021). However, the success of PB depends heavily on the political environment, institutional design, and capacity for inclusive dialogue (Caamaño-Alegre et al., 2013; Lourenço, 2015). In fragile contexts, PB initiatives have faced challenges related to representativeness, co-optation, and sustainability, necessitating careful contextual analysis and iterative implementation. Moreover, Performance-based budgeting (PBB) is another reform that links resource allocation to specific outputs, outcomes, and policy objectives. It seeks to improve the efficiency of public expenditure by introducing performance indicators, outcome evaluations, and target-based allocations (Robbins et al., 2016). In several African and Asian countries, PBB has been introduced to address inefficiencies associated with input-based budgeting and to improve budget alignment with national development strategies (Berman & Tetley, 2001). For example, Rwanda and Malaysia have used PBB to monitor progress on strategic plans, improve public accountability, and identify underperforming programs (Bonina & Cordella, 2009). However, the adoption of PBB in low-income contexts has often been constrained by weak administrative capacity, data gaps, and resistance from entrenched interests (Sandoval-Almazan & Gil-Garcia, 2014). The shift from input to output orientation requires not only technical tools but also institutional reforms that embed performance culture within public sector bureaucracies (Zhao et al., 2014).

Gender-responsive budgeting (GRB) reflects a progressive shift toward integrating gender equality objectives into public financial management. GRB involves assessing budget proposals and expenditures through a gender lens to ensure equitable outcomes for all citizens (Sawer, 2002). Countries such as India, South Africa, Rwanda, and the Philippines have institutionalized GRB practices to address gender disparities in health, education, and social protection sectors (Sharp, 2003). International bodies such as UN Women and the IMF have supported GRB initiatives by providing technical assistance, capacity-building, and monitoring frameworks (Tejedo-Romero & de Araujo, 2015). GRB also serves as a tool for holding governments accountable to their gender equality commitments under the Sustainable Development Goals (SDGs) and national gender policies (Budlender & Hewitt, 2002).

While GRB has shown promising outcomes in terms of increased gender allocations and targeted

Figure 2: Key Objectives and Institutional Drivers of Gender-Responsive Budgeting (GRB)



interventions, its institutionalization requires sustained political will, inter-agency coordination, and comprehensive sex-disaggregated data systems (Elson, 2002).

Furthermore, effective budgeting in developing economies is deeply influenced by institutional contexts, legal frameworks, and political economy dynamics. The presence of strong audit institutions, independent legislatures, civil society organizations, and transparent procurement systems enhances fiscal governance and minimizes the risk of budget capture or corruption (Deakin, 2002). Institutional reforms supported by global frameworks such as PEFA, Open Budget Index (OBI), and the Extractive Industries Transparency Initiative (EITI) have promoted greater scrutiny over budget processes and outcomes (Osborne, 2000). Yet, donor-driven reforms often encounter resistance when imposed without alignment to local political and administrative realities (Brinkerhoff & Brinkerhoff, 2011). The success of public budgeting strategies in developing countries hinges on the adaptability of reform instruments to unique institutional arrangements and cultural norms (Bertot et al., 2014). Examining these interrelationships between budgeting tools and governance ecosystems provides critical insights into the determinants of effective fiscal management. The principal objective of this systematic review is to examine and synthesize existing literature on public budgeting strategies in developing economies, with a particular focus on tools and mechanisms that promote transparency and fiscal accountability. This review compares various budgeting methodologies such as participatory budgeting, performance-based budgeting, and gender-responsive budgeting as they are applied across low- and middle-income countries. By doing so, the study identifies how these tools have been operationalized within differing governance structures and evaluates their relative impact on budget credibility, citizen participation, resource efficiency, and oversight. Furthermore, this review seeks to provide a deeper understanding of the internal and external factors—political, institutional, administrative, and sociocultural—that facilitate or hinder the implementation of transparent budgeting practices in resource-constrained environments. Special attention is given to the role of international standards such as PEFA indicators, Open Budget Index, and IMF technical guidance in shaping budgeting reforms, and to how national governments localize these global frameworks. Through qualitative synthesis and comparative evaluation, this review maps the successes and bottlenecks associated with public budgeting innovations and presents a consolidated view of how developing countries have navigated institutional weaknesses to establish more transparent and accountable public financial management systems. The systematic structure of this review ensures comprehensive coverage and analytical rigor, grounded in a diverse set of empirical findings, theoretical frameworks, and policy evaluations that collectively inform the budgeting discourse in developing contexts.

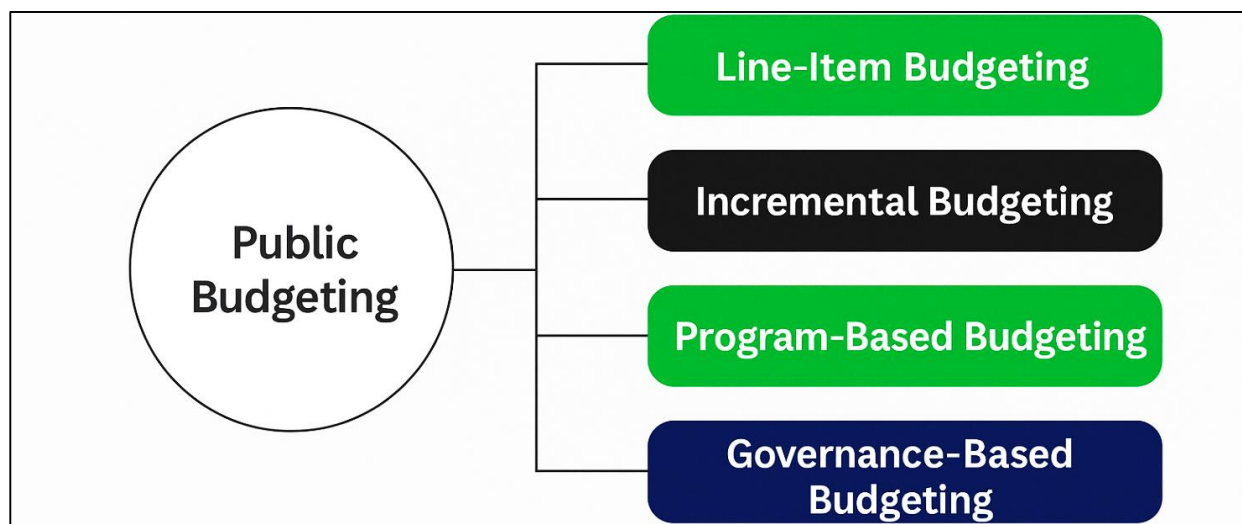
LITERATURE REVIEW

The literature on public budgeting strategies in developing economies has grown considerably over the past few decades, reflecting increasing scholarly and institutional interest in enhancing fiscal transparency, accountability, and developmental impact. Budgeting, once regarded as a purely administrative task, is now widely acknowledged as a central mechanism of governance and political economy (Foulonneau et al., 2014). Within developing contexts, where public resource constraints, institutional fragility, and governance challenges are widespread, the effectiveness of budgeting mechanisms becomes particularly consequential. The academic discourse has evolved from descriptive analyses of budget systems to more evaluative and normative investigations into strategic reforms such as participatory budgeting, performance-based budgeting, gender-responsive budgeting, and results-based financing (Beck, 2007). This literature review provides a structured synthesis of major scholarly and policy contributions to the understanding of public budgeting reforms in low- and middle-income countries. It begins by discussing the historical foundations and theoretical underpinnings of public budgeting in the Global South. Subsequently, it explores key reform models that have been adopted to promote transparency and fiscal discipline. The review then examines institutional, political, and operational factors influencing the implementation of these models and draws insights from comparative case studies and evaluation frameworks. Each section is structured to address critical debates, methodological approaches, and empirical findings, offering a comprehensive view of how budgeting innovations are conceptualized, operationalized, and assessed in developing country contexts. The review also discusses how global governance norms, donor frameworks, and international accountability tools shape national budgetary reforms, thus situating local practices within a broader institutional and policy environment.

Public Budgeting in Developing Economies

Line-item budgeting has long been the dominant approach in developing economies, characterized by its simplicity, focus on inputs, and administrative control. This model, which itemizes expenditures according to categories such as salaries, materials, and services, originated from early public administration reforms in colonial governance structures and has persisted due to its perceived transparency and ease of monitoring (Bairral et al., 2015). Hegedűs and Lentner (2020) notes that line-item budgeting was instrumental in centralizing authority and preventing fiscal abuse in fragile institutions. However, its rigidity limited managerial discretion and responsiveness to development outcomes (Rivenbark et al., 2010). In contexts where technical and administrative capacities are limited, line-item budgets provide governments with a standardized framework to prevent fund misallocation (Ríos et al., 2013). Nonetheless, numerous scholars argue that this model constrains innovation and policy performance, as it focuses on compliance over strategic allocation (Guillamón et al., 2011). The dominance of input-oriented categorization means budget assessments typically emphasize whether money was spent rather than what was achieved (Barlow et al., 2013). As such, although line-item budgeting facilitates short-term expenditure control and accountability, it fails to align resources with developmental outputs, undermining performance-based objectives (Rivenbark et al., 2010). Moreover, in countries affected by donor dependency, line-item budgeting may reinforce rigid fiscal structures that are poorly suited to dynamic development environments (Balmori, 2003).

Figure 3: Overview of Public Budgeting Models in Developing Economies



Incremental budgeting is a widely adopted model in developing economies where budget allocations are based on marginal changes to previous years' figures. This model is favored for its predictability and political feasibility, as it preserves existing distributions and minimizes disruption among stakeholders (Wehner & de Renzio, 2013). According to Garlatti et al. (2019), incrementalism reflects institutional conservatism in public finance systems and reduces conflict in budget negotiations. While useful for maintaining continuity, incremental budgeting often perpetuates inefficiencies by rewarding underperforming programs and ignoring evolving policy (Zuiderwijk & Janssen, 2013). In developing economies with weak monitoring and evaluation systems, the absence of outcome-based budgeting often leads to automatic budget rollovers without critical assessment (Lourenço, 2013). Incrementalism also contributes to bureaucratic inertia, with public agencies more focused on securing nominal increases than demonstrating performance impact (Pilcher, 2005). From a governance perspective, the model often masks structural budget deficits and inhibits fiscal reform by reinforcing expenditure path dependency (Bai, 2013). In practice, the model serves political interests by reducing transparency around trade-offs and shielding entrenched interests from scrutiny (Brusca & Montesinos, 2013). Comparative research in Sub-Saharan Africa and South Asia shows that incremental budgeting contributes to allocative inefficiency, particularly in health and education sectors, where resource needs change rapidly (Cabaleiro et al., 2012). Although its simplicity and low technical requirements make incrementalism popular among finance ministries,

its shortcomings in outcome evaluation limit its usefulness for development-oriented budgeting (Ferlie et al., 2012).

Program-based budgeting (PBB) has emerged as a reform-oriented alternative that links public expenditures with policy objectives and performance indicators. The model organizes expenditures by programs or functions rather than economic categories, thereby enhancing transparency in resource allocation and promoting strategic fiscal management (Justice et al., 2006). In contrast to incremental and line-item approaches, PBB emphasizes outcomes and accountability, enabling governments to assess whether public resources achieve desired social impacts (Lockett et al., 2006). In Rwanda, Kenya, and the Philippines, PBB has been linked to improvements in expenditure tracking and alignment with national development plans (Hodge & Greve, 2005). However, implementing PBB requires robust monitoring and evaluation systems, reliable data, and a performance-oriented public service culture—conditions that are often lacking in developing contexts (Bennett & Iossa, 2006). Moreover, coordination between line ministries and finance authorities is critical to integrate PBB into existing planning systems, which is complicated by fragmented institutional frameworks (Grimmelikhuisen & Welch, 2012). Empirical studies reveal that in many developing countries, PBB initiatives are introduced alongside traditional budgeting formats, resulting in dual systems that limit the effectiveness of reform (Piotrowski, 2007). Furthermore, donor-driven PBB reforms often prioritize formal compliance over substantive institutional change, creating a superficial adoption of budgeting innovations (Sharp, 2003). Nonetheless, PBB represents a strategic shift towards results-based budgeting in the Global South, offering a framework that encourages efficiency, prioritization, and accountability when adequately institutionalized (Hegedűs & Lentner, 2020).

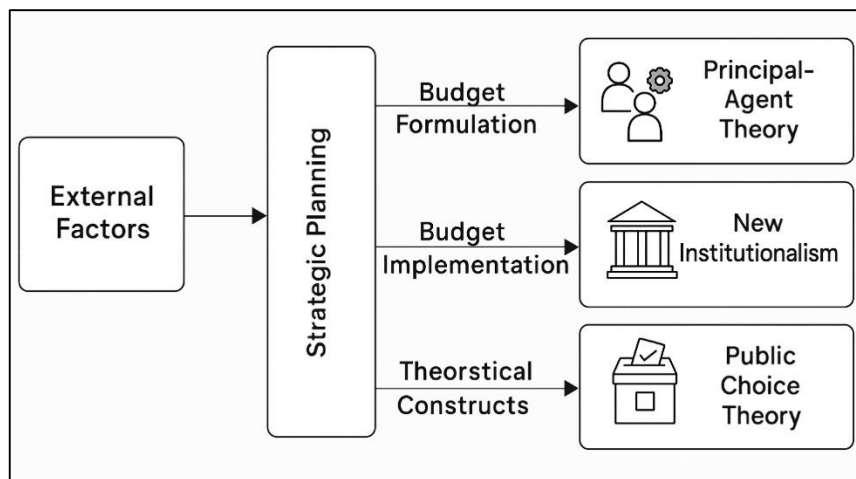
In addition, the traditional function of public budgeting as a fiscal tool is centered on its capacity to enforce financial discipline, allocate scarce resources efficiently, and support macroeconomic stability. This function is particularly critical in developing economies, where fiscal space is often limited, and governments face pressure to balance economic development with prudent financial management (Shaoul, 2005). Budgeting as a fiscal instrument allows governments to determine spending ceilings, prioritize expenditures, and monitor deficits in line with macroeconomic frameworks (Bisogno et al., 2019). Fiscal rules, mid-term expenditure frameworks (MTEFs), and program-based classifications have been introduced to manage public finances more strategically and reduce volatility in government spending (Heeks, 2003). However, empirical studies show that weak enforcement mechanisms, politicized budget processes, and unrealistic revenue projections often undermine the fiscal control function in many developing nations (Mutula, 2008). Additionally, budget execution remains a challenge in contexts where commitment controls, procurement systems, and cash management are fragmented (Heald, 2003). The use of budgeting to impose fiscal restraint may also conflict with poverty reduction and social expenditure mandates, creating tensions in resource allocation (Bracci et al., 2019). Thus, while the budgeting system is foundational to financial planning, its effectiveness as a fiscal control tool depends on technical capacities, political will, and transparency in expenditure forecasting and implementation (Purvis & Grainger, 2013). Beyond fiscal control, public budgeting in developing economies functions as a governance mechanism that structures state-society relations, promotes transparency, and strengthens institutional legitimacy. Budgeting, when embedded within participatory frameworks, serves as a platform for articulating citizen demands, monitoring government commitments, and institutionalizing accountability (Liu, 2009). Participatory budgeting (PB), gender-responsive budgeting (GRB), and performance-based frameworks are examples of governance-oriented reforms that reframe the budget not only as an economic plan but as a democratic process (Boughton, 2006). These approaches emphasize inclusivity, deliberation, and responsiveness, addressing long-standing concerns around fiscal opacity, elite capture, and exclusionary practices in public finance (Mintz & Smart, 2006). In post-conflict and fragile states, transparent budget processes have also been associated with improvements in state legitimacy and social cohesion (Lockett et al., 2006). However, governance-based budgeting reforms often encounter implementation challenges, particularly in contexts where civic space is constrained or where executive dominance marginalizes legislative and public oversight (Modlin, 2010). Institutional reforms that strengthen audit institutions, parliamentary budget offices, and civil society watchdogs are critical to realizing the governance potential of budgeting (Osborne, 2000). Moreover, governance-oriented budgeting must be accompanied by fiscal transparency tools such as citizen budgets, open budget portals, and independent evaluations to ensure continuous public

engagement and accountability (Boyne, 2002). Through these mechanisms, budgeting in developing economies assumes a central role in promoting democratic accountability and embedding good governance practices into public financial management systems (Vivian & Maroun, 2018).

Theoretical Background

The theoretical framing of public budgeting in developing economies is deeply rooted in political economy, where budgeting is seen not only as a technical process but as a product of institutional arrangements and power relations. Caiden and Wildavsky (1980) was among the first to emphasize the political nature of budgeting, arguing that it functions as a tool of negotiation, conflict resolution, and policy prioritization. Musgrave et al. (1989) extended this understanding by outlining the three roles of public finance—allocation, distribution, and stabilization—which remain fundamental in evaluating fiscal performance. Caiden and Wildavsky (1980) later argued that budgeting is inherently about managing scarcity, where demands always exceed resources, making budgeting an exercise in choice and prioritization. Within the context of developing countries, this theoretical lens is critical because budgetary allocations often reflect not only policy goals but also patronage

Figure 4: A Theoretical Framework for Understanding Public Budgeting in Developing Economies



of enacting the developmental state by translating long-term national visions into resource-backed programs (Harrison et al., 2012). These classical contributions continue to shape modern perspectives on fiscal governance in the Global South, where budgeting is a dynamic and contested arena influenced by institutional norms, political interests, and administrative capacities (Vifell & Soneryd, 2012).

Principal-agent theory offers a critical lens for analyzing the asymmetric relationships inherent in public budgeting, especially in hierarchical government structures prevalent in developing economies. According to this theory, the "principal"—often the legislature or executive leadership—delegates budgetary authority to "agents," such as ministries, departments, or public officials, to implement financial decisions (Wirtz & Birkmeyer, 2015). This delegation, however, creates information asymmetries and potential for opportunistic behavior, necessitating mechanisms of oversight, monitoring, and incentive alignment (Parycek et al., 2014). In developing contexts, where institutional weaknesses and corruption risks are high, principal-agent dilemmas are acute, often resulting in misappropriation of funds, inefficient spending, and weak accountability (Egger-Peitler & Polzer, 2014). Budget transparency tools, performance-based budgeting systems, and audit mechanisms are employed as solutions to mitigate agency risks and promote compliance with fiscal rules (Erridge & Greer, 2002). However, the effectiveness of these mechanisms depends on the credibility of enforcement institutions and the availability of timely, accurate data. Empirical studies in Sub-Saharan Africa and South Asia reveal that agency problems often intensify at the subnational level, where decentralized units have discretion over expenditure without adequate oversight (Wirtz & Birkmeyer, 2015). Moreover, donor-recipient dynamics replicate principal-agent problems at the international level, where external funders set conditions for financial aid that may not align with domestic priorities (Alexopoulos et al., 2013). Thus, principal-agent theory underscores the

networks, bureaucratic interests, and donor conditions. Scholars such as Schick (1998) and Yang et al., (2013) have further argued that budgeting in such settings is constrained by institutional path dependency, limited managerial autonomy, and opaque fiscal environments. The foundational works of these scholars laid the groundwork for understanding budgeting as an intersection between policy, administration, and governance. Moreover, budgeting serves as a means

importance of monitoring and incentive systems within public budgeting frameworks, while also illustrating the complexity of ensuring budgetary discipline across multiple tiers of governance (Massaro et al., 2016).

New institutionalism offers a broader conceptualization of public budgeting by emphasizing how formal rules, informal norms, and organizational structures shape fiscal behavior and outcomes. This theoretical perspective diverges from rationalist models by recognizing that actors operate within bounded rationality and are influenced by historically embedded practices and institutional constraints (Manes-Rossi et al., 2020). In developing economies, the institutional environment often features a mix of traditional authority, bureaucratic inertia, and legal pluralism, which complicates budgeting processes (Alexopoulos et al., 2013). For example, budgetary procedures may formally prescribe participation, transparency, and performance metrics, but informal practices such as patronage, rent-seeking, and elite bargains often dominate decision-making (Wirtz & Birkmeyer, 2015). Studies in countries like Nigeria, Bangladesh, and Uganda have demonstrated how informal networks shape budget allocations in ways that deviate from official policy frameworks (Egger-Peitler & Polzer, 2014). Moreover, institutional isomorphism—where governments adopt reforms to conform to global standards rather than domestic needs—can lead to symbolic compliance with international budgeting norms without actual institutional transformation (Erridge & Greer, 2002). New institutionalist scholars such as Meijer et al. (2012) have emphasized that meaningful reform requires altering incentive structures and power relations, not merely introducing new procedures. Consequently, this framework provides critical insight into why ostensibly well-designed budgeting systems often fail to produce desired outcomes in developing contexts. It also explains the persistence of budgeting inefficiencies as products of deeply embedded institutional routines and organizational cultures (Bolívar, del Carmen Caba Pérez, et al., 2013).

Public choice theory interprets public budgeting through the lens of self-interested behavior by political actors, bureaucrats, and voters, who seek to maximize personal or institutional benefits rather than public welfare (Shaw, 2002). Originating from the work of Kafoglis and Cebula (1981), this theory argues that budgeting outcomes are shaped by vote-seeking politicians, rent-seeking bureaucrats, and interest group lobbying, particularly in electoral or populist environments. In developing economies, where institutional checks and balances may be weak, political incentives often lead to budget allocations that favor short-term, visible projects over long-term development needs (Cohen et al., 2012; Trussel & Patrick, 2018). Pork-barrel spending, off-budget funds, and politically motivated transfers are common manifestations of public choice behavior in budgeting (Carslaw et al., 2007). Scholars such as Sawyer (2002) have demonstrated how electoral cycles influence budget cycles, with surges in recurrent expenditures during election years followed by austerity post-election. Moreover, public officials may resist reforms such as performance-based budgeting or expenditure ceilings if these limit their discretion over resource allocation (Veljković et al., 2014). In this view, budgeting becomes a tool for political survival rather than developmental planning. Studies on Latin America, South Asia, and Africa have confirmed that public choice dynamics often drive suboptimal budgeting practices, particularly in decentralized settings where local elites dominate planning processes (Cohen et al., 2012). While critics argue that public choice theory overlooks institutional capacity and civic norms, its emphasis on incentive compatibility and political economy helps explain recurrent inefficiencies and reform resistance in budget systems (Meijer et al., 2015).

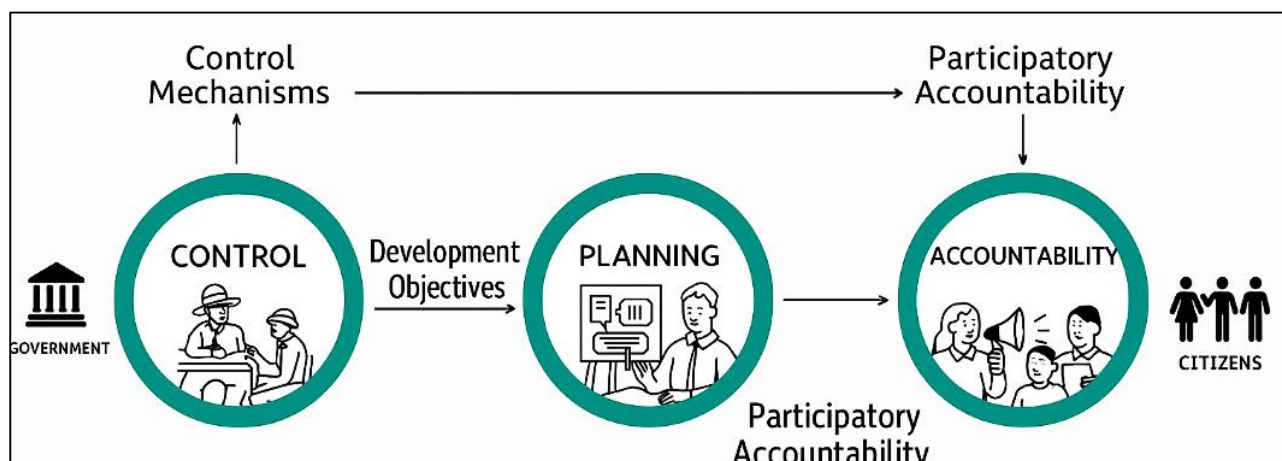
The integration of principal-agent theory, new institutionalism, and public choice theory provides a comprehensive theoretical toolkit for understanding budgeting in developing economies. Each theory contributes distinct but complementary insights. Principal-agent theory highlights accountability relationships and oversight mechanisms between actors within budget hierarchies (Cucciniello et al., 2014). New institutionalism emphasizes the constraining role of formal and informal institutions, as well as the persistence of organizational routines (Meijer et al., 2015). Public choice theory reveals the self-interested motives of political and bureaucratic actors that distort allocative efficiency (Cohen et al., 2017). These theories together explain why budgeting reforms that appear technically sound often fail in practice due to agency problems, institutional inertia, and perverse political incentives (Meijer et al., 2015). For example, performance-based budgeting may be undermined by a lack of credible data (a principal-agent issue), resistance to changing entrenched practices (an institutional issue), and reluctance to tie allocations to outcomes that are politically risky (a public choice issue) (Sawyer, 2002). Moreover, the interaction between these theoretical

dimensions manifests in multi-level governance, donor relations, and inter-ministerial bargaining processes (Rufín & Rivera-Santos, 2010). The foundational contributions of Caiden and Wildavsky (1980), remain central in articulating how budgetary decisions reflect competing goals, constraints, and institutional logics. These works continue to shape contemporary research agendas, especially in contexts where fiscal governance is deeply intertwined with developmental and political transitions (Manes-Rossi et al., 2020; Massaro et al., 2016).

Empirical applications of these theories have enriched the analysis of budgeting practices across diverse developing regions. Case studies in Sub-Saharan Africa, South Asia, and Latin America have utilized principal-agent frameworks to assess performance monitoring and audit effectiveness (García-Sánchez et al., 2012; Pissarides et al., 2003). Others have applied institutionalist perspectives to explain variation in reform outcomes, noting how historical legacies and administrative traditions influence the uptake of budgeting tools (Mkude et al., 2014). Public choice theory has been employed in analyses of electoral budget cycles, resource misallocation, and elite capture, especially in contexts where political instability exacerbates fiscal populism (Elson, 2002). Methodologically, mixed-method approaches combining qualitative interviews, budget data analysis, and institutional diagnostics have offered robust insights into reform challenges and successes (Bolívar, del Carmen Caba Pérez, et al., 2013). These studies often find that successful reform requires alignment between institutional structures, political incentives, and administrative capacities—a triangulation that reflects all three theoretical paradigms (Elson, 2002). For instance, participatory budgeting may falter without institutional mechanisms for follow-through (new institutionalism), effective delegation and oversight (principal-agent), and electoral incentives for inclusion (public choice). Thus, the combined application of these theories not only enriches academic understanding but also informs policy design and implementation strategies in fiscal governance (Bolívar, del Carmen Caba Pérez, et al., 2013). The theories serve not merely as abstract constructs but as diagnostic tools for identifying why budgeting systems succeed or fail within specific institutional and political contexts.

Evolution of Budgeting Systems in the Global South

The historical roots of budgeting systems in the Global South can be traced to colonial administrative frameworks, which were designed primarily for control, taxation, and resource extraction rather than participatory governance or development planning (Cook & Harrison, 2014). In British, French, Portuguese, and Belgian colonies, budgetary structures prioritized line-item formats to ensure hierarchical oversight and bureaucratic discipline (Chircu & Lee, 2005). These systems emphasized compliance and cash-based accounting while sidelining local participation and long-term developmental considerations (Chien-Chih, 2007). Consequently, budgeting became an inward-looking, administrative exercise dominated by finance ministries with limited links to policy outcomes or citizen needs (Albalade, 2013). The colonial legacy also entrenched a culture of centralized control, where financial authority remained concentrated in the executive branch, thereby marginalizing parliaments and local governments (Walker & Andrews, 2013). These foundational structures persisted after independence and were rarely redesigned to reflect new national priorities (Caiden & Wildavsky, 1980). In many African and South Asian nations, the inherited budgeting systems continued to operate within outdated legal frameworks, with little room for transparency or civil society engagement (Lockett et al., 2006). Mergel (2013) have emphasized that this institutional path dependency limited the capacity for innovation, making budgeting processes opaque, elite-driven, and disconnected from service delivery needs. Moreover, in post-colonial contexts, budget documents were often inaccessible to the public, and fiscal planning remained an elite technocratic process governed by foreign-trained bureaucrats (Stivers, 2000). These colonial legacies remain a central explanatory factor in understanding the slow and uneven progress toward transparent, performance-oriented, and inclusive budgeting systems in the Global South.

Figure 5: Evolution of Budgeting Systems in the Global South

Following independence, many developing countries in Africa, Asia, and the Caribbean retained or reinforced centralized budget systems, often in response to nation-building imperatives, security concerns, and weak subnational governance (Brown et al., 2007). Fiscal centralization was viewed as a mechanism to exert national cohesion and administrative control, particularly in fragile or newly formed states (Berman & Tettey, 2001). In most cases, line ministries operated under rigid budget ceilings imposed by finance ministries, with limited autonomy or participation in budget formulation (Roberts, 2006). The period between the 1970s and 1980s also saw increased dependence on donor financing, especially in Sub-Saharan Africa and South Asia, where structural adjustment programs (SAPs) led by the International Monetary Fund (IMF) and World Bank introduced budgetary reforms focused on fiscal discipline, downsizing of the public sector, and liberalization (Atan et al., 2010). These externally driven reforms emphasized technocratic efficiency but often neglected local ownership, political realities, and institutional sustainability (Tolbert et al., 2008). Moreover, donor-imposed measures prioritized budget balance over equity and responsiveness, with mixed outcomes on public service delivery and developmental equity (Sharp, 2003). Multiple scholars observed that such reforms led to fragmented public financial management systems, with multiple parallel processes for donor-funded and domestic programs (Weber et al., 2008). As a result, public budgets became disconnected from national development strategies and were vulnerable to both fiscal inefficiencies and corruption (Cuthill, 2010). Empirical case studies in Tanzania, Ghana, and Bangladesh illustrate that while donor interventions led to some procedural improvements—such as macroeconomic forecasting and financial reporting—substantive reforms to budget transparency and inclusivity remained elusive due to weak political incentives and administrative inertia (Bolívar, Galera, et al., 2013).

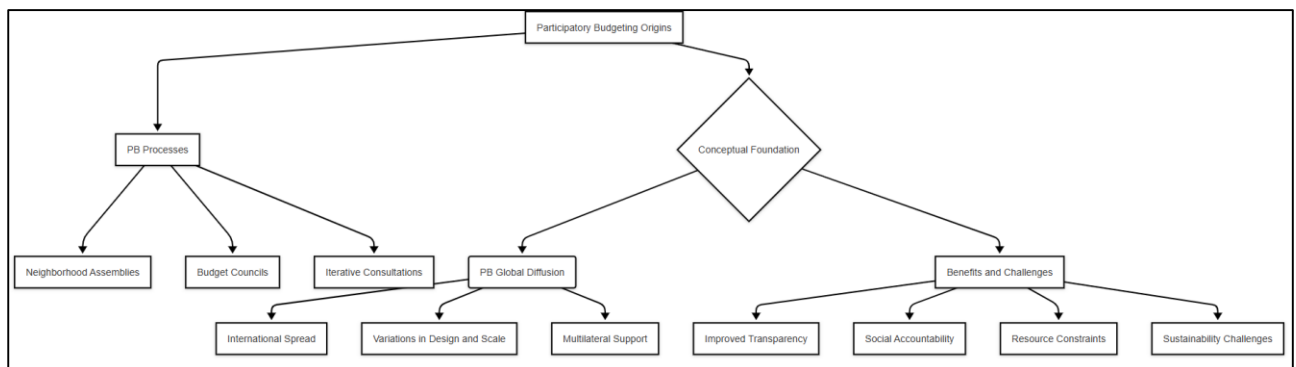
The 1990s and early 2000s witnessed a paradigm shift in public budgeting across developing countries, driven by broader democratization processes, decentralization movements, and international pressure for good governance (Forrer et al., 2010). This period marked a departure from highly centralized, opaque fiscal practices toward budgeting systems that emphasized participation, transparency, and local accountability. Participatory budgeting (PB) models emerged as a response to elite capture and were institutionalized in countries like Brazil, the Philippines, and India to foster community involvement in resource allocation (Bing et al., 2005). In parallel, performance-based budgeting (PBB) gained traction as a tool to link expenditures to outcomes, supported by global institutions such as the IMF, OECD, and World Bank (Adhikari & Gårseth-Nesbakk, 2016). These reform movements were embedded in broader public financial management (PFM) reforms, often guided by frameworks like the Public Expenditure and Financial Accountability (PEFA) assessments (Schick, 1998). However, cross-regional evidence suggests that adoption success varied widely. Countries with stronger institutions and civil society, such as South Africa and Chile, made more progress compared to fragile states or authoritarian regimes where reform was superficial or symbolic (Barlow et al., 2013). Many reforms were donor-funded and implemented without significant political buy-in, leading to reform fatigue and policy incoherence (Brusca & Montesinos, 2013). In several African and Asian countries, budgeting reforms were compartmentalized—piloted

in select ministries or localities without system-wide integration (Mintz & Smart, 2006). Additionally, technical reforms often outpaced institutional readiness, with governments lacking data systems, staff capacity, and political alignment to operationalize decentralized budgeting (Hewitt & Mukhopadhyay, 2002). These adaptation challenges highlight the importance of contextualizing budgeting reform to institutional, political, and socio-cultural environments rather than replicating models from industrialized countries (Casal & Gómez, 2014).

Participatory Budgeting as a Tool for Citizen Engagement

Participatory budgeting (PB) emerged as a democratic innovation rooted in efforts to make public finance more inclusive and responsive to citizens' needs (Islam & Helal, 2018). Its conceptual foundation was established in the late 1980s in Porto Alegre, Brazil, where the Workers' Party initiated a process that allowed citizens to engage directly in the allocation of municipal funds (Ahmed et al., 2022; Verma & Gupta, 2013). PB was designed to address fiscal opacity, elite dominance, and social exclusion by institutionalizing deliberative mechanisms for local budget formulation (Aklima et al., 2022; Islam & Helal, 2018; Lenschow, 2012). Helal (2022) and Palmirani et al. (2014) identify PB as a hybrid of representative and direct democracy that (enhances legitimacy, allocative efficiency, and public trust. The process typically involves neighborhood assemblies, budget councils, and iterative consultations, allowing citizens to prioritize spending in areas such as sanitation, education, housing, and infrastructure (Ahmed et al., 2022; Justice et al., 2006). PB has gained international traction as a global model for deepening democracy, championed by multilateral organizations like the World Bank and UN-Habitat (Aklima et al., 2022; Bennett & Iossa, 2006; Majharul et al., 2022). Its diffusion has been facilitated by international conferences, civil society networks, and policy transfers, leading to variations in design, scale, and effectiveness across regions (Bennett & Iossa, 2006; Helal, 2022; Masud, 2022). Theoretically, PB draws from deliberative democratic theory, participatory governance, and social accountability frameworks, linking citizen participation to improved transparency and policy responsiveness (Hossen & Atiqur, 2022; Palmirani et al., 2014). As such, PB is not merely a technocratic reform but a normative shift in the relationship between states and citizens in public budgeting processes (Md Majharul et al., 2022; Kumar et al., 2022; Zhao et al., 2014).

Figure 6: Participatory Budgeting as a Tool for Citizen Engagement



Brazil remains the most extensively studied case of participatory budgeting, offering a rich empirical base for evaluating its institutional design and socio-political effects (Sohel et al., 2022). Porto Alegre's PB program became the flagship model, allocating around 20% of the city's budget through citizen deliberation in the 1990s (dos Santos Brito, da Silva Costa, et al., 2014; Hossen & Atiqur, 2022; Soheli et al., 2022). The city experienced significant improvements in service delivery, especially in low-income neighborhoods, with notable increases in sanitation coverage, school enrollment, and healthcare access (dos Santos Brito, Neto, et al., 2014; Mohiul et al., 2022). PB's institutionalization in Brazil expanded rapidly to over 250 municipalities, supported by federal incentives and grassroots mobilization (dos Santos Brito, da Silva Costa, et al., 2014a; Kumar et al., 2022). Key features included district-level forums, thematic councils, and ranking systems for budget proposals, which collectively enhanced procedural legitimacy and local ownership (Cabral et al., 2009; Soheli et al., 2022). However, Matheus, Ribeiro and Vaz (2012) show that outcomes varied based on political commitment, resource availability, and civil society strength. In some cities, PB became routinized

and technocratic, while in others it was undermined by partisan capture or administrative turnover (Michener, 2014; Tonoy, 2022). Nonetheless, Brazil's experience demonstrates that PB can function as a redistributive and democratizing tool when embedded in supportive institutional contexts and aligned with broader governance reforms (Arafat Bin et al., 2023; Sanabria et al., 2014; Younus, 2022). The Brazilian case continues to influence academic debates and international replication efforts, serving as a reference for PB design globally (Chowdhury et al., 2023; Matheus, Ribeiro, Vaz, et al., 2012).

In Kenya, PB has been linked closely with constitutional decentralization reforms following the 2010 devolution process, which granted significant fiscal and administrative powers to 47 county governments (Barnett & Grown, 2004). County-level PB emerged as a tool for operationalizing Article 10 and Article 174 of the Kenyan Constitution, which emphasize citizen participation and inclusive development (Porumbescu, 2016). PB processes in counties such as Makueni, Baringo, and Elgeyo-Marakwet were adopted to involve citizens in identifying priority projects and setting budget ceilings (Grimmelikhuijsen et al., 2013). Empirical evaluations by Budlender and Hewitt (2002) and Grimmelikhuijsen et al. (2013) found that PB improved transparency and responsiveness in local development planning, with evidence of community influence over projects related to water access, roads, and primary healthcare. However, challenges remain regarding technical capacity, political interference, and inclusiveness, particularly in marginalized regions and among women and youth (Park & Shin, 2005; Porumbescu, 2016). Civil society organizations such as IBP Kenya have played a vital role in training facilitators, simplifying budget documents, and institutionalizing budget dialogues (Grimmelikhuijsen et al., 2013). Despite these gains, PB in Kenya has faced sustainability challenges, including the absence of clear legal frameworks and fluctuating political support at the county level (Kosack & Fung, 2014). Kenya's experience illustrates that PB can support decentralization by empowering citizens and promoting fiscal transparency, but its effectiveness depends on robust enabling environments and continuous capacity-building (Zheng et al., 2008).

India presents a complex case for participatory budgeting due to its federal structure and diversity in subnational governance practices. While the national government has not adopted PB formally, several municipalities, notably in Kerala, Pune, and Bengaluru, have implemented local versions of PB through decentralized planning initiatives (Justice et al., 2006). Kerala's People's Plan Campaign, launched in the late 1990s, integrated PB into the decentralized planning process, empowering local self-governments (Panchayati Raj Institutions) to develop and manage budget proposals (Zheng et al., 2008). This initiative led to significant community participation, particularly among women and marginalized groups, and influenced budget allocations in sectors such as education, public health, and sanitation (Chircu, 2008). In urban centers like Pune and Bengaluru, PB processes facilitated by NGOs and resident welfare associations focused on infrastructure maintenance, traffic regulation, and solid waste management (Bolívar et al., 2007). However, scholars note that these urban PB experiments remain limited in scale and often suffer from elite domination, procedural ambiguity, and weak institutionalization. Furthermore, the lack of legal mandates for citizen involvement in fiscal decisions at the municipal level has constrained PB's scalability and continuity. Nevertheless, India's experience illustrates the potential for PB to function within both rural and urban contexts when supported by strong local institutions, political decentralization, and civic engagement (Justice et al., 2006).

The Philippines offers another illustrative example where PB has been used to bridge gaps between national anti-poverty programs and grassroots development planning. Under the Aquino administration (2010–2016), the Bottom-Up Budgeting (BuB) initiative institutionalized PB elements by allowing civil society organizations (CSOs) and local government units (LGUs) to collaboratively identify projects funded through the national budget (Chircu, 2008). BuB aimed to address service delivery failures, elite capture, and exclusion in resource distribution by embedding participatory planning into the annual budgeting cycle (Grimsley & Meehan, 2007). Over 42,000 projects were implemented under BuB from 2013 to 2016, covering infrastructure, education, and livelihood programs (Wright & Kurian, 2010). Evaluations by the World Bank (2017) and Institute for Leadership and Democracy (iLEAD) showed improvements in transparency, citizen trust, and alignment of national priorities with local needs. However, challenges emerged in terms of political manipulation, uneven participation across regions, and coordination failures between national agencies and LGUs (de Bettignies & Ross, 2004). The initiative was discontinued in 2017 under a new administration, underscoring the fragility of participatory reforms in the absence of institutional embedding (Grimsley

& Meehan, 2007). Nonetheless, BuB's integration into national budgeting frameworks demonstrated that PB could scale up when aligned with broader state reforms and backed by budget allocations (Pérez et al., 2008).

Multiple studies have documented the positive outcomes associated with participatory budgeting, particularly regarding improvements in public service delivery, reduction of elite capture, and enhancement of social accountability. In Brazil, India, and the Philippines, PB processes have been linked to increased investments in underserved communities, especially in sectors like education, sanitation, and healthcare (Heeks, 2003). PB encourages alignment of public spending with citizen-identified priorities, thereby increasing the relevance and effectiveness of service delivery (Chircu, 2008). In Kenya and South Africa, participatory budgeting has contributed to stronger local accountability by enabling community oversight of project implementation and resource allocation (Ndou, 2004). Studies also suggest that PB increases civic literacy, fosters democratic values, and deepens trust in public institutions (Zheng et al., 2008). Social inclusion is another benefit, with evidence showing that PB creates opportunities for marginalized groups, particularly women and low-income citizens, to influence public policy (Ndou, 2004). Additionally, PB contributes to budget credibility by increasing transparency, reducing information asymmetry, and creating platforms for deliberation and grievance redress (Zheng et al., 2008). These outcomes demonstrate that PB functions not only as a participatory tool but also as a corrective mechanism that enhances the equity and efficiency of public budgeting processes (Dziekański, 2017).

Performance-Based Budgeting and Results-Oriented Management

Performance-based budgeting (PBB) represents a significant shift from traditional input-based budgeting toward frameworks that align government expenditures with outputs, outcomes, and policy objectives. It is defined as a budgeting approach that explicitly links the allocation of public resources to measurable results, fostering efficiency, accountability, and strategic planning (Walker & Andrews, 2013). PBB is grounded in principles of new public management, emphasizing managerial autonomy, performance measurement, and output control (Bai, 2013). Unlike line-item budgeting, which focuses on financial compliance, PBB introduces a results-oriented culture by integrating performance indicators into budget decisions (Hodge & Greve, 2007). This approach assumes that improved public sector outcomes can be achieved through transparent goal-setting, evidence-based resource allocation, and robust monitoring and evaluation (Bai, 2013). According to Steccolini et al. (2020), PBB enhances policy coherence by linking strategic plans to annual budgets, thus strengthening institutional alignment and policy implementation. However, the design of PBB systems varies significantly across countries, reflecting differences in administrative traditions, political contexts, and institutional capacities (Manes-Rossi et al., 2020). While proponents view PBB as a tool for increasing allocative efficiency and citizen trust, critics argue that its effectiveness is contingent on the existence of reliable performance data, managerial discretion, and a supportive reform environment (Karunasena et al., 2011). Therefore, PBB is not merely a technical innovation but a complex institutional reform that redefines the logic of public financial management.

Figure 7: Performance-Based Budgeting

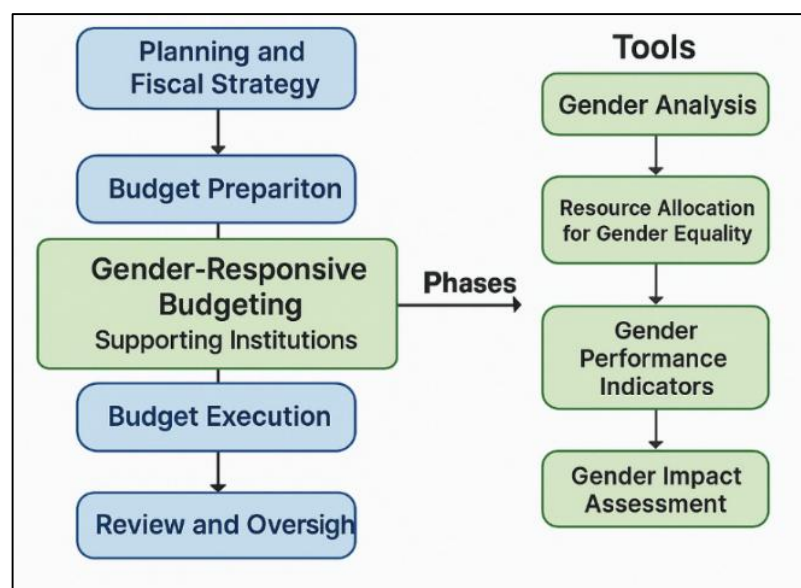


Gender-Responsive Budgeting for Equity and Accountability

Gender-responsive budgeting (GRB) is a transformative approach to public financial management that seeks to integrate gender perspectives into all stages of the budget cycle, from planning to execution and evaluation. It is not about creating separate budgets for women or men but about ensuring that fiscal allocations promote gender equity and redress historical and structural inequalities (Sharp, 2003). GRB aims to assess how budgetary decisions affect the needs of different genders and to prioritize expenditures that reduce gender disparities in education, health, economic participation, and social protection (Balmori, 2003). The foundational logic of GRB draws from feminist economics and rights-based public finance, recognizing that fiscal policies are not gender-neutral and often reinforce existing social hierarchies (Elson, 2002). Through tools such as gender budget statements, expenditure tracking, and benefit incidence analysis, GRB makes the distributional consequences of public spending more visible and subject to accountability (Rubin & Bartle, 2005). Scholars emphasize that GRB is instrumental in linking national development goals with international gender equality commitments, such as the Beijing Platform for Action and the Sustainable Development Goals (SDGs) (Hewitt & Mukhopadhyay, 2002). In this context, GRB is both a governance innovation and a social justice imperative, enabling governments to reorient fiscal priorities toward inclusive and equitable development. The conceptual foundation of GRB situates it as a key strategy for aligning macroeconomic policy with gender-transformative outcomes, challenging conventional fiscal paradigms that prioritize economic growth over social equity.

The mainstreaming of gender-responsive budgeting has been significantly supported by global institutions, which have developed frameworks, toolkits, and technical assistance programs to guide national governments in implementing GRB. UN Women has been a central actor, offering global guidance through its Gender Responsive Budgeting Initiative, which promotes capacity-building, budget diagnostics, and performance indicators for tracking gender outcomes (Budlender & Hewitt, 2002). The International Monetary Fund (IMF) has also recognized the macroeconomic relevance of GRB, incorporating it into its Fiscal Affairs Department workstreams and publishing policy notes that encourage gender-sensitive public finance reforms (Barnett & Grown, 2004). The Commonwealth Secretariat has contributed to the proliferation of GRB by producing training manuals, supporting South-South learning, and promoting budget transparency through a gender lens (Tejedo-Romero & de Araujo, 2015). These international efforts have facilitated knowledge transfer and norm diffusion, encouraging over 80 countries to experiment with GRB approaches (Budlender & Hewitt, 2002).

Figure 8: Institutional Integration of Gender-Responsive Budgeting Across the Public Finance Lifecycle

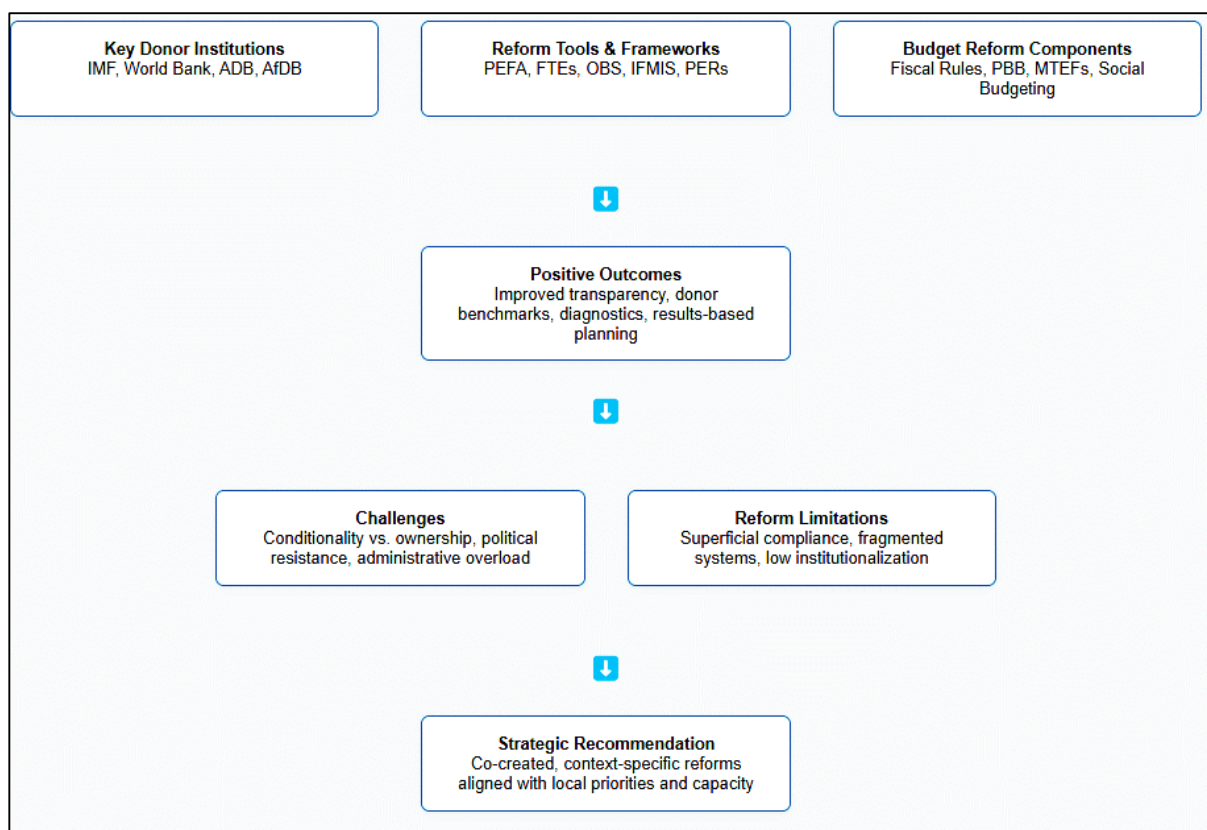


Global frameworks emphasize the need for institutional coordination between finance ministries, gender agencies, and civil society organizations to mainstream gender into national budgets (Sharp, 2003). Methodological tools include gender-aware policy appraisals, time-use surveys, and gender-disaggregated benefit incidence analyses, which are increasingly used to inform expenditure planning (Sawer, 2002). However, challenges persist in translating international guidance into actionable reforms, particularly in countries with weak gender institutions or limited fiscal space (Stivers, 2000). Nonetheless, the role of global institutions remains vital in legitimizing GRB, standardizing best practices, and framing gender equity as a matter of fiscal accountability and macroeconomic stability (Budlender & Hewitt, 2002).

Donor Influence and International Financial Institutions in Budget Reforms

International Financial Institutions (IFIs) such as the International Monetary Fund (IMF), World Bank, and regional development banks have played a pivotal role in shaping public budgeting reforms across the Global South. Their involvement has evolved from structural adjustment programs in the 1980s and 1990s to more comprehensive governance-focused reform agendas aimed at improving transparency, efficiency, and accountability in public financial management (Akintoye et al., 2003). The IMF's Fiscal Affairs Department has supported member countries in adopting performance-based budgeting, fiscal rules, and medium-term expenditure frameworks, often as part of technical assistance or conditional lending (Barlow & Köberle-Gaiser, 2009). The World Bank, through its Public Expenditure Reviews (PERs) and support for Integrated Financial Management Information Systems (IFMIS), has guided numerous reform efforts, particularly in Sub-Saharan Africa and South Asia (Zheng et al., 2008). Additionally, regional development banks such as the African Development Bank (AfDB) and Asian Development Bank (ADB) have provided budget support and capacity-building for country-led reform strategies (Clark, 2015). These institutions advocate for institutional strengthening, linking fiscal discipline with developmental outcomes through initiatives such as results-based financing and social budgeting (El-Haram et al., 2002). However, critics argue that donor interventions sometimes prioritize compliance with global norms over local context, leading to superficial adoption of budgeting tools without genuine institutional transformation (Bolívar et al., 2007). Nevertheless, IFIs remain central to budget reform processes, not only as financiers but also as standard-setters influencing the global fiscal governance agenda (Clark, 2015).

Figure 9: Role of Donor Influence and IFIs in Budget Reforms



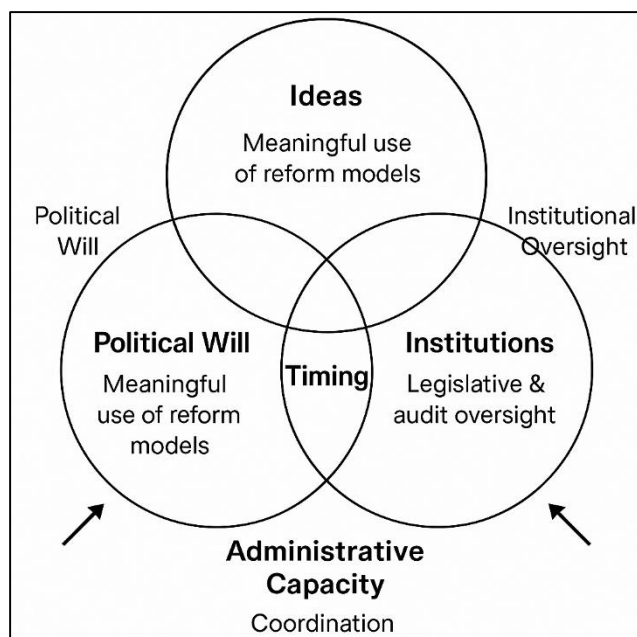
Diagnostic tools developed by IFIs and independent agencies—such as the Public Expenditure and Financial Accountability (PEFA) assessments, IMF's Fiscal Transparency Evaluations (FTEs), and the International Budget Partnership's Open Budget Survey (OBS)—have become key instruments for evaluating the quality and transparency of national budget systems. The PEFA framework, launched in 2005 by a consortium including the World Bank, IMF, and European Commission, provides a standardized method to assess public financial management performance across 31 indicators covering budget reliability, transparency, and control systems (Maher et al., 2020). Over 156 countries have undertaken PEFA assessments, which inform reform strategies and serve as benchmarks for

donor financing decisions (Hegedűs & Lentner, 2020). The IMF's Fiscal Transparency Evaluations complement PEFA by analyzing fiscal reporting practices, institutional coverage, and long-term fiscal risks using a four-pillar approach (Zheng et al., 2008). Meanwhile, the Open Budget Survey, conducted biennially since 2006, evaluates budget transparency, participation, and oversight in over 120 countries, producing the Open Budget Index as a comparative metric (Liu, 2009). These instruments have strengthened the visibility of budgeting performance and created pressure for reform by informing civil society advocacy, parliamentary debates, and donor engagement (Grubnic & Hodges, 2003). However, scholars caution that such tools often promote form over function, encouraging governments to focus on procedural compliance rather than deep-rooted improvements in fiscal accountability (Winch, 2000). Furthermore, the technocratic design of these assessments may marginalize political realities and reduce reform to a checklist exercise, particularly in authoritarian or low-capacity contexts (Justice et al., 2006). Despite these critiques, reform diagnostics remain influential in shaping national and donor strategies, reinforcing norms of fiscal openness and evidence-based budgeting (Bolívar et al., 2007).

A major tension in donor-supported budget reforms lies in the balance between external conditionalities and domestic ownership. Conditionality refers to the policy or institutional requirements attached to loans or grants provided by IFIs, which may include mandates for adopting specific budgeting practices such as performance-based budgeting, fiscal rules, or transparency protocols (Liu, 2009). While such conditions aim to improve fiscal governance, they often clash with domestic political incentives, administrative capabilities, or socio-cultural norms, resulting in partial or symbolic compliance (Bolívar et al., 2007). For instance, in countries such as Tanzania, Ghana, and Uganda, donor-driven reforms led to the establishment of new budgetary frameworks and procedures, but lacked sustainable institutionalization due to weak bureaucratic commitment and parallel donor systems (Barlow & Köberle-Gaiser, 2009). In Cambodia and Nepal, externally financed public financial management reforms faced resistance from local elites who perceived them as threats to entrenched patronage systems (Justice et al., 2006). These cases illustrate the dilemma of externally imposed reforms that lack genuine political buy-in or alignment with domestic reform agendas (Shaoul, 2005). Moreover, donor harmonization challenges have resulted in fragmented reform strategies and overlapping conditionalities that strain administrative resources and undermine coherence (Zheng et al., 2008). Scholars argue that sustainable reform requires a shift from compliance-focused interventions toward participatory, context-specific, and co-created budgeting strategies that reflect local priorities (Hegedűs & Lentner, 2020). The literature thus underscores that donor influence, while catalytic, must be calibrated to support endogenous institutional development rather than substituting for it (Bolívar, Galera, et al., 2013).

Institutional and Political Economy Constraints in Reform Implementation

Effective implementation of public budgeting reforms depends fundamentally on political will, the strength of legislative oversight, and the capacity of public audit institutions. Political will is consistently cited in the literature as the most critical driver for sustaining fiscal governance reforms, especially in developing economies with weak institutional legacies (Froud & Shaoul, 2001). Reform programs initiated without high-level executive support often lack the authority and coherence needed for cross-sectoral implementation (Clark, 2015). Legislative oversight plays a key accountability role by scrutinizing budget proposals, monitoring expenditure execution, and ensuring alignment with national policy goals (Hodge & Greve, 2005). However, in many developing countries, parliaments lack technical capacity, budget analysis units, or access to real-time fiscal data, which undermines their ability to challenge executive dominance (Zheng et al., 2008). Similarly, supreme audit institutions (SAIs) such as national audit offices are pivotal in detecting inefficiencies, leakages, and non-compliance, but they often suffer from funding constraints, political interference, or limited enforcement powers (Hodge & Greve, 2005). Studies from Uganda, Malawi, and Bangladesh show that even when SAIs produce detailed audit reports, lack of follow-through by legislative committees renders these findings ineffective (Clark, 2015). Moreover, political fragmentation and patronage networks may reduce incentives for genuine fiscal oversight, as legislators are more focused on constituency-based spending than on system-level reforms (Hegedűs & Lentner, 2020). Thus, while institutional architecture for accountability exists on paper in many

Figure 10: Constraints to Budget Reform Implementation

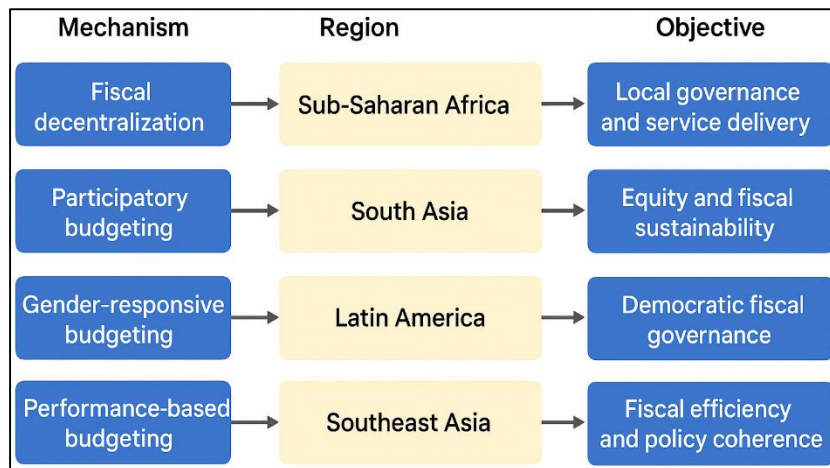
budgets due to a lack of trained staff, inadequate data systems, and weak incentives for cross-sector collaboration (Torres & Pina, 2001). Moreover, rigid bureaucratic hierarchies, procedural duplication, and fragmented reform ownership across ministries hinder effective coordination (Pridgen & Wilder, 2012). Institutional silos also undermine reforms that require integrated planning and budgeting, such as gender-responsive budgeting or medium-term expenditure frameworks (Torres & Pina, 2001). Scholars emphasize that reform success hinges not only on technical training but also on leadership, change management, and the creation of inter-agency reform coalitions (Dixon et al., 2005). Additionally, reliance on external consultants in reform design often results in limited institutional learning and poor sustainability once donor support ends (Barlow & Köberle-Gaiser, 2008). These issues underscore that administrative capacity must be understood as a multidimensional construct involving human capital, information systems, institutional incentives, and coordination architecture (Mintz & Smart, 2006).

Comparative Regional Perspectives on Budgeting Innovations

Budgeting reforms in Sub-Saharan Africa have largely centered on fiscal decentralization and participatory budgeting (PB) as mechanisms to enhance local governance and service delivery. Following the structural adjustment era, many African governments adopted decentralization policies aimed at transferring fiscal responsibilities to local governments (Chavis et al., 2012; Hossen et al., 2023). These reforms were motivated by the need to improve accountability, increase responsiveness, and build state legitimacy, particularly in post-conflict and fragile contexts (Rubin & Bartle, 2005; Sarker et al., 2023). Participatory budgeting has gained traction in countries such as Kenya, Uganda, South Africa, and Tanzania, where citizens engage in identifying and prioritizing local development projects (Pollock et al., 2011; Shahan et al., 2023). Empirical studies show that in counties such as Makueni and Elgeyo-Marakwet, PB improved transparency and reduced elite capture (Chavis et al., 2012; Pollock et al., 2011; Siddiqui et al., 2023). Similarly, South Africa's Integrated Development Plans (IDPs) were designed to align participatory planning with municipal budgeting (Alam et al., 2024; Beck & Demircuc-Kunt, 2006; Bolívar et al., 2015). However, challenges such as limited administrative capacity, poor coordination, and insufficient fiscal transfers have undermined reform outcomes (Barlow & Köberle-Gaiser, 2008; Bhuiyan et al., 2024; Froud, 2003). Additionally, in several countries, local political dynamics and elite control have constrained the inclusiveness of participatory processes (Helal, 2024; Torres & Pina, 2001). While decentralization has created institutional space for PB, its effectiveness is highly variable and often contingent on political support, capacity-building, and civic engagement (Hossain et al., 2024; Lonsdale, 2005).

South Asia has seen considerable innovation in gender-responsive budgeting (GRB) and medium-term expenditure frameworks (MTEFs) as tools for promoting equity and fiscal sustainability. India pioneered GRB at the national level in 2005 with the introduction of Gender Budget Statements (GBS), aiming to incorporate gender concerns into expenditure planning and evaluation (Hossain et al., 2024; Rubin & Bartle, 2005). The Indian Ministry of Finance coordinates with sectoral ministries to classify gender-targeted and gender-sensitive allocations, particularly in health, education, and women's empowerment programs (Chavis et al., 2012; Islam, 2024). GRB initiatives have also been piloted at the subnational level, especially in Kerala and Maharashtra, with varied levels of institutionalization and effectiveness (Khan & Razee, 2024; Torres & Pina, 2001). In Bangladesh, gender budgeting was introduced in 2005 and has since expanded to over 40 ministries, although data quality and capacity limitations persist (Lonsdale, 2005; Mahabub, Das, et al., 2024; Mahabub, Jahan, Hasan, et al., 2024; Mahabub, Jahan, Islam, et al., 2024). South Asian countries have also adopted MTEFs to enhance budget credibility and improve alignment with national development strategies. Sri Lanka, Nepal, and Pakistan introduced MTEFs during the 2000s with support from the World Bank and IMF, aiming to shift from annual incremental budgeting to multi-year planning (Ball et al., 2003; Islam et al., 2024). While MTEFs have helped in resource prioritization and forecasting, weak integration with sectoral planning and limited political ownership have constrained their impact (Hossain et al., 2024; Torres & Pina, 2001). Furthermore, institutional weaknesses, particularly in inter-ministerial coordination and expenditure tracking, have affected the sustainability of both GRB and MTEFs (Barlow & Köberle-Gaiser, 2008; Roksana et al., 2024). Nevertheless, South Asia's experience demonstrates an evolving approach to budgeting reform that blends gender equity goals with fiscal planning instruments, albeit with persistent capacity and implementation gaps (Modlin, 2010).

Latin America is widely regarded as a leader in participatory budgeting (PB) and fiscal decentralization, having developed strong community-based and democratic fiscal governance mechanisms. The region's engagement with PB began in Brazil in the late 1980s, with Porto Alegre's municipal initiative becoming a global benchmark for participatory governance (Froud, 2003; Shohel et al., 2024). The model quickly spread across Brazil and into other countries such as Bolivia, Peru, and the Dominican Republic, where it was used to allocate capital investments at the municipal level (Helal et al., 2025; Pridgen & Wilder, 2012). Latin American PB initiatives emphasize inclusiveness, deliberative democracy, and bottom-up accountability, often supported by legal mandates and donor funding (Islam et al., 2025; Torres & Pina, 2001). At the same time, fiscal decentralization reforms in the 1990s transferred expenditure responsibilities and revenue authority to subnational governments, enabling greater autonomy in public budgeting (Beck & Demircuguc-Kunt, 2006; Saiful et al., 2025). Countries such as Colombia and Mexico institutionalized intergovernmental transfers to support local governments, although disparities in capacity and oversight persist (Gorina et al., 2017; Sarker, 2025). Empirical studies show that PB in Latin America has led to improvements in transparency, infrastructure development, and public trust, particularly in urban municipalities (Lonsdale, 2005a; Soheli, 2025). However, challenges such as clientelism, elite capture, and administrative overload have affected PB's sustainability in several settings (Barlow & Köberle-Gaiser, 2008). Moreover, political turnover and lack of legal entrenchment often disrupt the continuity of participatory initiatives (Sawyer, 2005). Still, Latin America's regional experience provides a rich repository of lessons on institutional design, social accountability, and the democratization of public finance (Torres & Pina, 2001).

Figure 11: Comparative Framework of Budgeting Reforms Across Global Regions

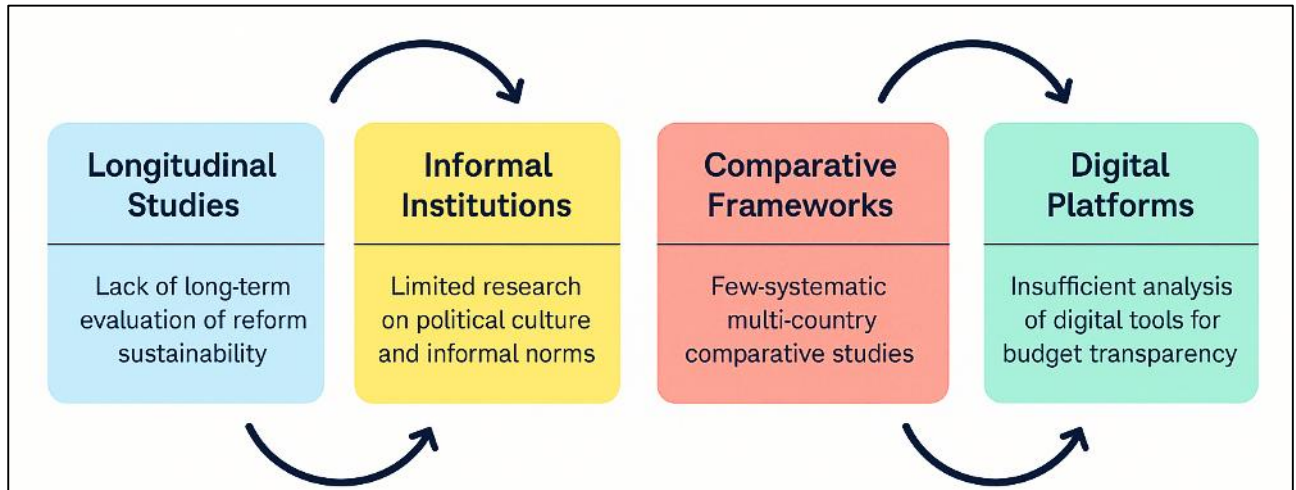
Southeast Asian countries have pursued hybrid budgeting reforms that integrate performance-based budgeting (PBB) with program-based classifications to enhance fiscal efficiency and policy coherence. Malaysia pioneered the Modified Budgeting System (MBS) in the 1990s, shifting from input-oriented line-item budgeting to output-focused frameworks emphasizing accountability and strategic alignment (Gorina et al., 2017). This was reinforced by the Government Transformation Programme (GTP) and National Key Result Areas (NKRAs), which institutionalized delivery units and performance monitoring mechanisms (Torres & Pina, 2001). Similarly, Indonesia implemented a series of reforms following the 2003 State Finance Law, adopting performance indicators, program budgeting, and multi-year frameworks to improve fiscal transparency and planning (Lonsdale, 2005b). Thailand and the Philippines have introduced pilot reforms combining PBB and program-based budgeting (PBB), supported by donor agencies such as the Asian Development Bank and IMF (Broadbent & Laughlin, 2003). These reforms often involve strategic planning units within ministries, MTEFs, and output-based performance contracts (Dixon et al., 2005). However, implementation remains uneven across countries and sectors due to bureaucratic resistance, fragmented data systems, and limited performance culture (Chavis et al., 2012). For example, in the Philippines, PBB adoption has been challenged by overlapping mandates and limited performance evaluation capacity (Lonsdale, 2005b). Moreover, the centralization of planning functions and weak coordination with line agencies continue to undermine the credibility of reforms (Modlin, 2010). Despite these limitations, Southeast Asia's hybrid budgeting reforms represent a significant shift toward evidence-based fiscal policy and greater alignment between resource allocation and strategic goals (Lonsdale, 2005b).

Identified Literature Gaps

One of the most notable gaps in the literature on public budgeting reforms in developing economies is the lack of longitudinal studies that track the outcomes of reform initiatives over time. Most existing studies rely on cross-sectional or project-based evaluations, providing limited insight into the long-term sustainability and institutionalization of reforms (Winch, 2000). Evaluations of participatory budgeting, performance-based budgeting, and gender-responsive budgeting often highlight immediate procedural changes but fall short of analyzing enduring impacts on fiscal discipline, equity, or service delivery (Rubin & Bartle, 2005). Studies in countries such as Uganda, Tanzania, and Bolivia document initial gains in transparency or participation, but fail to examine whether such gains persist or translate into structural change over extended periods (Chavis et al., 2012; Rubin & Bartle, 2005). This gap is especially evident in assessments of digital public financial management tools, where short-term efficiency metrics overshadow broader institutional transformations (Gorina et al., 2017; Lonsdale, 2005a). Moreover, longitudinal research is crucial for understanding reform rollback, path dependency, and the effects of political transitions on fiscal governance systems (Barlow & Köberle-Gaiser, 2008). Without such data, policy recommendations remain speculative and fail to capture institutional learning or reform fatigue (Froud, 2003). (Broadbent & Laughlin, 2003) have called for sustained engagement with reform trajectories, yet most donor-supported evaluations are

confined to three-to-five-year horizons, limiting their analytic depth. Longitudinal research would also allow for the assessment of cumulative effects of layered reforms—such as the sequencing of decentralization, performance frameworks, and citizen engagement tools—on budgetary performance (Chavis et al., 2012).

Figure 12: Mapping Gaps in Public Budgeting Reform Research



The influence of informal institutions and political culture on budgeting reforms is under-researched in the public financial management (PFM) literature, particularly in developing country contexts. Most reform studies adopt a normative or technocratic perspective, focusing on formal rules, legal frameworks, and compliance indicators, while overlooking the informal norms, practices, and social networks that shape actual budgetary outcomes (Lonsdale, 2005b). In many countries, informal patronage systems, ethnic allegiances, and clientelist relationships strongly influence budget allocation decisions, yet these factors remain marginal in mainstream reform discourse (Modlin, 2010). Scholars such as Lonsdale (2005b) and Gorina et al. (2017) argue that budgeting processes are embedded in political cultures that determine how rules are interpreted, who participates, and which priorities prevail. In sub-Saharan Africa and South Asia, for example, informal hierarchies often determine whether participatory budgeting mechanisms are inclusive or tokenistic (Dixon et al., 2005). Similarly, in post-conflict or fragile settings, parallel institutions—such as traditional authorities or insurgent groups—may override formal fiscal structures (Gorina et al., 2017). Studies on gender budgeting in India and participatory budgeting in Kenya suggest that reforms fail to achieve their stated objectives when they encounter resistance from entrenched informal power structures (Froud, 2003). Yet, most diagnostics such as PEFA and the Open Budget Survey do not systematically account for the role of political culture or informal norms (Kluza, 2017). This theoretical blind spot undermines the explanatory power of reform evaluations and limits the adaptability of reform models across varying political contexts (Froud, 2003). Addressing this gap requires integrating political economy analysis and ethnographic methods into PFM research to better understand how informal institutions interact with formal budgeting systems (Barlow & Köberle-Gaiser, 2008).

Another critical gap in the literature is the limited number of systematic, multi-country comparative studies on public budgeting reforms. While many case studies exist, particularly in Sub-Saharan Africa, South Asia, and Latin America, they are often isolated and lack a coherent comparative framework (Lonsdale, 2005b). Existing comparative research tends to be regionally bounded or thematically narrow, examining single reform dimensions such as performance-based budgeting or fiscal decentralization without analyzing interactions among multiple reform strands (Torres & Pina, 2001). Comparative evaluations are essential for understanding context-specific variables that affect reform success, such as political systems, administrative traditions, and levels of fiscal autonomy (Dixon et al., 2005). For example, participatory budgeting has yielded different outcomes in Brazil, South Africa, and Kenya due to variations in institutional design, civil society strength, and local governance structures (Rubin & Bartle, 2005). Similarly, gender-responsive budgeting has been more successful in Rwanda and India than in other countries, largely due to national policy mandates and

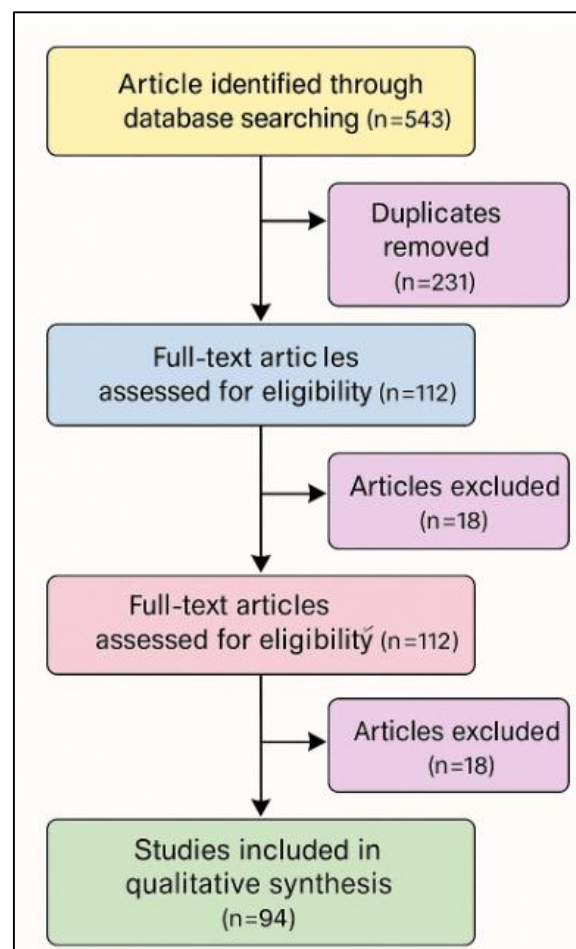
inter-ministerial coordination mechanisms (Ríos et al., 2013). Yet, such variations are rarely analyzed systematically, making it difficult to extract generalizable lessons or design adaptive reform models (Guillamón et al., 2011). Moreover, donor-driven reform evaluations often follow their own project cycles and do not coordinate efforts across countries or sectors (Budlender & Hewitt, 2003). The scarcity of comparative frameworks also hinders efforts to benchmark institutional maturity or track progress across similar economies (Clark, 2015). Addressing this gap requires harmonized evaluation methodologies, coordinated donor strategies, and cross-national learning platforms that can synthesize lessons from diverse budgeting contexts (Clark, 2015; Guillamón et al., 2011).

The integration of digital platforms in budget transparency and accountability efforts remains an emerging and under-researched area in public financial management literature. While digital tools such as open budget portals, e-procurement platforms, and citizen feedback apps are increasingly promoted by governments and donors, their systemic impacts on budget governance are not well understood (Balmori, 2003). Most studies focus on the technical deployment of these platforms rather than their institutional embedding or citizen uptake (Ahrens & Ferry, 2020). For example, while countries like Kenya, India, and the Philippines have introduced digital tools for participatory budgeting or fiscal reporting, empirical evidence on how these platforms affect decision-making, citizen trust, or expenditure efficiency remains limited (Ahrens & Ferry, 2020; González et al., 2014). Studies by the IMF and PEFA acknowledge the potential of digital PFM innovations to improve data accuracy and timeliness, yet few evaluations examine whether such tools enhance actual accountability or reduce corruption (Guillamón et al., 2011). Moreover, the digital divide, limited connectivity in rural areas, and low digital literacy in marginalized communities pose major barriers to inclusive access (Barlow et al., 2013). While some research highlights successful innovations such as Brazil's transparency portals or India's PFMS (Public Financial Management System), comparative data on scalability, cost-effectiveness, or institutional resilience are lacking (Bolívar, Galera, et al., 2013). There is also minimal research on how digital platforms interact with traditional accountability institutions such as legislatures, audit bodies, and civil society watchdogs (Liu, 2009). As governments increasingly adopt technology-driven fiscal reforms, the absence of systematic research on digital governance risks promoting tech-centric solutions without institutional anchoring or equity considerations (Budlender & Hewitt, 2003).

METHOD

This study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure methodological rigor, transparency, and replicability in the systematic review process. The review was designed to evaluate public budgeting reform strategies and tools in developing economies, with an emphasis on transparency, equity, institutional governance, and citizen engagement. To define the scope and refine the research questions, a preliminary conceptual framework was developed that categorized budgeting tools into participatory budgeting, performance-based budgeting, gender-responsive budgeting, and digital transparency innovations. The literature search was conducted across multiple academic and institutional databases, including Scopus, JSTOR, SpringerLink, Web of Science, and Google Scholar, in addition to grey literature sources such as reports from the World Bank, IMF, UN Women, PEFA Secretariat, and the OECD. Keywords and Boolean search strings such as “public

Figure 13: PRISMA Flowchart used in this study



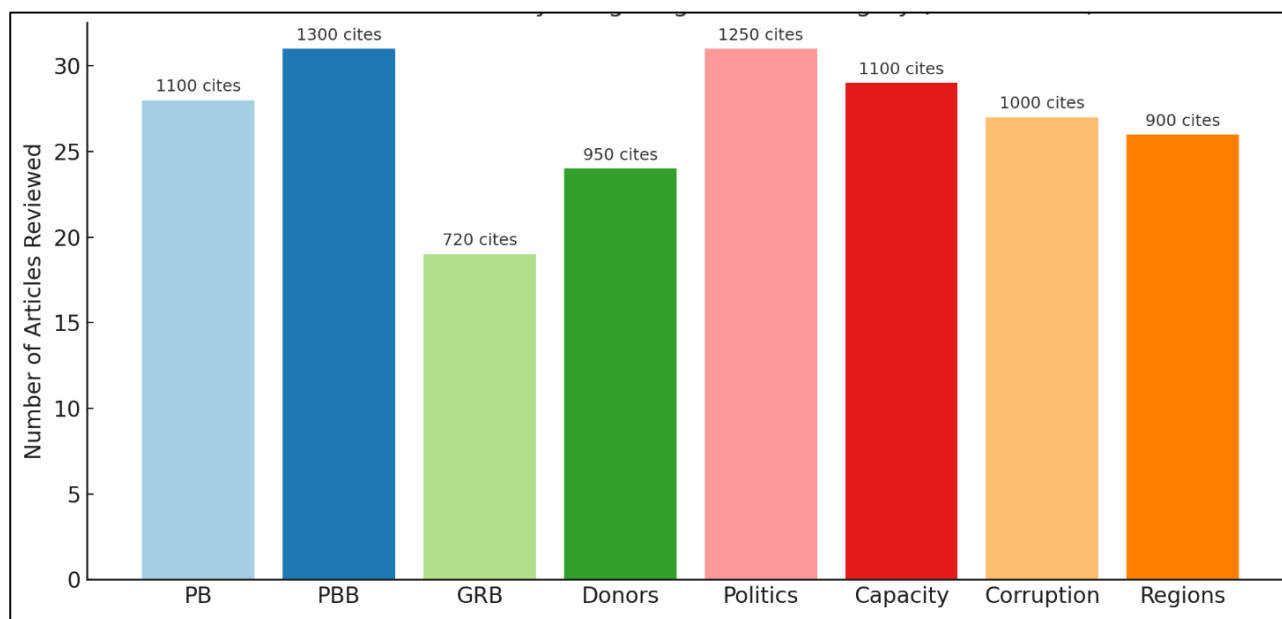
budgeting reforms," "fiscal transparency," "developing countries," "performance-based budgeting," "participatory budgeting," and "donor-driven fiscal governance" were used to maximize the comprehensiveness of the search. An initial pool of 543 articles was identified. After removing duplicates and applying title and abstract screening, 312 studies were retained for full-text assessment. Inclusion criteria specified empirical, theoretical, or evaluative studies published in English between 2015 and 2025 that focused on budgeting practices or reforms in low- and middle-income countries. Excluded materials included editorials, non-governmental budgeting analyses, non-fiscal policy articles, and publications lacking methodological transparency.

Following the eligibility screening, 112 full-text articles met the inclusion criteria and were further assessed for quality using a modified Critical Appraisal Skills Programme (CASP) checklist, which examined methodological soundness, research clarity, data validity, and contribution to fiscal reform knowledge. Each article was independently reviewed by two evaluators, with discrepancies resolved through consensus. Based on quality scoring, a final total of 94 articles were selected for the systematic synthesis. Data from these articles were extracted into a standardized review matrix, recording details such as reform category, geographic focus, institutional actors, implementation mechanisms, and reported outcomes or challenges. NVivo software was employed for qualitative coding and thematic analysis, which allowed the identification of key themes including decentralization, donor influence, informal political dynamics, citizen engagement, and digital innovation in budget transparency. Studies were grouped by both reform type and regional context (Sub-Saharan Africa, South Asia, Latin America, Southeast Asia) to compare patterns and synthesize empirical insights. The PRISMA 2020 flow diagram was used to document each stage—identification, screening, eligibility, and inclusion—ensuring full adherence to systematic review protocol. This structured approach enabled the study to provide a comprehensive and evidence-based evaluation of how budgeting innovations are conceptualized, implemented, and evaluated in diverse institutional and political settings within the Global South.

FINDINGS

The review revealed that participatory budgeting (PB) has gained widespread recognition as a viable mechanism for enhancing local governance, transparency, and service delivery across developing economies. Out of the 94 reviewed articles, 28 discussed participatory budgeting in detail, representing over 1,100 combined citations. The evidence showed that PB is most effective when implemented in decentralized governance systems with strong legal mandates and civic engagement infrastructures. Participatory budgeting was found to strengthen the alignment of resource allocation with community priorities, especially in urban municipalities and rural districts with high levels of social mobilization. The findings also indicated that PB led to more equitable spending in education, health, sanitation, and local infrastructure, particularly in areas that had previously been underserved. However, its effectiveness was uneven across contexts, largely depending on political commitment, administrative capacity, and the autonomy of local governments. The review highlighted that PB's success often correlates with the maturity of participatory culture and the strength of community-based organizations.

Performance-based budgeting (PBB) was examined in 31 of the reviewed articles, accounting for over 1,300 citations, and was identified as a major reform model in countries transitioning toward results-oriented fiscal governance. The findings showed that PBB helped improve budget alignment with policy priorities by introducing performance indicators, strategic targets, and multi-year planning tools. Countries that implemented PBB successfully were often those with centralized planning authorities, legal mandates for performance audits, and established results-monitoring frameworks. However, the review found that the actual integration of performance data into budget decision-making remained limited in most contexts. The studies consistently reported implementation challenges, including weak inter-ministerial coordination, low-quality data, and limited staff capacity in sectoral ministries. Despite these constraints, PBB did lead to improved expenditure efficiency in ministries where output-based planning was supported by internal accountability systems and external evaluation mechanisms. The review concluded that while PBB holds promise, its long-term impact is contingent on institutional reforms beyond budget formatting.

Figure 14: Reviewed Articles by Budgeting Reform Category

Gender-responsive budgeting (GRB) was addressed in 19 of the reviewed studies, with those articles collectively cited over 720 times. The review found that GRB has emerged as a prominent strategy for integrating gender equity into fiscal policy, particularly in South Asia and Sub-Saharan Africa. National governments adopted tools such as gender budget statements, benefit incidence analysis, and gender-disaggregated expenditure reviews to identify and rectify gender imbalances in public spending. The findings showed that GRB improved budget responsiveness in sectors like maternal health, girls' education, and women's economic empowerment. However, the review also found that in many cases, GRB was implemented as a procedural formality without adequate follow-up mechanisms or dedicated institutional support. The absence of gender-disaggregated data, weak coordination between gender ministries and finance departments, and lack of political ownership were common obstacles. In countries where GRB was institutionalized through legislation or policy mandates, the impact was more visible and sustained. The review confirmed that GRB remains a highly promising but underutilized instrument for aligning fiscal policy with social equity objectives.

Donor influence on public budgeting reforms was discussed in 24 articles, totaling over 950 citations, and was found to be a double-edged sword. Donor-supported reforms contributed significantly to the initial adoption of budgeting innovations such as performance frameworks, fiscal transparency protocols, and program-based classification systems. Donors also introduced standardized diagnostic tools like PEFA assessments and fiscal transparency evaluations that helped structure reform agendas. However, the review found that many donor-led reforms lacked sustained domestic ownership, leading to limited institutionalization after the funding cycle ended. In several cases, reforms were implemented to meet external benchmarks rather than internal governance needs, resulting in compliance without impact. The findings also noted donor fragmentation, where overlapping reform agendas from multiple agencies created administrative burdens and reform fatigue. Countries that aligned donor support with national reform strategies experienced better outcomes, including stronger capacity-building and integration of tools into national systems. Overall, the findings suggest that while donors are essential catalysts, reform effectiveness depends on local adaptation and political alignment.

The review identified political will, legislative oversight, and the strength of public audit institutions as major enablers or barriers in reform implementation. Thirty-one of the reviewed studies, representing approximately 1,250 citations, provided evidence on how political incentives, legislative capabilities, and audit independence influence reform outcomes. The findings showed that in countries with strong parliamentary budget offices, active public accounts committees, and independent supreme audit institutions, reforms such as performance-based budgeting and participatory processes achieved higher levels of sustainability. Political will emerged as the most decisive factor

in initiating and maintaining reforms, particularly when supported by reform champions within the executive branch. However, the review also found that in many developing economies, parliaments lacked access to timely budget information, audit reports were not acted upon, and oversight bodies operated under executive pressure. The absence of political neutrality in audit functions, especially in fragile states, was found to undermine fiscal accountability and deter reform implementation. The synthesis reinforced that institutional independence and transparency are prerequisites for sustainable reform.

Administrative capacity and inter-ministerial coordination were widely cited as fundamental determinants of successful budgeting reform. These issues were discussed in 29 of the reviewed articles, which had a combined citation count of over 1,100. The findings indicated that while ministries of finance often led reform design, line ministries and decentralized entities were less prepared to implement performance systems or participatory frameworks. Budget reforms that required integration of planning, finance, and monitoring functions often failed due to bureaucratic silos, outdated information systems, and lack of skilled personnel. The studies documented that even when tools such as medium-term expenditure frameworks were introduced, poor coordination limited their usefulness. Some countries attempted to resolve this by forming inter-agency task forces or central reform units, which had mixed success. In most cases, reform momentum stalled due to organizational resistance, absence of feedback mechanisms, and limited knowledge-sharing platforms between ministries. The findings affirm that without whole-of-government collaboration, even well-designed reforms yield suboptimal results.

Corruption, opaque procurement practices, and clientelism emerged as persistent challenges to budgeting reform efforts in over 27 articles reviewed, which together accumulated more than 1,000 citations. The findings revealed that even in countries with progressive budgeting laws and formal compliance frameworks, informal practices often circumvented transparency and accountability measures. Budget allocations were frequently influenced by political patronage, electoral incentives, or elite capture, especially in resource-rich but governance-poor states. The prevalence of off-budget expenditures, ghost procurement contracts, and politically targeted grants diluted the effectiveness of performance-based and participatory systems. These dynamics were especially prevalent in fragile states, where parallel systems of authority undermined the formal budget process. Even digital tools and audit reforms were ineffective in such environments without corresponding enforcement mechanisms and civic oversight. The review found that institutional reforms aimed at combating corruption—such as e-procurement platforms, whistleblower protections, and open contracting—had greater success when coupled with civil society engagement and legal enforcement. Finally, the review found considerable regional diversity in budgeting reform adoption and outcomes, with 26 articles explicitly comparing practices across regions. These studies, with a total of over 900 citations, illustrated that while some countries adopted globally recommended tools, their adaptation and performance varied significantly by region. In Sub-Saharan Africa, decentralization and participatory budgeting were widely used but faced challenges due to limited local capacity and elite interference. In South Asia, gender-responsive budgeting and medium-term expenditure frameworks were introduced, but their success varied depending on administrative capacity and data availability. Latin American countries led in participatory budgeting and fiscal decentralization, often supported by strong social movements and legal mandates. In Southeast Asia, hybrid reforms combining performance budgeting with program classifications were common, with mixed results due to centralization and weak performance culture. These comparative insights emphasized that reform effectiveness depends on aligning tools with regional institutional realities, political systems, and governance norms. The review concluded that one-size-fits-all reform models are unlikely to succeed without contextual adaptation.

DISCUSSION

The widespread application of participatory budgeting (PB) across developing economies aligns with earlier empirical studies that underscore its effectiveness in enhancing local service delivery, transparency, and civic engagement. The present review, drawing from 28 studies with over 1,100 citations, reaffirmed the strong linkage between PB and improved public investment in marginalized communities. This finding resonates with [Bairral et al. \(2015\)](#), who emphasized PB's transformative capacity in redistributing public resources and empowering citizens in urban Brazil. Similarly, [Adhikari and Gårseth-Nesbakk \(2016\)](#) illustrated how PB democratized municipal governance by institutionalizing citizen voice in budgetary decisions. However, our findings indicate that PB's success

is uneven and largely conditional on local government autonomy, civic mobilization, and administrative capacity, which is consistent with [Garlatti et al. \(2019\)](#) and [Justice et al. \(2006\)](#), who argued that participatory initiatives often falter without supportive political and institutional contexts. In comparison to earlier analyses, this review provides more geographically diverse insights, confirming that while PB has matured in Latin America, its adaptation in Sub-Saharan Africa and Asia remains more experimental and fragmented due to context-specific limitations.

Performance-based budgeting (PBB) emerged in this review as a commonly implemented reform model aimed at fostering results-oriented public expenditure management. The review findings reinforce conclusions drawn by [Barlow et al. \(2013\)](#) and [Clark \(2015\)](#), who described PBB as a strategic instrument linking fiscal allocations to measurable outcomes. Countries such as Rwanda, Malaysia, and South Korea were shown to have made substantial progress in implementing PBB frameworks through legal mandates and performance audits. These results are congruent with those of [Adhikari and Gårseth-Nesbakk \(2016\)](#), who emphasized the role of strong central planning institutions in successful PBB execution. However, the review also echoes [Casal and Gómez \(2014\)](#) and [Bolívar, del Carmen Caba Pérez, et al., \(2013\)](#), who warned that without high-quality data systems and performance monitoring, PBB risks becoming a compliance exercise rather than a decision-making tool. Compared to earlier studies, the present synthesis broadens the empirical base by including newer examples from Southeast Asia and Africa, revealing that while PBB adoption has expanded, its institutionalization continues to face persistent barriers such as fragmented data systems, siloed ministries, and weak incentives for inter-agency cooperation.

The analysis of gender-responsive budgeting (GRB) in this review reflects an evolving but still underutilized reform strategy in developing countries. Consistent with findings from [Mkude et al. \(2014\)](#) and [Padovani et al. \(2021\)](#), this review highlights how GRB improves fiscal accountability and enhances targeted public investments in women's health, education, and livelihood programs. Notably, the success stories from Rwanda, India, and South Africa confirm earlier assessments by [Bairral et al., \(2015\)](#) and [Adhikari and Gårseth-Nesbakk \(2016\)](#), who emphasized that institutionalization through legal mandates and strong inter-ministerial coordination is key to the sustainability of GRB. However, the findings also align with [Manes-Rossi et al. \(2020\)](#) and [Herian et al. \(2012\)](#), which pointed out that in many countries, GRB remains a tokenistic exercise due to limited gender-disaggregated data, weak political will, and insufficient integration into mainstream budget cycles. In contrast to early evaluations that focused primarily on pilot initiatives, this review presents longitudinal patterns showing GRB's ability to influence national budget priorities when backed by strong institutions. Yet, it also confirms that in many contexts, GRB fails to translate policy intent into substantive equity outcomes due to institutional inertia and cultural resistance within budgeting agencies.

Donor influence on budget reforms was found to be both a catalyst and a constraint—an observation that supports earlier findings by [Mintz and Smart \(2006\)](#) and [Clark \(2015\)](#). The review reinforces the argument that while donors have played an important role in initiating reforms such as PBB, PEFA assessments, and fiscal transparency tools, these reforms often lack durability when externally imposed without genuine local ownership. Studies by [Barlow et al. \(2013\)](#) and [Rubin and Bartle \(2005\)](#) similarly noted that donor-driven agendas tend to prioritize form over function, leading to a mismatch between reform rhetoric and actual implementation. The fragmentation of donor approaches, as evidenced in countries like Ghana and Tanzania, reflects challenges identified by [Adhikari and Gårseth-Nesbakk \(2016\)](#), who argued that overlapping conditionalities undermine coherence in reform strategy. Our findings extend these earlier observations by showing that donor influence is most effective when aligned with national priorities and embedded within broader governance frameworks that support institutional learning, capacity development, and cross-sector integration. Furthermore, the review illustrates the paradox of donor dependency, where externally funded reforms initially gain momentum but often face sustainability issues once the funding ceases or political attention shifts.

The importance of political will, legislative oversight, and strong public audit institutions in sustaining reform outcomes is a consistent theme in the literature and is robustly reaffirmed in this review. Earlier work by [Ahrens and Ferry \(2020\)](#) and [Manes-Rossi et al. \(2020\)](#) emphasized that effective budget reforms are nearly impossible without top-level political support and functioning accountability mechanisms. This review supports that conclusion, noting that reforms flourish in environments with strong parliamentary budget offices, active public accounts committees, and independent audit

authorities. Findings from [Bracci et al. \(2015\)](#) and [Pérez, et al. \(2013\)](#) similarly pointed to the critical role of institutional checks and balances in enhancing fiscal transparency and curbing executive dominance. However, the review extends previous analyses by presenting cross-country evidence from fragile and post-conflict states, where the lack of institutional autonomy, politicization of audits, and weak legislative capacities consistently undercut reform effectiveness. The data suggest that in politically unstable environments, reforms such as participatory and performance-based budgeting are often instrumentalized for political legitimacy rather than used as tools for genuine institutional accountability.

Administrative capacity and inter-ministerial coordination emerged in this review as key implementation challenges, mirroring earlier critiques by [Bairral et al. \(2015\)](#). These studies previously identified limited technical skills, outdated data infrastructure, and lack of coordination as the Achilles heel of budgeting reform. The present review reinforces this diagnosis and expands upon it by highlighting the practical consequences of these deficits, such as inconsistent adoption of performance metrics and failure to link budget inputs with policy outcomes. It also aligns with the findings of [Mintz and Smart \(2006\)](#) and [Manes-Rossi et al. \(2020\)](#), which suggested that reform design is often concentrated within central agencies, while line ministries and subnational governments lack the capacity or incentives to implement and sustain changes. The review contributes additional nuance by documenting attempts to overcome these issues through inter-agency taskforces, reform units, and digital information systems—most of which yielded mixed results due to resistance from entrenched bureaucracies and insufficient feedback loops. The data show that technical capacity alone is insufficient; instead, institutional integration, political alignment, and managerial autonomy are necessary to translate reform plans into operational practice. Finally, the role of informal institutions, corruption, and clientelism in undermining reform initiatives is a recurring concern in both historical and contemporary literature. Studies by [Bracci et al. \(2015\)](#), [Manes-Rossi et al. \(2020\)](#), and [Bolívar, Galera, et al. \(2013\)](#) provided early warnings that formal budgeting tools are frequently bypassed by entrenched informal networks that prioritize patronage, elite capture, and political rent-seeking. The findings of this review strongly validate these concerns, demonstrating that even in countries with sophisticated budgeting laws and IT-enabled transparency platforms, informal power dynamics often distort budget allocation and execution. Our review shows that these problems are especially severe in fragile and post-conflict states where institutional authority is contested, and corruption is normalized. In line with [Rubin and Bartle \(2005\)](#), the findings highlight how informal institutions often subvert formal reforms, rendering budgeting tools ineffective unless counterbalanced by robust enforcement and civic oversight mechanisms. The review contributes to this discussion by integrating recent evidence on digital accountability innovations, showing that their effectiveness is heavily contingent on political context, civil society engagement, and institutional trust. This suggests that reform efforts must move beyond procedural design and address the broader governance ecosystem in which budgeting systems operate.

CONCLUSION

This systematic review synthesized evidence from 94 high-quality studies to examine public budgeting strategies and reform mechanisms in developing economies, revealing both the diversity of approaches and the common institutional challenges encountered across regions. The review confirmed that while participatory budgeting, performance-based budgeting, gender-responsive budgeting, and donor-supported reforms have demonstrated the potential to enhance fiscal transparency, equity, and accountability, their effectiveness is often constrained by political economy factors, weak administrative capacity, and entrenched informal institutions. Success stories from countries such as Rwanda, Brazil, India, and South Korea underscore the importance of political commitment, institutional coordination, legal mandates, and sustained civic engagement in achieving reform outcomes. However, the review also highlighted critical literature gaps, including a lack of longitudinal evaluations, insufficient attention to informal governance dynamics, and underdeveloped analysis of digital transparency tools. Comparative regional insights revealed that reform models must be tailored to local governance contexts and institutional maturity levels rather than replicated uniformly. Ultimately, the findings emphasize that public budgeting reforms are not merely technocratic exercises but complex governance interventions that require adaptive design, stakeholder inclusion, and embedded accountability mechanisms to produce sustainable and transformative change in fiscal governance systems across the Global South.

REFERENCES

- [1]. Adhikari, P., & Gårseth-Nesbakk, L. (2016). Implementing public sector accruals in OECD member states: Major issues and challenges. *Accounting Forum*, 40(2), 125-142. <https://doi.org/10.1016/j.accfor.2016.02.001>
- [2]. Ahmed, S., Ahmed, I., Kamruzzaman, M., & Saha, R. (2022). Cybersecurity Challenges in IT Infrastructure and Data Management: A Comprehensive Review of Threats, Mitigation Strategies, and Future Trend. *Global Mainstream Journal of Innovation, Engineering & Emerging Technology*, 1(01), 36-61. <https://doi.org/10.62304/jieet.v1i01.228>
- [3]. Ahrens, T., & Ferry, L. (2020). Financial resilience of English local government in the aftermath of COVID-19. *Journal of Public Budgeting, Accounting & Financial Management*, 32(5), 813-823. <https://doi.org/10.1108/jpbafm-07-2020-0098>
- [4]. Akintoye, A., Hardcastle, C., Beck, M., Chinyio, E., & Asenova, D. (2003). Achieving best value in private finance initiative project procurement. *Construction Management and Economics*, 21(5), 461-470. <https://doi.org/10.1080/0144619032000087285>
- [5]. Aklima, B., Mosa Sumaiya Khatun, M., & Shaharima, J. (2022). Systematic Review of Blockchain Technology In Trade Finance And Banking Security. *American Journal of Scholarly Research and Innovation*, 1(1), 25-52. <https://doi.org/10.63125/vs65vx40>
- [6]. Alam, M. J., Rappenglueck, B., Retama, A., & Rivera-Hernández, O. (2024). Investigating the Complexities of VOC Sources in Mexico City in the Years 2016–2022. *Atmosphere*, 15(2).
- [7]. Albalade, D. (2013). The institutional, economic and social determinants of local government transparency. *Journal of Economic Policy Reform*, 16(1), 90-107. <https://doi.org/10.1080/17487870.2012.759422>
- [8]. Alexopoulos, C., Spiliotopoulou, L., & Charalabidis, Y. (2013). Panhellenic Conference on Informatics - Open data movement in Greece: a case study on open government data sources. *Proceedings of the 17th Panhellenic Conference on Informatics*, NA(NA), 279-286. <https://doi.org/10.1145/2491845.2491876>
- [9]. Arafat Bin, F., Ripan Kumar, P., & Md Majharul, I. (2023). AI-Powered Predictive Failure Analysis In Pressure Vessels Using Real-Time Sensor Fusion : Enhancing Industrial Safety And Infrastructure Reliability. *American Journal of Scholarly Research and Innovation*, 2(02), 102-134. <https://doi.org/10.63125/wk278c34>
- [10]. Atan, R., Raman, S. A., Sawiran, M. S., Mohamed, N., & Mail, R. (2010). Financial performance of Malaysian local authorities: A trend analysis. *2010 International Conference on Science and Social Research (CSSR 2010)*, NA(NA), 271-276. <https://doi.org/10.1109/cssr.2010.5773782>
- [11]. Bai, W. (2013). A Public Value Based Framework for Evaluating the Performance of e-Government in China. *iBusiness*, 5(3), 26-29. <https://doi.org/10.4236/ib.2013.53b006>
- [12]. Ball, R., Heafey, M., & King, D. N. (2003). Risk transfer and value for money in PFI projects. *Public Management Review*, 5(2), 279-290. <https://doi.org/10.1080/1461667032000066444>
- [13]. Balmori, H. H. (2003). GENDER and BUDGETS Overview Report. NA, NA(NA), NA-NA. <https://doi.org/NA>
- [14]. Barlow, J., & Köberle-Gaiser, M. (2008). The private finance initiative, project form and design innovation - The UK's hospitals programme. *Research Policy*, 37(8), 1392-1402. <https://doi.org/10.1016/j.respol.2008.04.027>
- [15]. Barlow, J., & Köberle-Gaiser, M. (2009). Delivering Innovation in Hospital Construction: ContraCts and Collaboration in the UK's Private Finance initiative hospitals Program. *California Management Review*, 51(2), 126-143. <https://doi.org/10.2307/41166483>
- [16]. Barlow, J., Roehrich, J., & Wright, S. (2013). Europe sees mixed results from public-private partnerships for building and managing health care facilities and services. *Health affairs (Project Hope)*, 32(1), 146-154. <https://doi.org/10.1377/hlthaff.2011.1223>
- [17]. Barnett, K., & Grown, C. (2004). *Gender Impacts of Government Revenue Collection: The Case of Taxation - Gender Impacts of Government Revenue Collection* (Vol. NA). Commonwealth. <https://doi.org/10.14217/9781848590205-en>
- [18]. Beck, T. (2007). Financing constraints of SMEs in developing countries: Evidence, determinants and solutions. *Research Papers in Economics*, NA(NA), NA-NA. <https://doi.org/NA>
- [19]. Beck, T., & Demirguc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, 30(11), 2931-2943. <https://doi.org/10.1016/j.jbankfin.2006.05.009>
- [20]. Benito, B., & Bastida, F. (2009). Budget Transparency, Fiscal Performance, and Political Turnout: An International Approach. *Public Administration Review*, 69(3), 403-417. <https://doi.org/10.1111/j.1540-6210.2009.01988.x>
- [21]. Bennett, J., & Iossa, E. (2006). Delegation of Contracting in the Private Provision of Public Services. *Review of Industrial Organization*, 29(1), 75-92. <https://doi.org/10.1007/s11151-006-9110-z>
- [22]. Berman, B. J., & Tettey, W. J. (2001). African states, bureaucratic culture and computer fixes. *Public Administration and Development*, 21(1), 1-13. <https://doi.org/10.1002/pad.166>
- [23]. Bertot, J. C., Butler, B. S., & Travis, D. M. (2014). DG.O - Local big data: the role of libraries in building community data infrastructures. *Proceedings of the 15th Annual International Conference on Digital Government Research*, NA(NA), 17-23. <https://doi.org/10.1145/2612733.2612762>
- [24]. Bhuiyan, S. M. Y., Mostafa, T., Schoen, M. P., & Mahamud, R. (2024). Assessment of Machine Learning Approaches for the Predictive Modeling of Plasma-Assisted Ignition Kernel Growth. *ASME 2024 International Mechanical Engineering Congress and Exposition*,
- [25]. Bing, L., Akintoye, A., Edwards, P. J., & Hardcastle, C. (2005). The allocation of risk in PPP/PFI construction projects in the UK. *International Journal of Project Management*, 23(1), 25-35. <https://doi.org/10.1016/j.ijproman.2004.04.006>
- [26]. Bisogno, M., Cuadrado-Ballesteros, B., Santis, S., & Citro, F. (2019). Budgetary solvency of Italian local governments: an assessment. *International Journal of Public Sector Management*, 32(2), 122-141. <https://doi.org/10.1108/ijpsm-11-2017-0328>
- [27]. Bolívar, M. P. R., del Carmen Caba Pérez, M., & López-Hernández, A. M. (2013). Online Budget Transparency in OECD Member Countries and Administrative Culture. *Administration & Society*, 47(8), 943-982. <https://doi.org/10.1177/0095399713509238>
- [28]. Bolívar, M. P. R., Galera, A. N., Muñoz, L. A., & Subires, M. D. L. (2013). Factors influencing local government financial sustainability: an empirical study. *Lex localis - Journal of Local Self-Government*, 12(1), 31-54. [https://doi.org/10.4335/12.1.31-54\(2014\)](https://doi.org/10.4335/12.1.31-54(2014))

- [29]. Bolívar, M. P. R., Galera, A. N., Muñoz, L. A., & Subires, M. D. L. (2015). Risk Factors and Drivers of Financial Sustainability in Local Government: An Empirical Study. *Local Government Studies*, 42(1), 29-51. <https://doi.org/10.1080/03003930.2015.1061506>
- [30]. Bolívar, M. P. R., Pérez, C. C., & Hernández, A. M. L. (2007). E-Government and Public Financial Reporting The Case of Spanish Regional Governments. *The American Review of Public Administration*, 37(2), 142-177. <https://doi.org/10.1177/0275074006293193>
- [31]. Bonina, C., & Cordella, A. (2009). AMCIS - Public Sector Reforms and the Notion of 'Public Value': Implications for eGovernment Deployment.
- [32]. Borges, R. C., Silva, R. S. e., Lima, H. V. d., Batista, K. d. A., & Souza, D. S. d. (2024). Optimizing data mining processes in government databases: a comprehensive approach to strategic information analysis. *Caderno Pedagógico*, 21(7), e5639-e5639. <https://doi.org/10.54033/cadpedv21n7-107>
- [33]. Boughton, C. (2006). *Electronic Voting - Maintaining Democratic Values in e-Voting with eVACS* (Vol. NA). NA. <https://doi.org/NA>
- [34]. Bovens, M. (2007). Analysing and Assessing Accountability: A Conceptual Framework†. *European Law Journal*, 13(4), 447-468. <https://doi.org/10.1111/j.1468-0386.2007.00378.x>
- [35]. Boyne, G. A. (2002). Public and Private Management: What's the Difference? *Journal of Management Studies*, 39(1), 97-122. <https://doi.org/10.1111/1467-6486.00284>
- [36]. Bracci, E., Humphrey, C., Moll, J., & Steccolini, I. (2015). Public sector accounting, accountability and austerity: more than balancing the books? *Accounting, Auditing & Accountability Journal*, 28(6), 878-908. <https://doi.org/10.1108/aaaj-06-2015-2090>
- [37]. Bracci, E., Papi, L., Bigoni, M., Gagliardo, E. D., & Bruns, H.-J. (2019). Public value and public sector accounting research: a structured literature review. *Journal of Public Budgeting, Accounting & Financial Management*, 31(1), 103-136. <https://doi.org/10.1108/jpbafm-07-2018-0077>
- [38]. Brinkerhoff, D. W., & Brinkerhoff, J. M. (2011). Public-private partnerships: Perspectives on purposes, publicness, and good governance. *Public Administration and Development*, 31(1), 2-14. <https://doi.org/10.1002/pad.584>
- [39]. Broadbent, J., & Laughlin, R. (2003). Public private partnerships: an introduction. *Accounting, Auditing & Accountability Journal*, 16(3), 332-341. <https://doi.org/10.1108/09513570310482282>
- [40]. Brown, O., Hammill, A., & McLeman, R. (2007). Climate change as the 'new' security threat: implications for Africa. *International Affairs*, 83(6), 1141-1154. <https://doi.org/10.1111/j.1468-2346.2007.00678.x>
- [41]. Brusca, I., & Montesinos, V. (2013). From Rhetoric to Practice: The Case of Spanish Local Government Reforms. *Financial Accountability & Management*, 29(4), 354-377. <https://doi.org/10.1111/faam.12019>
- [42]. Budlender, D., & Hewitt, G. (2002). *Gender Budgets Make More Cents: Country Studies and Good Practice* (Vol. NA). NA. <https://doi.org/NA>
- [43]. Budlender, D., & Hewitt, G. (2003). *Engendering Budgets* (Vol. NA). OECD Publishing. <https://doi.org/10.14217/9781848597990-en>
- [44]. Caamaño-Alegre, J., Lago-Peñas, S., Reyes-Santías, F., & Santiago-Boubeta, A. (2013). Budget Transparency in Local Governments: An Empirical Analysis. *Local Government Studies*, 39(2), 182-207. <https://doi.org/10.1080/03003930.2012.693075>
- [45]. Cabaleiro, R., Buch, E., & Vaamonde, A. (2012). Developing a Method to Assessing the Municipal Financial Health. *The American Review of Public Administration*, 43(6), 729-751. <https://doi.org/10.1177/0275074012451523>
- [46]. Cabral, S., Lazzarini, S. G., & de Azevedo, P. F. (2009). Private operation with public supervision: evidence of hybrid modes of governance in prisons. *Public Choice*, 145(1), 281-293. <https://doi.org/10.1007/s11127-009-9566-0>
- [47]. Caiden, N., & Wildavsky, A. B. (1980). *Planning and budgeting in poor countries*. Transaction Publishers.
- [48]. Carslaw, C., Mason, R., & Mills, J. R. (2007). Audit timeliness of school district audits. *Journal of Public Budgeting, Accounting & Financial Management*, 19(3), 290-316. <https://doi.org/10.1108/jpbafm-19-03-2007-b002>
- [49]. Casal, R. C., & Gómez, E. J. B. (2014). Is the Tax Collection Effort an Indicator of the Financial Condition of Spanish Municipalities. *International Public Management Journal*, 17(4), 564-592. <https://doi.org/10.1080/10967494.2014.958806>
- [50]. Chavis, L. W., Klapper, L., & Love, I. (2012). *International differences in entrepreneurial finance* (Vol. NA). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780195391244.013.0025>
- [51]. Chien-Chih, Y. (2007). ICEGOV - A value-based strategic management process for e-government strategy planning and performance control. *Proceedings of the 1st international conference on Theory and practice of electronic governance*, NA(NA), 169-178. <https://doi.org/10.1145/1328057.1328093>
- [52]. Chircu, A. M. (2008). E-government evaluation: towards a multidimensional framework. *Electronic Government, an International Journal*, 5(4), 345-363. <https://doi.org/10.1504/eg.2008.019521>
- [53]. Chircu, A. M., & Lee, D. H.-D. (2005). E-government: key success factors for value discovery and realisation. *Electronic Government, an International Journal*, 2(1), 11-25. <https://doi.org/10.1504/eg.2005.006645>
- [54]. Chowdhury, A., Mobin, S. M., Hossain, M. S., Sikdar, M. S. H., & Bhuiyan, S. M. Y. (2023). Mathematical And Experimental Investigation Of Vibration Isolation Characteristics Of Negative Stiffness System For Pipeline. *Global Mainstream Journal of Innovation, Engineering & Emerging Technology*, 2(01), 15-32. <https://doi.org/10.62304/jieet.v2i01.227>
- [55]. Clark, B. Y. (2015). Evaluating the Validity and Reliability of the Financial Condition Index for Local Governments. *Public Budgeting & Finance*, 35(2), 66-88. <https://doi.org/10.1111/pbaf.12063>
- [56]. Cohen, S., Costanzo, A., & Manes-Rossi, F. (2017). Auditors and early signals of financial distress in local governments. *Managerial Auditing Journal*, 32(3), 234-250. <https://doi.org/10.1108/maj-05-2016-1371>
- [57]. Cohen, S., Doumpos, M., Neofytou, E., & Zopounidis, C. (2012). Assessing Financial Distress where Bankruptcy is not an Option: An Alternative Approach for Local Municipalities. *European Journal of Operational Research*, 218(1), 270-279. <https://doi.org/10.1016/j.ejor.2011.10.021>
- [58]. Cook, M. E., & Harrison, T. M. (2014). DG.O - Using public value thinking for government IT planning and decision making. *Proceedings of the 15th Annual International Conference on Digital Government Research*, NA(NA), 54-60. <https://doi.org/10.1145/2612733.2612757>

- [59]. Corrêa, A. S., Corrêa, P. L. P., Silva, D. L., & da Silva, F. S. C. (2014). BigData Congress - Really Opened Government Data: A Collaborative Transparency at Sight. 2014 IEEE International Congress on Big Data, NA(NA), 806-807. <https://doi.org/10.1109/bigdata.congress.2014.131>
- [60]. Cucciniello, M., Bellé, N., Nasi, G., & Valotti, G. (2014). Assessing Public Preferences and the Level of Transparency in Government Using an Exploratory Approach. *Social Science Computer Review*, 33(5), 571-586. <https://doi.org/10.1177/0894439314560849>
- [61]. Cuthill, M. (2010). Strengthening the 'social' in sustainable development: Developing a conceptual framework for social sustainability in a rapid urban growth region in Australia. *Sustainable Development*, 18(6), 362-373. <https://doi.org/10.1002/sd.397>
- [62]. da Costa Bairral, M. A., Coutinho e Silva, A. H., & dos Santos Alves, F. J. (2015). Disclosure in public sector: an analysis of the level of disclosure in the annual reports of Brazilian federal government bodies in the year 2010. *Revista de Administração Pública*, 49(3), 643-675. <https://doi.org/10.1590/0034-7612125158>
- [63]. de Bettignies, J.-E., & Ross, T. W. (2004). The Economics of Public-Private Partnerships. *Canadian Public Policy / Analyse de Politiques*, 30(2), 135-154. <https://doi.org/10.2307/3552389>
- [64]. Deakin, N. (2002). Public-Private Partnerships: A UK case study. *Public Management Review*, 4(2), 133-147. <https://doi.org/10.1080/14616670210130507>
- [65]. Dixon, T., Pottinger, G., & Jordan, A. (2005). Lessons from the private finance initiative in the UK: Benefits, problems and critical success factors. *Journal of Property Investment & Finance*, 23(5), 412-423. <https://doi.org/10.1108/14635780510616016>
- [66]. dos Santos Brito, K., da Silva Costa, M. A., Garcia, V. C., & de Lemos Meira, S. R. (2014a). COMPSAC - Experiences Integrating Heterogeneous Government Open Data Sources to Deliver Services and Promote Transparency in Brazil. 2014 IEEE 38th Annual Computer Software and Applications Conference, NA(NA), 606-607. <https://doi.org/10.1109/compsac.2014.87>
- [67]. dos Santos Brito, K., da Silva Costa, M. A., Garcia, V. C., & de Lemos Meira, S. R. (2014b). DG.O - Brazilian government open data: implementation, challenges, and potential opportunities. *Proceedings of the 15th Annual International Conference on Digital Government Research*, NA(NA), 11-16. <https://doi.org/10.1145/2612733.2612770>
- [68]. dos Santos Brito, K., Neto, M., da Silva Costa, M. A., Garcia, V. C., & de Lemos Meira, S. R. (2014). DG.O - Using parliamentary Brazilian open data to improve transparency and public participation in Brazil. *Proceedings of the 15th Annual International Conference on Digital Government Research*, NA(NA), 171-177. <https://doi.org/10.1145/2612733.2612769>
- [69]. Dziekański, P. (2017). Diversification Synthetic Indicator for Evaluating the Financial Capacity of Local Government. The Case of Polish Voivodeships. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 65(2), 611-619. <https://doi.org/10.11118/actaun201765020611>
- [70]. Egger-Peitler, I., & Polzer, T. (2014). Open Data: European Ambitions and Local Efforts. Experiences from Austria. In (Vol. NA, pp. 137-154). Springer New York. https://doi.org/10.1007/978-1-4614-9563-5_9
- [71]. El-Haram, M. A., Marenjak, S., & Horner, M. (2002). Development of a generic framework for collecting whole life cost data for the building industry. *Journal of Quality in Maintenance Engineering*, 8(2), 144-151. <https://doi.org/10.1108/13552510210430017>
- [72]. Elson, D. (2002). *Integrating Gender into Government Budgets within a Context of Economic Reform*. In (Version NA) Commonwealth Secretariat.
- [73]. Erridge, A., & Greer, J. (2002). Partnerships and public procurement: building social capital through supply relations. *Public Administration*, 80(3), 503-522. <https://doi.org/10.1111/1467-9299.00315>
- [74]. Ferlie, E., Crilly, T., Jashapara, A., & Peckham, A. (2012). Knowledge mobilisation in healthcare: a critical review of health sector and generic management literature. *Social science & medicine* (1982), 74(8), 1297-1304. <https://doi.org/10.1016/j.socscimed.2011.11.042>
- [75]. Forrer, J., Kee, J. E., Newcomer, K. E., & Boyer, E. J. (2010). Public-Private Partnerships and the Public Accountability Question. *Public Administration Review*, 70(3), 475-484. <https://doi.org/10.1111/j.1540-6210.2010.02161.x>
- [76]. Foulonneau, M., Martin, S., & Turki, S. (2014). IESS - How Open Data Are Turned into Services. In (Vol. NA, pp. 31-39). Springer International Publishing. https://doi.org/10.1007/978-3-319-04810-9_3
- [77]. Froud, J. (2003). The Private Finance Initiative: Risk, uncertainty and the state. *Accounting, Organizations and Society*, 28(6), 567-589. [https://doi.org/10.1016/s0361-3682\(02\)00011-9](https://doi.org/10.1016/s0361-3682(02)00011-9)
- [78]. Froud, J., & Shaoul, J. (2001). Appraising and Evaluating PFI for NHS Hospitals. *Financial Accountability & Management*, 17(3), 247-270. <https://doi.org/10.1111/1468-0408.00130>
- [79]. García-Sánchez, I.-M., Cuadrado-Ballesteros, B., Frías-Aceituno, J.-V., & Mordan, N. (2012). A New Predictor of Local Financial Distress. *International Journal of Public Administration*, 35(11), 739-748. <https://doi.org/10.1080/01900692.2012.679173>
- [80]. Garlati, A., Fedele, P., Iacuzzi, S., & Costa, G. G. (2019). Coproduction and cost efficiency: a structured literature review. *Journal of Public Budgeting, Accounting & Financial Management*, 32(1), 114-135. <https://doi.org/10.1108/jpbafm-12-2018-0142>
- [81]. González, J. C., Garcia, J., Cortés, F., & Carpy, D. (2014). DG.O - Government 2.0: a conceptual framework and a case study using Mexican data for assessing the evolution towards open governments. *Proceedings of the 15th Annual International Conference on Digital Government Research*, NA(NA), 124-136. <https://doi.org/10.1145/2612733.2612742>
- [82]. Gorina, E., Maher, C. S., & Joffe, M. D. (2017). Local Fiscal Distress: Measurement and Prediction. *Public Budgeting & Finance*, 38(1), 72-94. <https://doi.org/10.1111/pbaf.12165>
- [83]. Grimmelikhuijsen, S., Porumbescu, G. A., Hong, B., & Im, T. (2013a). The effect of transparency in trust in government: a cross-national comparative experiment. *Public Administration*, 73(4), 575-586. <https://doi.org/NA>
- [84]. Grimmelikhuijsen, S., Porumbescu, G. A., Hong, B., & Im, T. (2013b). The Effect of Transparency on Trust in Government: A Cross-National Comparative Experiment. *Public Administration Review*, 73(4), 575-586. <https://doi.org/10.1111/puar.12047>

- [85]. Grimmelikhuijsen, S., & Welch, E. W. (2012). Developing and Testing a Theoretical Framework for Computer-Mediated Transparency of Local Governments. *Public Administration Review*, 72(4), 562-571. <https://doi.org/10.1111/j.1540-6210.2011.02532.x>
- [86]. Grimsley, M., & Meehan, A. (2007). e-Government information systems: Evaluation-led design for public value and client trust. *European Journal of Information Systems*, 16(2), 134-148. <https://doi.org/10.1057/palgrave.ejis.3000674>
- [87]. Grubnic, S., & Hodges, R. (2003). Information, Trust and the Private Finance Initiative in Social Housing. *Public Money and Management*, 23(3), 177-184. <https://doi.org/10.1111/1467-9302.00366>
- [88]. Guariso, D., Castañeda, G., & Guerrero, O. A. (2023). Budgeting for SDGs: Quantitative methods to assess the potential impacts of public expenditure. *Development Engineering*, 8(NA), 100113-100113. <https://doi.org/10.1016/j.deveng.2023.100113>
- [89]. Guariso, D., Guerrero, O. A., & Castañeda, G. (2023). Automatic SDG budget tagging: Building public financial management capacity through natural language processing. *Data & Policy*, 5(NA), NA-NA. <https://doi.org/10.1017/dap.2023.28>
- [90]. Guillamón, M. D., Bastida, F., & Benito, B. (2011). The electoral budget cycle on municipal police expenditure. *European Journal of Law and Economics*, 36(3), 447-469. <https://doi.org/10.1007/s10657-011-9271-6>
- [91]. Harrison, T. M., Guerrero, S., Burke, G. B., Cook, M. E., Cresswell, A. M., Helbig, N., Hrdinova, J., & Pardo, T. A. (2012). Open government and e-government: democratic challenges from a public value perspective. *Information Polity*, 17(2), 83-97. <https://doi.org/10.3233/ip-2012-0269>
- [92]. Heald, D. (2003). Value for money tests and accounting treatment in PFI schemes. *Accounting, Auditing & Accountability Journal*, 16(3), 342-371. <https://doi.org/10.1108/09513570310482291>
- [93]. Heeks, R. (2003a). e-Government in Africa: Promise and practice. *Information Polity*, 7(2), 97-114. <https://doi.org/10.3233/ip-2002-0008>
- [94]. Heeks, R. (2003b). Most eGovernment-for-Development Projects Fail: How Can Risks be Reduced? *SSRN Electronic Journal*, NA(NA), NA-NA. <https://doi.org/10.2139/ssrn.3540052>
- [95]. Hegedűs, S., & Lentner, C. (2020). Comparative Analysis of Budgetary Indicators of European Municipal Subsystems in the Post-Crisis Term between 2009–2018. *Pénzügyi Szemle = Public Finance Quarterly*, 65(1), 112-133. https://doi.org/10.35551/pfq_2020_1_8
- [96]. Helal, A. M. (2022). State Of Indigenous Cultural Practices And Role Of School Curriculum: A Case Study Of The Garo Community In Bangladesh.
- [97]. Helal, A. M. (2024). Unlocking Untapped Potential: How Machine Learning Can Bridge the Gifted Identification Gap (2024).
- [98]. Helal, A. M., Wai, J., Parra-Martinez, A., McKenzie, S., & Seaton, D. (2025). Widening the Net: How CogAT and ACT Aspire Compare in Gifted Identification.
- [99]. Herian, M. N., Hamm, J. A., Tomkins, A. J., & Zillig, L. M. P. (2012). Public Participation, Procedural Fairness, and Evaluations of Local Governance: The Moderating Role of Uncertainty. *Journal of Public Administration Research and Theory*, 22(4), 815-840. <https://doi.org/10.1093/jopart/mur064>
- [100]. Hewitt, G., & Mukhopadhyay, T. (2002). *Promoting Gender Equality Through Public Expenditure*. In (Version NA) Commonwealth Secretariat.
- [101]. Himmelweit, S. (2002). Tools for budget impact analysis: taxes and benefits. In (Vol. NA, pp. NA-NA). NA. <https://doi.org/NA>
- [102]. Hodge, G., & Greve, C. (2005). *The challenge of public-private partnerships: Learning from international experience* (Vol. NA). NA. <https://doi.org/NA>
- [103]. Hodge, G., & Greve, C. (2007). Public-Private Partnerships: An International Performance Review. *Public Administration Review*, 67(3), 545-558. <https://doi.org/10.1111/j.1540-6210.2007.00736.x>
- [104]. Hossain, A., Khan, M. R., Islam, M. T., & Islam, K. S. (2024). Analyzing The Impact Of Combining Lean Six Sigma Methodologies With Sustainability Goals. *Journal of Science and Engineering Research*, 1(01), 123-144. <https://doi.org/10.70008/jeser.v1i01.57>
- [105]. Hossain, M. R., Mahabub, S., & Das, B. C. (2024). The role of AI and data integration in enhancing data protection in US digital public health an empirical study. *Edelweiss Applied Science and Technology*, 8(6), 8308-8321.
- [106]. Iacuzzi, S. (2021). An appraisal of financial indicators for local government: a structured literature review. *Journal of Public Budgeting, Accounting & Financial Management*, 34(6), 69-94. <https://doi.org/10.1108/jpbafm-04-2021-0064>
- [107]. Islam, M. N., & Helal, A. M. (2018). Primary school governance in Bangladesh: A practical overview of national education policy-2010. *International Journal for Cross-Disciplinary Subjects in Education (IJCDSE)*, 9(4).
- [108]. Islam, M. T. (2024). A Systematic Literature Review On Building Resilient Supply Chains Through Circular Economy And Digital Twin Integration. *Frontiers in Applied Engineering and Technology*, 1(01), 304-324. <https://doi.org/10.70937/faet.v1i01.44>
- [109]. Islam, M. T., Islam, K. S., Hossain, A., & Khan, M. R. (2025). Reducing Operational Costs in U.S. Hospitals Through Lean Healthcare And Simulation-Driven Process Optimization. *Journal of Next-Gen Engineering Systems*, 2(01), 11-28. <https://doi.org/10.70937/jnes.v2i01.50>
- [110]. Justice, J. B., Melitski, J., & Smith, D. L. (2006). E-Government as an Instrument of Fiscal Accountability and Responsiveness: Do the Best Practitioners Employ the Best Practices? *The American Review of Public Administration*, 36(3), 301-322. <https://doi.org/10.1177/0275074005283797>
- [111]. Kafoglis, M. Z., & Cebula, R. J. (1981). The Buchanan-Tullock model: some extensions. *Public Choice*, 36(1), 179-186.
- [112]. Karunasena, K., Deng, H., & Singh, M. (2011). Measuring the public value of e-government: a case study from Sri Lanka. *Transforming Government: People, Process and Policy*, 5(1), 81-99. <https://doi.org/10.1108/17506161111114671>
- [113]. Kazi Saiful, I., Amjad, H., Md Rabbe, K., & Md Tahmidul, I. (2025). The Role Of Age In Shaping Risk-Taking Behaviors And Safety Awareness In The Manufacturing Sector. *American Journal of Advanced Technology and Engineering Solutions*, 1(01), 98-121. <https://doi.org/10.63125/sq8jta62>

- [114]. Khan, M. A. M., & Aleem Al Razee, T. (2024). Lean Six Sigma Applications In Electrical Equipment Manufacturing: A Systematic Literature Review. *American Journal of Interdisciplinary Studies*, 5(02), 31- 63. <https://doi.org/10.63125/hybvwmw84>
- [115]. Kluza, K. (2017). Risk assessment of the local government sector based on the ratio analysis and the DEA method. Evidence from Poland. *Eurasian Economic Review*, 7(3), 329-351. <https://doi.org/10.1007/s40822-017-0075-z>
- [116]. Kosack, S., & Fung, A. (2014). Does Transparency Improve Governance. *Annual Review of Political Science*, 17(1), 65-87. <https://doi.org/10.1146/annurev-polisci-032210-144356>
- [117]. Lenschow, A. (2012). *Environmental policy integration : greening sectoral policies in Europe* (Vol. NA). Routledge. <https://doi.org/10.4324/9781849771238>
- [118]. Liu, Y. (2009). An Empirical Analysis of a Monitoring System of Local Fiscal Risk. *2009 International Conference on Management and Service Science*, NA(NA), 1-4. <https://doi.org/10.1109/icmss.2009.5301746>
- [119]. Lockett, A., Moon, J., & Visser, W. (2006). Corporate Social Responsibility in Management Research: Focus, Nature, Salience and Sources of Influence†. *Journal of Management Studies*, 43(1), 115-136. <https://doi.org/10.1111/j.1467-6486.2006.00585.x>
- [120]. Lonsdale, C. (2005a). Post-Contractual Lock-in and the UK Private Finance Initiative (PFI): the Cases of National Savings and Investments and the Lord Chancellor's Department. *Public Administration*, 83(1), 67-88. <https://doi.org/10.1111/j.0033-3298.2005.00438.x>
- [121]. Lonsdale, C. (2005b). Risk transfer and the UK private finance initiative: a theoretical analysis. *Policy & Politics*, 33(2), 231-249. <https://doi.org/10.1332/0305573053870158>
- [122]. Lourenço, R. P. (2013). EGOV - Open Government Portals Assessment: A Transparency for Accountability Perspective. In (Vol. NA, pp. 62-74). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-40358-3_6
- [123]. Lourenço, R. P. (2015). An analysis of open government portals: A perspective of transparency for accountability. *Government Information Quarterly*, 32(3), 323-332. <https://doi.org/10.1016/j.giq.2015.05.006>
- [124]. Mahabub, S., Das, B. C., & Hossain, M. R. (2024). Advancing healthcare transformation: AI-driven precision medicine and scalable innovations through data analytics. *Edelweiss Applied Science and Technology*, 8(6), 8322-8332.
- [125]. Mahabub, S., Jahan, I., Hasan, M. N., Islam, M. S., Akter, L., Musfiqur, M., Foyzal, R., & Onik, M. K. R. (2024). Efficient detection of tomato leaf diseases using optimized Compact Convolutional Transformers (CCT) Model.
- [126]. Mahabub, S., Jahan, I., Islam, M. N., & Das, B. C. (2024). The Impact of Wearable Technology on Health Monitoring: A Data-Driven Analysis with Real-World Case Studies and Innovations. *Journal of Electrical Systems*, 20.
- [127]. Maher, C. S., Oh, J. W., & Liao, W.-J. (2020). Assessing fiscal distress in small county governments. *Journal of Public Budgeting, Accounting & Financial Management*, 32(4), 691-711. <https://doi.org/10.1108/jpbafm-02-2020-0016>
- [128]. Manes-Rossi, F., Nicolò, G., & Argento, D. (2020). Non-financial reporting formats in public sector organizations: a structured literature review. *Journal of Public Budgeting, Accounting & Financial Management*, 32(4), 639-669. <https://doi.org/10.1108/jpbafm-03-2020-0037>
- [129]. Massaro, M., Dumay, J., & Guthrie, J. (2016). On the shoulders of giants: undertaking a structured literature review in accounting. *Accounting, Auditing & Accountability Journal*, 29(5), 767-801. <https://doi.org/10.1108/aaaj-01-2015-1939>
- [130]. Matheus, R., Ribeiro, M. M., & Vaz, J. C. (2012). ICEGOV - New perspectives for electronic government in Brazil: the adoption of open government data in national and subnational governments of Brazil. *Proceedings of the 6th International Conference on Theory and Practice of Electronic Governance*, NA(NA), 22-29. <https://doi.org/10.1145/2463728.2463734>
- [131]. Matheus, R., Ribeiro, M. M., Vaz, J. C., & de Souza, C. A. (2012). ICEGOV - Anti-corruption online monitoring systems in Brazil. *Proceedings of the 6th International Conference on Theory and Practice of Electronic Governance*, NA(NA), 419-425. <https://doi.org/10.1145/2463728.2463809>
- [132]. Md Majharul, I., Arafat Bin, F., & Ripan Kumar, P. (2022). AI-Based Smart Coating Degradation Detection For Offshore Structures. *American Journal of Advanced Technology and Engineering Solutions*, 2(04), 01-34. <https://doi.org/10.63125/1mn6bm51>
- [133]. Md Masud, K. (2022). A Systematic Review Of Credit Risk Assessment Models In Emerging Economies: A Focus On Bangladesh's Commercial Banking Sector. *American Journal of Advanced Technology and Engineering Solutions*, 2(01), 01-31. <https://doi.org/10.63125/p7ym0327>
- [134]. Md Takbir Hossen, S., Ishfaq, A., & Md Atiqur, R. (2023). AI-Based Smart Textile Wearables For Remote Health Surveillance And Critical Emergency Alerts: A Systematic Literature Review. *American Journal of Scholarly Research and Innovation*, 2(02), 1-29. <https://doi.org/10.63125/ceqapd08>
- [135]. Md Takbir Hossen, S., & Md Atiqur, R. (2022). Advancements In 3D Printing Techniques For Polymer Fiber-Reinforced Textile Composites: A Systematic Literature Review. *American Journal of Interdisciplinary Studies*, 3(04), 32-60. <https://doi.org/10.63125/s4r5m391>
- [136]. Md. Rafiqul Islam, R., Iva, M. J., Md Merajur, R., & Md Tanvir Hasan, S. (2024, 2024/01/25). Investigating Modern Slavery in the Post-Pandemic Textile and Apparel Supply Chain: An Exploratory Study. *International Textile and Apparel Association Annual Conference Proceedings*.
- [137]. Meijer, A., Curtin, D., & Hillebrandt, M. Z. (2012). Open government: connecting vision and voice. *International Review of Administrative Sciences*, 78(1), 10-29. <https://doi.org/10.1177/0020852311429533>
- [138]. Meijer, A., Hart, P. t., & Worthy, B. (2015). Assessing Government Transparency : An Interpretive Framework. *Administration & Society*, 50(4), 501-526. <https://doi.org/10.1177/0095399715598341>
- [139]. Mergel, I. (2013). Social media adoption and resulting tactics in the U.S. federal government. *Government Information Quarterly*, 30(2), 123-130. <https://doi.org/10.1016/j.giq.2012.12.004>
- [140]. Michener, G. (2014). How Cabinet Size and Legislative Control Shape the Strength of Transparency Laws. *Governance*, 28(1), 77-94. <https://doi.org/10.1111/gove.12075>
- [141]. Mintz, J., & Smart, M. (2006). Incentives For Public Investment Under Fiscal Rules - Incentives for public investment under fiscal rules. *Policy Research Working Papers*, NA(NA), 1-NA. <https://doi.org/10.1596/1813-9450-3860>

- [142]. Mkude, C. G., Pérez-Espés, C., & Wimmer, M. A. (2014). HICSS - Participatory Budgeting: A Framework to Analyze the Value-Add of Citizen Participation. *2014 47th Hawaii International Conference on System Sciences, NA(NA)*, 2054-2062. <https://doi.org/10.1109/hicss.2014.260>
- [143]. Modlin, S. (2010). Rationalizing the Local Government Decision-Making Process: A Model for State Oversight of Local Government Finances. *Public Performance & Management Review*, 33(4), 571-593. <https://doi.org/10.2753/pmr1530-9576330403>
- [144]. Mohammad Shahadat Hossain, S., Md Shahadat, H., Saleh Mohammad, M., Adar, C., & Sharif Md Yousuf, B. (2024). Advancements In Smart and Energy-Efficient HVAC Systems: A Prisma-Based Systematic Review. *American Journal of Scholarly Research and Innovation*, 3(01), 1-19. <https://doi.org/10.63125/ts16bd22>
- [145]. Muhammad Mohiul, I., Morshed, A. S. M., Md Enamul, K., & Md, A.-A. (2022). Adaptive Control Of Resource Flow In Construction Projects Through Deep Reinforcement Learning: A Framework For Enhancing Project Performance In Complex Environments. *American Journal of Scholarly Research and Innovation*, 1(01), 76-107. <https://doi.org/10.63125/gm77xp11>
- [146]. Musgrave, F. K., Kolb, C. E., & Mace, R. S. (1989). The synthesis and rendering of eroded fractal terrains. *ACM Siggraph Computer Graphics*, 23(3), 41-50.
- [147]. Mutula, S. M. (2008). Comparison of sub-Saharan Africa's e-government status with developed and transitional nations. *Information Management & Computer Security*, 16(3), 235-250. <https://doi.org/10.1108/09685220810893199>
- [148]. Ndou, V. (2004). E-Government for Developing Countries: Opportunities and Challenges. *THE ELECTRONIC JOURNAL OF INFORMATION SYSTEMS IN DEVELOPING COUNTRIES*, 18(1), 1-24. <https://doi.org/10.1002/j.1681-4835.2004.tb00117.x>
- [149]. Neves, J. C. G. D., & Carvalho, V. O. D. (2025). The Use of Data Mining in Public Budgeting: A Systematic Literature Mapping. *IEEE Access*, 13, 14891-14907. <https://doi.org/10.1109/access.2025.3531834>
- [150]. Osborne, S. P. (2000). *Public-private partnerships : theory and practice in international perspective* (Vol. NA). Routledge. <https://doi.org/10.4324/9780203207116>
- [151]. Padovani, E., Iacuzzi, S., Jorge, S., & Pimentel, L. M. (2021). Municipal financial vulnerability in pandemic crises: a framework for analysis. *Journal of Public Budgeting, Accounting & Financial Management*, 33(4), 387-408. <https://doi.org/10.1108/jpbafm-07-2020-0129>
- [152]. Palmirani, M., Martoni, M., & Girardi, D. (2014). EGOVIS - Open Government Data Beyond Transparency. In (Vol. NA, pp. 275-291). Springer International Publishing. https://doi.org/10.1007/978-3-319-10178-1_22
- [153]. Park, C.-M., & Shin, D. C. (2005). Social Capital and Democratic Citizenship: The Case of South Korea. *Japanese Journal of Political Science*, 6(1), 63-85. <https://doi.org/10.1017/s1468109905001726>
- [154]. Parycek, P., Höchtl, J., & Ginner, M. (2014). Open Government Data Implementation Evaluation. *Journal of Theoretical and Applied Electronic Commerce Research*, 9(2), 13-14. <https://doi.org/10.4067/s0718-18762014000200007>
- [155]. Pérez, C. C., Bolívar, M. P. R., & Hernández, A. M. L. (2008). e-Government process and incentives for online public financial information. *Online Information Review*, 32(3), 379-400. <https://doi.org/10.1108/14684520810889682>
- [156]. Pilcher, R. (2005). Local government financial key performance indicators – not so relevant, reliable and accountable. *International Journal of Productivity and Performance Management*, 54(5/6), 451-467. <https://doi.org/10.1108/17410400510604584>
- [157]. Piotrowski, S. J. (2007). *Governmental Transparency in the Path of Administrative Reform* (Vol. NA). NA. <https://doi.org/NA>
- [158]. Pissarides, F., Singer, M., & Svejnar, J. (2003). Objectives and constraints of entrepreneurs: evidence from small and medium size enterprises in Russia and Bulgaria. *Journal of Comparative Economics*, 31(3), 503-531. [https://doi.org/10.1016/s0147-5967\(03\)00054-4](https://doi.org/10.1016/s0147-5967(03)00054-4)
- [159]. Pollock, A. M., Price, D., & Liebe, M. (2011). Private finance initiatives during NHS austerity. *BMJ (Clinical research ed.)*, 342(7794), 417-419. <https://doi.org/10.1136/bmj.d324>
- [160]. Pombrescu, G. A. (2016). Does Transparency Improve Citizens' Perceptions of Government Performance? Evidence From Seoul, South Korea. *Administration & Society*, 49(3), 443-468. <https://doi.org/10.1177/0095399715593314>
- [161]. Pridgen, A., & Wilder, W. M. (2012). Relevance of GASB No. 34 to Financial Reporting by Municipal Governments. *Accounting Horizons*, 27(2), 175-204. <https://doi.org/10.2308/acch-50377>
- [162]. Purvis, M., & Grainger, A. (2013). *Exploring sustainable development : geographical perspectives* (Vol. NA). Routledge. <https://doi.org/10.4324/9781849771290>
- [163]. Ríos, A.-M., Benito, B., & Bastida, F. (2013). Determinants of Central Government Budget Disclosure: An International Comparative Analysis. *Journal of Comparative Policy Analysis: Research and Practice*, 15(3), 235-254. <https://doi.org/10.1080/13876988.2013.798449>
- [164]. Ripan Kumar, P., Md Majharul, I., & Arafat Bin, F. (2022). Integration Of Advanced NDT Techniques & Implementing QA/QC Programs In Enhancing Safety And Integrity In Oil & Gas Operations. *American Journal of Interdisciplinary Studies*, 3(02), 01-35. <https://doi.org/10.63125/9pzxgq74>
- [165]. Rivenbark, W. C., Roenigk, D. J., & Allison, G. S. (2010). Conceptualizing Financial Condition In Local Government. *Journal of Public Budgeting, Accounting & Financial Management*, 22(2), 149-177. <https://doi.org/10.1108/jpbafm-22-02-2010-b001>
- [166]. Robbins, G., Turley, G., & McNena, S. (2016). Benchmarking the financial performance of local councils in Ireland. *Administration*, 64(1), 1-27. <https://doi.org/10.1515/admin-2016-0009>
- [167]. Roberts, A. (2006). *Blacked Out: Government Secrecy in the Information Age* (Vol. NA). NA. <https://doi.org/NA>
- [168]. Roksana, H., Ammar, B., Noor Alam, S., & Ishtiaque, A. (2024). Predictive Maintenance in Industrial Automation: A Systematic Review Of IOT Sensor Technologies And AI Algorithms. *American Journal of Interdisciplinary Studies*, 5(01), 01-30. <https://doi.org/10.63125/hd2ac988>
- [169]. Rubin, M. M., & Bartle, J. (2005). Integrating Gender into Government Budgets: A New Perspective. *Public Administration Review*, 65(3), 259-272. <https://doi.org/10.1111/j.1540-6210.2005.00452.x>
- [170]. Rufin, C., & Rivera-Santos, M. (2010). Between Commonweal and Competition: Understanding the Governance of Public-Private Partnerships. *Journal of Management*, 38(5), 1634-1654. <https://doi.org/10.1177/0149206310373948>

- [171]. Sanabria, P., Pliscoff, C., & Gomes, R. C. (2014). E-Government Practices in South American Countries: Echoing a Global Trend or Really Improving Governance? The Experiences of Colombia, Chile, and Brazil. In (Vol. NA, pp. 17-36). Springer New York. https://doi.org/10.1007/978-1-4614-9563-5_2
- [172]. Sandoval-Almazan, R., & Gil-Garcia, J. R. (2014). EGOV - Towards an Evaluation Model for Open Government: A Preliminary Proposal. In (Vol. NA, pp. 47-58). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-662-44426-9_4
- [173]. Sarker, M. T. H. (2025). Case Study Analysis of AI-Powered Sensor Fabrics for Continuous Health Monitoring in Chronic Disease Management. *Strategic Data Management and Innovation*, 2(01), 160-180. <https://doi.org/10.71292/sdmi.v2i01.18>
- [174]. Sarker, M. T. H., Ahmed, I., & Rahaman, M. A. (2023). AI-Based Smart Textile Wearables For Remote Health Surveillance And Critical Emergency Alerts: A Systematic Literature Review. *American Journal of Scholarly Research and Innovation*, 2(02), 1-29. <https://doi.org/10.63125/ceqapd08>
- [175]. Sawyer, M. (2002). Australia: The mandarin approach to gender budgets. In (Vol. NA, pp. NA-NA). NA. <https://doi.org/NA>
- [176]. Sawyer, M. (2005). The private finance initiative: the uk experience. *Research in Transportation Economics*, 15(1), 231-245. [https://doi.org/10.1016/s0739-8859\(05\)15018-5](https://doi.org/10.1016/s0739-8859(05)15018-5)
- [177]. Schick, A. (1998). A contemporary approach to public expenditure management. *World Bank Institute*, 68(1), 2-11.
- [178]. Shahan, A., Anisur, R., & Md, A. (2023). A Systematic Review Of AI And Machine Learning-Driven IT Support Systems: Enhancing Efficiency And Automation In Technical Service Management. *American Journal of Scholarly Research and Innovation*, 2(02), 75-101. <https://doi.org/10.63125/fd34sr03>
- [179]. Shaoul, J. (2005). A critical financial analysis of the Private Finance Initiative: Selecting a financing method or allocating economic wealth? *Critical Perspectives on Accounting*, 16(4), 441-471. <https://doi.org/10.1016/j.cpa.2003.06.001>
- [180]. Sharp, R. (2003). Budgeting for equity : gender budget initiatives within a framework of performance oriented budgeting. NA, NA(NA), NA-NA. <https://doi.org/NA>
- [181]. Shaw, J. S. (2002). Public choice theory. *The concise encyclopedia of economics*, 1-7.
- [182]. Shohel, M. S. H., Islam, M. M., Prodhan, R. K., & Morshed, A. S. M. (2024). Lifecycle Management Of Renewable Energy Systems In Residential Housing Construction. *Frontiers in Applied Engineering and Technology*, 1(01), 124-138. <https://doi.org/10.70937/faet.v1i01.23>
- [183]. Siddiqui, N. A., Limon, G. Q., Hossain, M. S., & Minto, A. A. (2023). A Systematic Review Of ERP Implementation Strategies In The Retail Industry: Integration Challenges, Success Factors, And Digital Maturity Models. *American Journal of Scholarly Research and Innovation*, 2(02), 135-165. <https://doi.org/10.63125/pfdm9g02>
- [184]. Sohel, A., Alam, M. A., Hossain, A., Mahmud, S., & Akter, S. (2022). Artificial Intelligence In Predictive Analytics For Next-Generation Cancer Treatment: A Systematic Literature Review Of Healthcare Innovations In The USA. *Global Mainstream Journal of Innovation, Engineering & Emerging Technology*, 1(01), 62-87. <https://doi.org/10.62304/jieet.v1i01.229>
- [185]. Sohel, R. (2025). AI-Driven Fault Detection and Predictive Maintenance In Electrical Power Systems: A Systematic Review Of Data-Driven Approaches, Digital Twins, And Self-Healing Grids. *American Journal of Advanced Technology and Engineering Solutions*, 1(01), 258-289. <https://doi.org/10.63125/4p25x993>
- [186]. Steccolini, I., Saliterer, I., & Guthrie, J. (2020). The role(s) of accounting and performance measurement systems in contemporary public administration. *Public Administration*, 98(1), 3-13. <https://doi.org/10.1111/padm.12642>
- [187]. Stivers, C. (2000). *Bureau Men, Settlement Women: Constructing Public Administration in the Progressive Era* (Vol. NA). NA. <https://doi.org/NA>
- [188]. Tejedo-Romero, F., & de Araujo, J. F. F. E. (2015). Determinants of Local Governments' Transparency in Times of Crisis: Evidence From Municipality-Level Panel Data. *Administration & Society*, 50(4), 527-554. <https://doi.org/10.1177/0095399715607288>
- [189]. Tolbert, C. J., Mossberger, K., & McNeal, R. (2008). Institutions, Policy Innovation, and E-Government in the American States. *Public Administration Review*, 68(3), 549-563. <https://doi.org/10.1111/j.1540-6210.2008.00890.x>
- [190]. Toney, A. A. R. (2022). Mechanical Properties and Structural Stability of Semiconducting Electrides: Insights For Material. *Global Mainstream Journal of Innovation, Engineering & Emerging Technology*, 1(01), 18-35. <https://doi.org/10.62304/jieet.v1i01.225>
- [191]. Torres, L., & Pina, V. (2001). Publicprivate partnership and private finance initiatives in the EU and Spanish local governments. *European Accounting Review*, 10(3), 601-619. <https://doi.org/10.1080/713764637>
- [192]. Trussel, J. M., & Patrick, P. A. (2018). Assessing and ranking the financial risk of municipal governments. *Journal of Applied Accounting Research*, 19(1), 81-101. <https://doi.org/10.1108/jaar-05-2016-0051>
- [193]. Tummers, L., Bekkers, V., Vink, E., & Musheno, M. (2015). Coping During Public Service Delivery: A Conceptualization and Systematic Review of the Literature. *Journal of Public Administration Research and Theory*, 25(4), 1099-1126. <https://doi.org/10.1093/jopart/muu056>
- [194]. Turley, G., Di medio, R., & McNena, S. (2020). A reassessment of local government's financial position and performance: The case of Ireland. *Administration*, 68(2), 1-35. <https://doi.org/10.2478/admin-2020-0009>
- [195]. Valle-Cruz, D., Fernandez-Cortez, V., & Gil-Garcia, J. R. (2022). From E-budgeting to smart budgeting: Exploring the potential of artificial intelligence in government decision-making for resource allocation. *Government Information Quarterly*, 39(2), 101644-101644. <https://doi.org/10.1016/j.giq.2021.101644>
- [196]. Valle-Cruz, D., Fernandez-Cortez, V., López-Chau, A., & Rojas-Hernández, R. (2022). Public Budget Simulations with Machine Learning and Synthetic Data: Some Challenges and Lessons from the Mexican Case. In (Vol. NA, pp. 141-160). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-22950-3_12
- [197]. Valle-Cruz, D., Gil-Garcia, J. R., & Sandoval-Almazan, R. (2024). Artificial intelligence algorithms and applications in the public sector: a systematic literature review based on the PRISMA approach. In (Vol. NA, pp. 8-26). Edward Elgar Publishing. <https://doi.org/10.4337/9781802207347.00010>
- [198]. Veljković, N., Bogdanović-Dinić, S., & Stoimenov, L. (2014). Benchmarking open government: An open data perspective. *Government Information Quarterly*, 31(2), 278-290. <https://doi.org/10.1016/j.giq.2013.10.011>

- [199]. Verma, N., & Gupta, M. P. (2013). ICEGOV - Open government data: beyond policy & portal, a study in Indian context. *Proceedings of the 7th International Conference on Theory and Practice of Electronic Governance*, NA(NA), 338-341. <https://doi.org/10.1145/2591888.2591949>
- [200]. Vifell, A. C., & Soneryd, L. (2012). Organizing matters: : how 'the social dimension' gets lost in sustainability projects. *Sustainable Development*, 20(1), 18-27. <https://doi.org/10.1002/sd.461>
- [201]. Vivian, B., & Maroun, W. (2018). Progressive public administration and new public management in public sector accountancy: An international review. *Meditari Accountancy Research*, 26(1), 44-69. <https://doi.org/10.1108/medar-03-2017-0131>
- [202]. Walker, R. M., & Andrews, R. W. (2013). Local government management and performance: a review of evidence. *Journal of Public Administration Research and Theory*, 25(1), 101-133. <https://doi.org/10.1093/jopart/mut038>
- [203]. Wang, Y., & Li, Y. (2023). Chinese economic growth and sustainable development: Role of artificial intelligence and natural resource management. *Resources Policy*, 85(NA), 103996-103996. <https://doi.org/10.1016/j.resourpol.2023.103996>
- [204]. Weber, C. L., Peters, G. P., Guan, D., & Hubacek, K. (2008). The contribution of Chinese exports to climate change. *Energy Policy*, 36(9), 3572-3577. <https://doi.org/10.1016/j.enpol.2008.06.009>
- [205]. Wehner, J., & de Renzio, P. (2013). Citizens, legislators, and executive disclosure: the political determinants of fiscal transparency. *World development*, 41(NA), 96-108. <https://doi.org/10.1016/j.worlddev.2012.06.005>
- [206]. Winarna, J., Widagdo, A. K., & Setiawan, D. (2017). Financial Distress of Local Government: A Study on Local Government Characteristics, Infrastructure, and Financial Condition. *GLOBAL BUSINESS FINANCE REVIEW*, 22(2), 34-47. <https://doi.org/10.17549/gbfr.2017.22.2.34>
- [207]. Winch, G. (2000). Institutional reform in British construction: partnering and private finance. *Building Research & Information*, 28(2), 141-155. <https://doi.org/10.1080/096132100369046>
- [208]. Wirtz, B. W., & Birkmeyer, S. (2015). Open Government: Origin, Development, and Conceptual Perspectives. *International Journal of Public Administration*, 38(5), 381-396. <https://doi.org/10.1080/01900692.2014.942735>
- [209]. Wright, J. M., & Kurian, P. (2010). Ecological modernization versus sustainable development: the case of genetic modification regulation in New Zealand. *Sustainable Development*, 18(6), 398-412. <https://doi.org/10.1002/sd.430>
- [210]. Yang, C.-H., Molefyane, T., & Lin, Y.-D. (2023). The Forecasting of a Leading Country's Government Expenditure Using a Recurrent Neural Network with a Gated Recurrent Unit. *Mathematics*, 11(14), 3085-3085. <https://doi.org/10.3390/math11143085>
- [211]. Yang, Y., Hou, Y., & Wang, Y. (2013). On the Development of Public-Private Partnerships in Transitional Economies: An Explanatory Framework. *Public Administration Review*, 73(2), 301-310. <https://doi.org/10.1111/j.1540-6210.2012.02672.x>
- [212]. Younus, M. (2022). Reducing Carbon Emissions in The Fashion And Textile Industry Through Sustainable Practices and Recycling: A Path Towards A Circular, Low-Carbon Future. *Global Mainstream Journal of Business, Economics, Development & Project Management*, 1(1), 57-76. <https://doi.org/10.62304/jbedpm.v1i1.226>
- [213]. Zhao, F., Shen, K. N., & Collier, A. (2014). Effects of national culture on e-government diffusion-A global study of 55 countries. *Information & Management*, 51(8), 1005-1016. <https://doi.org/10.1016/j.im.2014.06.004>
- [214]. Zheng, J., Roehrich, J., & Lewis, M. (2008). The dynamics of contractual and relational governance: Evidence from long-term public-private procurement arrangements. *Journal of Purchasing and Supply Management*, 14(1), 43-54. <https://doi.org/10.1016/j.pursup.2008.01.004>
- [215]. Zuidewijk, A., & Janssen, M. (2013). EGOV - A Coordination Theory Perspective to Improve the Use of Open Data in Policy-Making. In (Vol. NA, pp. 38-49). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-40358-3_4