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Faculty of Management and Economics

Doctoral Thesis

Accounting in Social Movements: Impact of Social Controls on Ethical Public Budgeting in Developing Economies

Účetnictví v sociálních hnutích: Dopad sociální kontroly na etické veřejné rozpočtování v rozvojových ekonomikách

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ABSTRACT

This study integrates principal-agent theory and fair wage-effort theory to examine how advanced civic education relates to fair wages (proxy,fair rewards system) and how both social control mechanisms foster social accountability consciousness (proxy, ethical budgeting) needed to mitigate budget slack fraud in the public sector. Using survey responses and semi-structured interviews from Gambian public sector practitioners, the research tests the direct and indirect effects between advanced civic education and fair rewards system including their respective relationships with social accountability consciousness and ethical budgeting. Findings reveal significant positive direct effects but fair rewards system neither mediate nor moderate the relationship between advanced civic education and budgetary slack fraud reduction. The study thus addresses a theoretical gap by demonstrating that integrating advanced civic education into public servants' professional development cultivates the social accountability consciousness required to control waste,abuse and fraud in public budgeting. Empirically, it highlights the limited efficacy of fair rewards systems alone, advocating instead for prioritizing advanced civic education initiatives to strengthen fiscal integrity in government operations.

ABSTRAKT

Tato studie integruje teorii principál-agent a teorii spravedlivé mzdy a úsilí, aby prozkoumala, jak vzdělávání v oblasti pokročilé občanského vzdělávání souvisí se spravedlivými mzdami, a jak oba mechanismy sociální kontroly podporují vědomí sociální odpovědnosti (proxy etického rozpočtování), které je nezbytné pro zmírnění podvodů spojených s rozpočtovou rezervou ve veřejném sektoru. Pomocí dotazníkových odpovědí a polo-strukturovaných rozhovorů s profesionály z gambijského veřejného sektoru výzkum testuje model analyzující přímé a nepřímé efekty spravedlivých mezd na vztah mezi vzděláváním v sociální odpovědnosti auditu a etickým rozpočtováním.

Zjištění ukazují, že spravedlivé mzdy ani nezprostředkovávají, ani nemoderují vztah mezi pokročilé občanského vzdělávání a snížením podvodů. Zatímco toto vzdělávání pozitivně koreluje se spravedlivými mzdami a etickým rozpočtováním, spravedlivé mzdy nevykazují významnou asociaci s vědomím sociální odpovědnosti ani se snížením podvodů spojených s rozpočtovou rezervou. Studie řeší teoretickou mezeru tím, že demonstruje, jak integrace pokročilé občanského vzdělávání do profesního rozvoje veřejných činitelů kultivuje etické povědomí potřebné k potlačení plýtvání, zneužívání a podvodů v rozpočtování veřejných prostředků.

Empiricky zdůrazňuje omezenou účinnost systémů spravedlivých mezd samotných a namísto toho doporučuje upřednostňovat pokročilé iniciativy občanského vzdělávání pro posílení fiskální integrity v operacích vlády.

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF SYMBOLS AND ABBREVATIONS

ACE: Advanced Civic Education

AVE: Average Variance Extracted

CFI: Comparative Fit Index

D.O.G.E: Department of Government Efficiency

FRS: Fair Rewards System

P-A: Principal-Agent

RMSEA: Root Mean Square Error of Approximation

SAC: Social Accountability Consciousness

SAE: Social Accountability Education

SEM: Structural Equation Modeling

SRMR: Standardized Root Mean Square Residual

TLI: Tucker–Lewis Index

α (alpha): Cronbach's alpha (internal consistency reliability)

1. INTRODUCTION

> *"Budgeting is a powerful tool but it causes some dysfunctional effects in organizations. No solution for that dilemma." (Argyris, 1953)*
>
> *"Can the Issue of Corruption Be Solved?" (Teichmann & Falker, 2020)*
>
> *"Neither the most sophisticated political debates nor the best researched* exposés *of corruption or political failure will bring about change. Social movements, in their various forms, are required to do that." Cooper and Coulson (2014: p. 238)*

1.1 Background

This dissertation examines how management accounting's social controls can address the failure of technical control-based agency models to protect citizens of developing economies from public budgeting fraud. The main argument is that sustainable reform in ethical budgeting requires transforming both public servants' mindsets and the incentive system. Such transformation is achievable through an integrated Advanced Civic Education (ACE) and Fair Rewards System (FRS) framework. Together, ACE and FRS target the core contradictions of "distorted incentives and compromised information" (Van der Stede, 2011, p. 605) that underpin public budgeting fraud.

The Dual Role of Accounting in Society

Public budgeting fraud–the manipulation of revenue and expenditure estimates by agents entrusted with their implementation–represents a paradox that has remained unresolved for over half a century (Argyris, 1953; Covaleski et al., 2006; Mohanna & Sponem, 2020). The paradox as an abuse of trust sits at the heart of scholarly debates regarding accounting's dual role in society. On the one hand, critical accounting research (CAR) examines historical financial information to expose how capitalists have used accounting as a tool for exploitation and crisis, beginning from the 1929 capital market crash to corporate failures of the early 20th century (Catchpole & Smyth, 2016; Cooper, 2015). Conversely, social movement studies explore accounting's emancipatory potential- repurposing financial data for labour rights advocacy.

The divergence in ongoing debates highlights two interrelated gaps. First, a 'temporal gap' arises from focusing on historical information and excluding public budgets' futuristic information. Approved budgets authorize future spending and support specific political, social, and economic agendas (UNOPS, 2023). Corrupting it, therefore, is a pre-emptive plundering of societal possibilities. Second, a 'dialectical gap' also exists between viewing accounting as a weapon against or for society, with scant research synthesizing these perspectives into a practical, internalized fraud-control framework to address the paradox.

Budgeting paradox problem in the context of developing economies

Moreover, the dissertation studies developing economies for four interconnected reasons. First, these countries are recipients of financial aid from international donors. Second, they experience the budgeting paradox (Argyris, 1953) acutely. Three, they face poverty-corruption nexus with direct implications for UN SDG 16 (Peace, Justice and Strong Institutions) and SDG 1 (No Poverty). Lastly, they exhibit pronounced 'budgetary slack' that strengthens Cooper's (2015)' elite control.' At the root of the paradox is a major '***contextual gap***' also: theories rooted in developed economies often ignore material realities in developing economies, like survival wages and the poverty-corruption nexus (Abdullahi & Mansor, 2015, 2018). The paradox further highlights a ***'locus-of-change gap***': while literature documents external activists using accounting information (Cooper & Coulson, 2014), there is limited work on catalyzing internal movements to transform bureaucrats into empowered 'collective intellectuals' with the 'ability to account' (Flint, 1988). Finally, a 'control-mechanism gap' persists, characterized by an over-reliance on technical, detective controls at the expense of foundational 'social controls' (Merchant & Van der Stede, 2017) that shape ethical habits and intrinsic motivation. The gaps lead us to propose an interventionist solution that utilizes social controls.

The solution of an ACE–FRS framework

Consequently, this research adopts an interventionist stance, proposing the ACE–FRS framework as deliberate praxis. The framework argues that activating social controls can forge an internal movement within the 'accountingized' system[1] (Gebreiter, 2022), moving from a Theory X toward a Theory Y model of stewardship:

- Advanced Civic Education (ACE) drives a cognitive 'inside out' shift, cultivating a pro-social identity and the interpretive competence to engage ethically with budgeting as a promissory tool. It thus reframes Van der Stede's (2011) 'inside out' view through Lukka and Suomala's (2014) concept of 'phronesis' (practical wisdom), arguing that the key transformation is an internal shift in the public agent's mindset and professional principles.
- Fair Rewards System (FRS) corrects foundational material contradictions of survival wages for ethical agency, making ethical conduct a rational choice and stabilizing the promissory relationship between agents and citizens.

The proposed framing is grounded in viewing management accounting as a behavioral discipline that shapes identity (Luft, 2016; Mafrolla, 2016) and as a performative practice in a promissory economy (Mouritsen & Kreiner, 2016). Thus, the study responds to calls for greater societal relevance in accounting

[1] Accountingization- a phenomenon where accounting practices, financial metrics, and managerial logic become the dominant language and governing mechanism of public sector organizations.

research (Modell, 2014; Tucker & Parker, 2014) by engaging interventionist research models rooted in Aristotle's three intellectual virtues: episteme, techne, and phronesis.

Developing economies' public sector budgetary slack environment

The public sector, encompassing state entities and the civil service bureaucracy (Lamidi et al., 2016; Rao, 2013), is central to policy and service delivery. However, across Africa, it remains plagued by inefficiency, corruption, and skilled worker exodus (Crook, 2010; Nwanolue & Iwuoha, 2012; Adesopo et al., 2022). A stark example is Nigeria's 2024 budget, which allocated 94% of federal overhead costs to just three finance-related ministries–a severe administrative misallocation that exceeds capital expenditure (Adamolekun, 2023). This misallocation illustrates the critical disconnect between state budgets and development caused by corruption (Davila & Wouters, 2005; Abdullahi & Mansor, 2018, 2015). Budget fraud, as illustrated by the routine overestimation or "padding" reported in the interview in The Gambia, exemplifies this problem. Addressing it requires integrating technical controls with fair salaries and a mindset transformation among officials (Adesopo et al., 2022). Accordingly, this study aims to validate predictors of ethical budgetary slack behavior among public servants in developing economies.

1.2 Research Purpose, Research Questions, and Objectives

1.2.1 Research purpose

This study examines how Management Accounting's social controls affect ethical budgeting behavior among public servants in developing economies, with a focus on The Gambia. This study defines social controls in two ways: advanced civic education (which incorporates auditing principles) and a fair rewards system (wages based on egalitarian principles with additional incentives). The study views public servants as agents of the citizens. These social controls are rooted in social accountability–mechanisms citizens use to hold public servants accountable, including participatory budgeting, expenditure monitoring, social audits, sanctions, and rewards (Ackerman, 2005).

The dissertation posits that ACE, coupled with an FRS, can mitigate budgetary slack fraud, ultimately leading to ethical budgeting behavior. Here, ACE and FRS serve as control and incentive mechanisms, respectively, that help principals (citizens) align agents' interests with their own, thereby reducing information asymmetry in the principal-agent relationship. The intention is to cultivate social accountability consciousness (SAC)–*cost consciousness and psychological ownership of public funds*–among public servants, thereby translating into ethical budgeting behavior. SAC heightens perceived awareness of the essence of public service – *the principal's interest in the P-A theory context* – and 'corruption perception' or sensitivity among politicians and bureaucrats.

Given that budgetary slack fraud is a universal issue that varies by context, culture, and degree, the goal is to offer generalizable insights. Instilling a consciousness of social accountability through this educational approach, which frames ethical budgeting as a categorical imperative (Kant, 1993, 1785), is crucial. The consciousness, in turn, encourages public servants, as agents of society, to exercise budgetary discretion responsibly and ethically, prioritizing legitimate organizational interests over personal gain. This shift – a form of social movement–is essential for promoting a culture of integrity and transparency in public budgeting, with the aim of improving public sector liquidity by reducing budget-related fraud. Accordingly, drawing on principal-agent, fair-wage effort, and social movement theories, the subsequent section presents specific research questions and objectives that are crucial to a comprehensive understanding of the research topic.

1.2.2 Research Questions

Focusing on The Gambia as a case study within developing economies, this engaged intervention contributes to resolving Argyris's budgeting dilemma by exploring the transformative potential of **internal social movements within the public sector**. The main research questions–' How does fraud manifest in public budgeting, and does social controls significantly improve ethical budgeting behavior in public servants?'–is addressed through five sub-questions organized thematically:

Effects of Advanced Civic Education (ACE)

- RQ1: Is ACE positively associated with ethical budgeting behavior among public servants? (H1)
- RQ2: Is ACE positively associated with awareness of and support for a Fair Rewards System in the public sector? (H2).

Effects of Fair Rewards System (FRS)

- RQ3: Is a Fair Rewards System positively associated with ethical budgeting behavior among public servants? (H3)

Mediating and Moderating Mechanisms

- RQ4: Does the direct effect of ACE on ethical budgeting remain significant after accounting for the indirect path through Fair Rewards Systems, or does full mediation better characterize the data? (H4)
- RQ5: To what extent does a Fair Rewards System moderate the impact of Advanced Civic Education on social accountability consciousness? (H5).

1.2.3 Research Objectives

The research models ethical budgeting behaviour as an outcome variable, explained by ACE, with FRS representing the rewards component of social accountability (SA), acting as a mediator or moderator to incentivise ethical behaviour and strengthen the impact of ACE on agents' ethical budgetary slack behaviour. The study selected ACE as a key intervention for three reasons:

1. It instils patriotism, good citizenship, and ethical decision-making.
2. Addresses donors’ concerns about inadequate civic education programs by incorporating auditing principles (Marquette, 2017).
3. Civic education shares theoretical foundations like principal-agent theory, social contract theory, etc., with social accountability and auditing.

Against this background, the study seeks to realize the following objectives:

RO1: To investigate the relationship between ACE and ethical budgeting behavior among public servants in developing economies.

RO2: To investigate the relationship between ACE and FRS among public servants in developing economies.

RO3: To investigate the relationship between FRS and ethical budgeting behavior among public servants in developing economies.

RO4: To investigate the mediating role of FRS in the relationship between ACE and ethical budgeting behavior in public sector organizations.

RO4: To investigate the moderating effect of FRS on the relationship between ACE and ethical budgeting behavior in public sector organizations.

This study integrates principal-agent theory and fair-wage-effort theory to propose a civic education program that combines auditing principles with performance-based rewards, aimed at fostering ethical behavior among public servants to enhance transparency and accountability in public financial management in developing economies.

1.3 Research Contexts

Context is important for external validity, as it helps generalize research findings to similar contexts. The study triangulates five contexts: P-A theory, fair wage-effort theory, budgetary slack fraud, developing economies, and The Gambia. The study applies P-A theory and fair wage-effort theory to budgetary slack fraud in the public sector of developing countries, proxied by The Gambia. The argument is that budgetary slack discussion in the public sector without the political dimension is incomplete. The political dimension here is that wages and budgeting are political decisions made by politicians, who are agents of the citizens, and by bureaucrats, who are agents of the politicians.

Developing economies typically exhibit a distinct set of public-sector characteristics: low wages, normalized corruption, traditional budgeting systems susceptible to fraud, and a preference for higher-paying private-sector employment. Within this context, The Gambia, a nation heavily dependent on tourism and foreign aid, emerges as a particularly relevant case. During data collection, anecdotal feedback suggested that the study's themes resonated with ongoing wage reform discussions between The Gambia and its Ghanaian counterparts. These developments render The Gambia a compelling lens for examining ethical budgeting in developing economies.

1.4 Contribution and positioning of the study

Theoretical contribution: SAC and reconceptualization of the Agency Model

Theoretical contribution: SAC and reconceptualization of the Agency Model

The study's primary theoretical innovation is the introduction of Social Accountability Consciousness (SAC). This construct captures the internalized psychological readiness of public servants to accept and act on accountability as a professional and ethical duty. SAC fills a critical gap in existing literature, which extensively documents 'institutional mechanisms' of social accountability (e.g., citizen charters, participatory budgeting) but largely overlooks the 'cognitive and dispositional transformation' required for public servants to move from viewing accountability as an external administrative burden to embracing it as a rational choice.

By treating SAC as an outcome variable, this study reconceptualizes the dominant principal-agent model in public budgeting research. Traditional agency theory relies on technical controls- monitoring, sanctions, and incentives- to align agent behavior with principals' interests. However, this framework proves inadequate in developing economies contexts where material deprivation and normalized corruption distort incentives.

This study extends agency theory by demonstrating that sustainable ethical behavior requires both external alignment and an internalized shift in the agent's professional identity–a transformation cultivated through social controls like advanced civic education. SAC thus bridges the gap between institutional design and individual ethical agency, offering a more complete model of accountability in resource-constrained economies. Furthermore, the study advances social movement theory by operationalizing Bourdieu's (1995) concept of 'collective intellectuals' as public servants–agents who possess specialized knowledge and a shared disposition (collective action) toward shaping the ethical field they inhabit. Moreover, the ACE–FRS framework positions civic education as the mechanism that cultivates this collective intellectual identity, while fair rewards make participation in the accountability movement a rational choice within the agents' professional field.

Empirical Contribution: Testing ACE–FRS in Context

Empirically, this study provides one of the first systematic tests of the conditional effects of ACE and FRS on ethical budgeting behavior in a developing country's public sector. By focusing on The Gambia–a low-income, aid-dependent West African nation–the research moves beyond Western-centric pedagogical and incentive studies to examine how social controls operate in contexts characterized by survival wages, systemic corruption pressures, and acute manifestations of Argyris's (1953) budgeting paradox.

The findings offer three novel empirical insights. First, ACE emerges as the dominant predictor of SAC, demonstrating that civic education cultivates ethical disposition independently of material incentives. Second, FRS plays a secondary, contingent role–valued by public servants but insufficient alone to drive ideal transformation–according to qualitative data that reveal skepticism that salary alone addresses dishonesty. Third, the absence of mediation or moderation by FRS in the ACE–fraud reduction relationship suggests that while rewards incentivize participation, the transformative potential of civic education operates autonomously, mobilizing public servants as Bourdieu's 'collective intellectuals' who internalize ethical agency as rational choice within their professional field.

Methodological Contribution: Interventionist Engaged Scholarship

Methodologically, this study contributes through its 'interventionist engaged scholarship' approach (Lukka & Suomala, 2014; Mendez et al.,2024), to bridge the rigor–relevance gap frequently criticized in accounting research (Modell, 2014; Tucker & Parker, 2014). Rather than observing public sector ethics from a distance, the research team co-designed the ACE program with Gambian public sector practitioners, embedding theoretical constructs within a real-world intervention.

This engaged approach yielded three methodological advantages. First, it ensured that the findings reflect both survey responses and the lived experiences of public servants operating in an actual poverty-corruption nexus environment. Second, it enabled concurrent triangulation, with qualitative interviews providing explanatory depth for quantitative patterns, revealing, for instance, 'why' FRS effects remain modest despite statistical significance. Third, it operationalizes Aristotle's intellectual virtues–particularly 'phronesis' (practical wisdom)–by positioning researchers and practitioners as co-participants in the generation of actionable knowledge. This co-production model offers a replicable template for engaged scholarship in public sector accounting research, particularly in developing economies, where contextual grounding is essential for meaningful intervention.

Practical Contribution: Implementable reform for the public sector

In practice, this study offers a cost-effective, scalable reform blueprint for governments, international donors, and public-sector ethics agencies seeking to strengthen fiscal integrity. The findings have clear implications:

- For governments and ministries of finance: Governments and their institutions should prioritize investment in ACE over standalone incentive reforms. While fair wages are necessary to reduce financial pressure for fraud, they are insufficient to cultivate the accountability consciousness required for sustainable ethical behavior. Civic education programs that position public servants as collective intellectuals- agents of a professional accountability movement- provide a transformative complement to technical controls.

- For international donor agencies: Development assistance targeting anti-corruption should fund integrated interventions combining civic education, fair wage policies, and robust internal controls. The study demonstrates that fragmented approaches-relying solely on salary increases or monitoring mechanisms-fail to address the cognitive and dispositional dimensions of ethical agency.
- For public sector ethics agencies: The ACE–FRS framework provides a concrete model for reforming public financial management. By reforming both incentives (FRS) and mindset (ACE), institutions can help public managers make sense of change (Bukh et al., 2021) and lead bottom-up accountability movements. This dual approach transforms budgeting from a technical exercise into a promissory practice grounded in democratic accountability and public good.

1.5 Scope of study

The scope of this study is limited to fraud control in public budgeting. Frauds are actions legally defined as violations of codified rules and regulations. These violations occur in a professional organizational context. The analysis centers on compliance with formal institutional and legal frameworks. These frameworks serve as the standard basis for fraud control mechanisms in public administration. However, the study accepts that broader ethical obligations may be interpreted differently across cultures. Moreover, fraud is a component of corruption. However, the term "corruption" is broad and subject to varying cultural interpretations. Due to this variation, the study narrows its focus to the more universally defined concept of fraud in law and auditing as actions involving deception for gain. This makes fraud a more stable variable for empirical analysis. Finally, the Discussion section reiterates the study’s findings to pertain specifically to fraud control in public budgeting. It also notes the nuances in broader definitions of corruption which happen to be culturally dependent. These nuances could be explored in future cross-cultural research.

1.6 Summary of chapters

This study explores how the combination of advanced civic education and fair wages can reduce fraudulent budgetary slack and promote ethical budgeting behavior among public servants in developing economies, proxied by The Gambia. The research uses Mixed Methods as a research technique and is organized under seven chapters as follows:

Chapter 1 - Introduction provides a background to the investigation, the main goal and objectives of the study, and a summary of the study. It also discusses rationale, uniqueness, significance, and needs for the study, including an introduction to the methodology.

Chapter 2 has reviewed the literature on the current study's impact of the Social Accountability Consciousness Model on fraudulent public sector budgeting and has developed the hypotheses. After reviewing the literature, the study concludes the following points:

1- There is evidence that educating citizens about ethics, integrity, and transparency fosters accountability, prevents corruption, and enhances governance (Adigwe, 2022; Fahmi et al., 2021; Heliantono et al., 2020; Teichmann & Falker, 2020; Marquette, 2007; Assudani, Chinta, Manolis & Burns,2011).

2- Fair wages are needed to moderate the effectiveness of social accountability consciousness (Alberti et al., 2013; Chen,2012)

3- The mediating impact of fair wages is mixed because of politics, especially in the public sector (Akerlof & Yellen,1990).

4- The broader implications and applications of social accountability consciousness in other public sector areas, such as ethical budgeting and auditing, are less explored.

Chapter 3 presents the Research Methodology, which justifies the use of mixed methods to investigate the impact of social accountability consciousness on reducing fraudulent budgeting behavior among Gambian public servants. There is also an explanation of the research philosophy, research approach, research strategy, and data collection method used to complete the current study.

Chapter 4 presents the results of quantitative and qualitative studies, respectively.

Chapter 5 discusses the research results, detailing the outcomes of hypotheses and the effects of explanatory variables on the study's criterion variable. These findings form the basis for the concluding remarks.

Chapter 6 – The penultimate chapter concludes the outcomes of the research with contributions from the author.

Chapter 7 – The last chapter discusses the limitations of the current study and provides guidelines to budget managers, academics, policymakers, and even politicians.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This chapter reviews the literature to establish the theoretical foundation for the research model. It comprises four main segments: a survey of recent pertinent studies, an exploration of theoretical underpinnings, a conceptual analysis, and the formulation of hypotheses.

2.1 Key existing literature review

This study integrates five categories of recent research on corruption and public administration to discuss the concept of budgetary slack fraud within agency theory. Corruption literature is used because fraud is one of its components and there has been less focus on fraud, and particularly on budgetary fraud, in extant literature. The five categories include the impact of wages on corruption, the influence of education on behavior, the public good as a core accountability measure, and corruption prevention through growth mindset transformation and a fair rewards system for public servants.

According to research, a compensation system that encourages a sense of accomplishment can align employees' interests with organizational goals, while low wages can incentivise corrupt behavior (Chen & Liu, 2018; Ritz et al., 2016). Moreover, Chang et al. (2022) and Arlinghaus & Johnston (2018) have demonstrated that education promotes ethical behavior and operational efficiency. Furthermore, Hassan (2021) argues that serving the public good, organizational citizenship behavior, and commitment should be the primary drivers and accountability measures in the public sector. Fourth, Aksinudin, Wiyono, and Nariswari (2022) argue for a "mental revolution" to prevent corruption by addressing its societal roots and promoting national pride and awareness.

Lastly, this scholarly engagement inherently intersects with the political sphere, as public budgeting and wages are political decisions with political, economic, and managerial functions. In this spirit, Bourdieu called for academics to engage politically as "collective intellectuals" (Cooper & Coulson, 2014), collaborating across disciplines to address social problems. Accordingly, Cooper & Coulson (2014) argued that neither sophisticated debates nor academic critique, nor well-researched exposés of corruption, will spur change; rather, meaningful change requires social movements in their various forms. Thus, the collective action of "collective intellectuals"- public servants in this study- constitutes a form of social movement aimed at meaningful social transformation of public budgeting. Therefore, making public servants "collective intellectuals" is a novelty.

2.2 Gaps in extant literature

Several interconnected theoretical and empirical gaps in existing scholarship on critical accounting, social movements, and public sector fraud motivate this study. While the critical and emancipatory literatures provide robust analysis and normative models, there is no synthesized praxis (application of theory or phronesis) capable of resolving the central *'budgeting paradox'* in developing economies, particularly. The study thus identifies the following gaps:

1. The temporal gap: a focus on historical over futuristic accounting information

Scholarship at the intersection of critical accounting and social movements has predominantly utilized 'historical' accounting data-such as cost reports, audits, and financial statements-to expose past exploitation, call for redress, or analyze class struggles (Catchpowle & Smyth, 2016; Cooper, 2015). While invaluable for critique, this retrospective focus leaves a significant vacuum in examining 'futuristic' accounting instruments. Public budgets are uniquely powerful and prone to pre-emptive weaponization for fraud because they serve as forward-looking tools that determine which political, social, and economic agendas receive resources, and how this specific futuristic information can be designed 'ex-ante' for empowerment rather than captured for corruption, creating a critical gap in preventive accountability research.

2. The dialectical gap: a disconnect between critique and constructive praxis

A clear parallel contention exists between the critical accounting view of accounting as a weapon "against" society and the social movement view of accounting as a weapon "for" society. Studies have not moved beyond the realm of critique and documentation of use by external activists to synthesizing these perspectives into a coherent, actionable framework for "internal institutional reform". Furthermore, research that actively operationalizes the emancipatory (self-healing) potential of accounting to disarm its own weaponized forms within the state, particularly in the budgeting domain, is missing. This study addresses this gap by proposing ACE and FRS as a direct synthesis to turn critical insight into a blueprint for social change.

3. The locus-of-change gap: external activism versus internal transformation

Social movement literature has effectively documented how "external" actors-unions, community groups, NGOs-leverage accounting information to challenge state and corporate power (Cooper & Coulson, 2014). Conversely, within public administration, the principal-agent framework often views bureaucrats as part of the problem that requires monitoring. This view creates a gap: there is limited theoretical and empirical work on catalyzing "internal" social movements-that is, transforming public servants (agents) from potential perpetrators into empowered agents of accountability, in line with Professor David Flint's 'ability to account' definition of accountability. The question of how to systematically grow a "collective intellectual" (Cooper & Coulson, 2014) or a "public fiduciary habitus" within the bureaucracy remains underexplored.

4. The control-mechanism gap: an over-reliance on technical over social controls

Research on combating public sector fraud often emphasizes technical controls-e.g., strengthening audits, performance targets, rules, and punitive measures. Agency theory traditionally focuses on using monitoring and incentives to align interests and mitigate information asymmetry. While important, the strategy overlooks the foundational role of "social controls" (Merchant & Van der Stede, 2017) in shaping the ethical "habitus" (disposition), professional identity, and intrinsic motivations of public agents. Research also lacks robust models that integrate mindset transformation (e.g., via advanced civic education) with material fair incentives as a cohesive social control system to pre-emptively address the attitudinal drivers of fraud.

5. The contextual gap: generic models versus developing economies' realities

Theoretical models of public integrity and ethical budgeting are often derived from or applied to developed institutional contexts. They frequently fail to integrate the 'specific material contradictions' endemic to developing economies-such as systemic low wages in the public sector, the poverty-corruption nexus, and aid dependency-as central to the ethical dilemma faced by bureaucrats (Abdullahi & Mansor, 2015). This failure constitutes a significant contextual gap, as solutions that treat these foundational economic pressures as peripheral risk are irrelevant or ineffective. Reform frameworks must therefore recognize these material conditions not as peripheral but as primary variables.

Synthesizing the gaps: the core research niche

In summary, the literature reveals a niche for a study to: (a) shift focus from historical to 'futuristic' accounting (budgeting); (b) 'synthesize' critical and emancipatory accounting praxis; (c) target the 'internal' transformation of public agents; (d) amplify 'social control' mechanisms; and (e) be explicitly grounded in the 'material context' of developing economies. This dissertation fills this niche by investigating the ACE and FRS framework as an integrated intervention to resolve the budgeting paradox in which these gaps converge.

2.3 Theoretical framework and hypotheses development

The study identified and discussed variables from prior research that could mitigate negative budgetary slack behavior among public servants and developed corresponding hypotheses to investigate the research objectives and questions.

2.3.1 Education and auditing theories: Advanced Civic Education (ACE)

The nexus of social accountability, civic education, and auditing

This study integrates related domains of social accountability, civic education, and auditing to construct a novel model for cultivating ethical budgeting in the public sector. The nexus between these fields is foundational, providing the theoretical bedrock for the proposed intervention of ACE and the cultivation of SAC.

Social accountability

Social accountability is a concept that emphasizes the relationship between citizens and their governments. It involves citizens actively participating, often at a cost, in the oversight and improvement of public services delivered by politicians and bureaucrats-agents of citizens. Social accountability represents mechanisms that enable citizens and civil society organisations to hold public officials accountable. Examples of such mechanisms are participatory budgeting, public expenditure tracking, social audits, sanctions, rewards, and service delivery monitoring (Ackerman, 2005; Malena, 2004). The intention behind these mechanisms is to enhance governance, societal development, and citizen empowerment. However, their effectiveness depends on factors such as access to information, the capacity of civil society, and a synergistic relationship between citizens and the state (Ackerman, 2005), as well as the quality of information from agents, which is a central thrust of this dissertation.

Wetterberg et al. (2016) posit that social accountability combines transparency, coproduction, compliance, and confrontation to improve service delivery and governance. Transparency is the process of furnishing citizens with clear information on government activities, decision-making, and resource allocation. Coproduction involves citizens (the principal) collaborating with the government (the agent) to design, implement, and monitor public services for effectiveness and responsiveness. Compliance ensures the government follows established laws, rules, and procedures. Confrontation involves citizens challenging the government over unmet promises and commitments to catalyze positive change.

Boydell et al. (2019) define social accountability as "citizens' efforts at ongoing meaningful collective engagement with public institutions,” while Ritz et al. (2014) describe it as the process of engaging with and being accountable to communities. Thus, social accountability is a multifaceted concept encompassing mechanisms through which citizens and civil society can hold public institutions accountable for improving governance and service delivery. Social accountability also forms part of the broader concept of general accountability, following the definition of accountability by Bemelmans-Videc et al.(2007). These authors define social accountability as the obligation to provide information and justify actions or inactions before a relevant forum, such as parliament, courts, or the public through elections. Ackerman (2005) distinguishes between formal accountability institutions, such as the parliament and the judiciary, and citizen engagement, which drives social accountability. In line with principal-agent (P-A) theory, citizens, as principals, seek to hold their agents-public servants - accountable. Peruzzotti and Smulovitz (2006) highlight citizens' power to influence governments beyond elections through symbolic sanctions and horizontal accountability mechanisms. Additionally, citizen involvement can exert psychological influence on public officials' decisions (Pereira & Figueira, 2021; Fox, 2015). In underscoring the importance of citizen engagement, Mendez et al. (2024) highlights the need to build capacity, co-create policies with the public, and involve citizens in dialogue to improve engagement and outcomes. This collaboration will ultimately enhance transparency, ownership, and trust in regional policies.

Flint (1988) introduced the concept of social accountability in auditing to emphasize the auditor's social contract to protect public trust. Gray and Owen (1997) argue that social accountability and auditing are tools for organizations to be accountable beyond financial reporting. In contrast, Ventres et al. (2018) and Coşkun et al. (2023) extended the focus to healthcare institutions (public and private), recommending further research on the development and validation of assessment instruments in medical education. However, the WHO introduced the concept of social accountability for medical schools in 1995 via a resolution of the World Health Assembly. It reconceptualized social accountability as aligning societal health needs with the Education, research, and service delivery of medical institutions (Muhammed et al., 2020). According to Muhammed et al. (2020), the successful implementation of social accountability in medical schools can lead to increased community participation, support groups, collaboration with NGOs, and policy planning, ultimately improving primary healthcare and medical education in developing countries like Sudan. Since the 1995 World Health Assembly resolution, the medical profession has largely led research on social accountability, emphasizing the importance of medical education in addressing societal responsibilities (Ritz et al., 2014).

Over time, accountability initiatives have shifted from accreditation and quality assurance in medical schools to aligning programs with community needs. In this context, we aim to extend the discussion to the public sector, specifically on ethical budgeting, by proposing the concept of "social accountability consciousness" (SAC). This concept involves raising awareness through postgraduate training on current social accountability mechanisms using a civic education curriculum that integrates auditing principles or standards of ethical decision-making, integrity, competence, objectivity, and capacity. The goal is to effectively combat advanced forms of budgetary slack abuse in the public sector. Current social accountability mechanisms include participatory budgeting, rewards, sanctions, social audits, behavioral constraints, and civic engagement rooted in civic education. Our focus is on the rewards and civic education components. SAC can foster ethical budgeting behavior among public servants by serving as a proxy for fraud-free budget slack.

The critical theory of education and civic education

The critical theory of education, traditionally linked to Cicero's concept of 'the citizen' and expounded by Kellner (2002), seeks to cultivate individuals as citizens who contribute meaningfully to a just society. Education, as argued by Arlinghaus and Johnston (2017), not only shapes behavior but also plays a pivotal role in improving operational efficiencies, a view supported by Chang (2022). The branch of education selected for this study is civic education, which, for the first time, the study upgrades with auditing principles to meet donors' expectations (Marquette, 2007).

Civic Education, as defined by Aksinudin (2022), is a branch of social studies focused on imparting knowledge of citizenship ideals, principles, and ethical practices to address issues such as corruption in nationalism, public organizations, and statehood. Malena et al. (2004) view civic education as a social accountability mechanism that emphasizes honesty, integrity, empathy, and ethical decision-making. Marquette (2007) notes that international donor agencies have funded civic education as an anti-corruption tool but have found current methods, such as billboards and radio ads, simplistic and ineffective against sophisticated forms of corruption, such as budget-related fraud, emphasized in this study. Therefore, civic education requires more complex pedagogy and long-term training (Marquette, 2007). Educating citizens about ethics, integrity, and transparency fosters accountability, prevents corruption, and enhances governance (Adigwe, 2022; Fahmi et al., 2021; Heliantono et al., 2020; Teichmann & Falker, 2020; Marquette, 2007). Teichmann and Falker (2020) argue that corruption in Eastern Europe, particularly in Serbia and Kosovo, poses a significant threat to society. To combat it, businesses should implement anti-bribery incentives, protect whistleblowers, promote judicial transparency, and ensure media coverage.

Adeyemi (2019) defines civic education as "organized and systematic educational activities providing young people and adults with the necessary knowledge and skills for political and social participation, teaching the virtues of good citizenship". Adigwe (2022) posits that civic education is crucial for good governance and can address leadership challenges in Africa by teaching the responsibilities of citizenship, the importance of integrity, and principles of good governance. By instilling values like honesty, cooperation, self-reliance, and integrity, civic education helps cultivate leaders equipped to combat corruption, nepotism, and dictatorship (Adigwe, 2022). Owusu-Agyeman & Fourie-Malherbe (2021) examine factors influencing students' interest and participation in civic activities within higher education. They emphasize the importance of cultural diversity, social responsibility, and student partnerships. They stress the need for supportive university environments and community partnerships to enhance civic engagement, which, according to Nkechinyere (2019), can be fostered by civic education.

Moreover, Smolentseva (2023) presents a conceptual model with nine domains to analyze higher education's societal contributions, highlighting the intrinsic value of education beyond economic factors. The study suggests that higher education can address societal challenges by equipping graduates with the knowledge and skills to understand budgeting problems in the public sector, conduct research, and develop new solutions. Consequently, graduates of such educational programs are well aligned with Cicero's concept of 'the citizen,' which is deeply rooted in the critical theory of education. As articulated by Kellner (2002), Cicero's concept emphasizes the formation of individuals who not only possess knowledge but also contribute meaningfully to the creation and maintenance of a just society. This approach to education goes beyond mere knowledge acquisition to instill in individuals a sense of civic duty and moral responsibility, preparing them to actively engage in improving society.

Furthermore, education plays a crucial role in shaping behavior, as noted by Arlinghaus and Johnston (2017). Through the development of critical thinking skills and ethical awareness, education shapes how individuals act within their communities, promoting behaviors aligned with societal values and norms. In addition to its impact on behavior, education can also improve operational efficiency, as Chang (2022) highlights. By equipping individuals with the necessary skills and knowledge, education enhances their ability to perform tasks effectively, thereby contributing to the overall efficiency and productivity of organizations and society.

Foundational auditing principles underpinning the nexus

The theoretical nexus described above is grounded in enduring principles of auditing. These principles, articulated across seminal works, provide the concrete framework that Advanced Civic Education (ACE) seeks to impart.

1. The Philosophy of Auditing (Mautz & Sharaf, 1961)

Mautz and Sharaf's (1961) pioneering work outlined primary concepts and postulates of auditing. Among the most relevant to the social accountability-civic education nexus are:

- Evidence: The foundational concept that assertions are susceptible to verification through evidence.
- Due audit care & fair presentation: Obligation to apply skill and judgment to ensure information is presented fairly by managers.
- Independence and ethical conduct: The essential characteristics that confer credibility on the audit opinion. Their postulate that "the professional status of the independent auditor imposes commensurate professional obligations" (Postulate 8) directly parallels the professional ethos SAC aims to instill in public servants.

While some postulates, such as the assumed absence of conflict between auditor and management (Postulate 2), have been challenged by modern regulation (e.g., Sarbanes-Oxley Act), the core framework emphasizing verification, judgment, and professional duty remains valid. It forms a critical part of the technical knowledge to be transmitted.

2. The Principles of Auditing (Flint, 1988)

Flint's (1988) principles offer a more recent survey, several of which are central to the proposed model:

- Principle 1: The primary condition for an audit is that there is a relationship of accountability. Accountability is thus the very bedrock of the principal-agent relationship that social accountability addresses.
- Principle 4: The subject matter of audit, for example, conduct, performance, or achievement, or record of events or state of affairs, or a statement or facts relating to any of these, is susceptible to verification by evidence. Principle 4 underpins the operational link between auditing and social accountability mechanisms.
- Principle 5: Standards of accountability, for example, of conduct, performance, achievement and quality of information, can be set for those who are accountable; actual conduct, performance, achievement, quality and so on can be measured and compared with these standards by reference to known criteria; and the process of measurement and comparison requires skill and the exercise of judgment. This principle directly aligns with the competency that ACE aims to build.
- Principle 7: An audit produces an economic and social benefit. This principle aligns perfectly with the triad's unified consequentialist goal.

3. INTOSAI Principles for Government Auditing

The International Organization of Supreme Audit Institutions (INTOSAI) principles for public sector auditing reinforce and contextualize these ideas within government:
- The principle that "with increased public consciousness, the demand for public accountability... has become increasingly evident" (Principle 3) explicitly links public awareness (a goal of civic education) to the demand for accountability.
- The principles regarding the development of adequate information and control systems (Principle 4), the promulgation of accounting standards (Principle 5), and the importance of internal control (Principle 7) outline the ecosystem within which accountable public management must operate-an ecosystem where ACE-trained public servants would be able to navigate and uphold.

The notes at the end of the dissertation provide a detailed evaluation of each principle in its current reality.

The foundational principle: a shared imperative of accountability

At its core, this triad addresses the fundamental principal-agent relationship in a social contract between citizens (the principal) and government (the agent). Social accountability encompasses the mechanisms-such as participatory budgeting, social audits, and public expenditure tracking-through which citizens actively enforce this accountability (Ackerman, 2005; Malena et al., 2004). Auditing exists to independently verify the discharge of this same duty (Mautz & Sharaf,1961; Flint, 1988). Civic Education serves as the vital transmission mechanism, inculcating an understanding of this social contract and the competencies required for meaningful engagement (Boydell et al., 2019). Thus, all three originate from the same root: the imperative for answerability in the management of public trust and resources.

Operational convergence: verification, judgment, and ethical conduct

The verification and evidence principles align the methodologies of auditing and social accountability in this study. Information verifiability and the application of skilled judgment against established standards underpin auditing (Mautz & Sharaf, 1961; Flint, 1988). Social accountability mechanisms 'democratize' these principles by engaging citizens in evidence-based monitoring and evaluation. For this to be effective, however, both citizens and public servants require the requisite knowledge and an ethical foundation. Therefore, an integrated civic education becomes crucial. Furthermore, the credibility of both audit and social accountability hinges on independence and ethical conduct-auditing principles that civic education fosters by cultivating an "independence of mind" and a commitment to the public interest.

Synthesis into Advanced Civic Education (ACE) and Social Accountability Consciousness (SAC)

This study proposes that deliberately integrating core auditing principles into a civic education curriculum for public servants creates a powerful, internalized self-control mechanism. Therefore, this study designs an ACE to foster a SAC, defined as an agent's cost consciousness and psychological ownership of public funds. The **novel SAC construct** *conceptualizes an agent's psychological readiness to accept and act upon accountability as a professional and ethical duty in terms of 6 mindsets or behavioral dimensions*. The six specific behavioral dimensions operationalize SAC, representing the synthesis of civic duty and auditing principles:

– ACE1 (entrepreneurial mindset): Handling public funds with care as if it were a strategic investment of personal business capital.
– ACE2 (fund manager mindset): Managing public resources with the prudence, skill, and diligence of a fund manager acting on behalf of investors.
– ACE3 (public value maximization mindset): Ensuring public spending maximizes social benefit and compassion (Flint,1988; Bryson, Crosby & Bloomberg, 2014).
– ACE4 (credible reporting): Upholding honesty and clarity in financial transactions and reporting.
– ACE5 (internal control advocacy): Understanding, designing, and advocating for strong internal controls as a form of organizational policing.
– ACE6 (shrewd investor mindset): Approaching public expenditures with the critical, value-seeking analysis of a shrewd investor.

These dimensions embody the minimum accountability standards principals expect and which auditors seek to assure. They translate abstract principles into concrete professional values. This transformation aligns with the concept of "accountingization"-*where accounting logic shapes professional values* (Catchpowle & Smyth, 2016)-in response to calls to turn management accounting 'inside out' for societal relevance (Van der Stede, 2011; Modell, 2014; Tucker & Parker, 2014). By fostering this internalized consciousness, ACE aims to create a grassroots social movement within bureaucracy, mobilizing public servants as 'collective intellectuals' and proactive agents of change (Cooper & Coulson, 2014).

From nexus to hypothesis

The established nexus demonstrates that social controls aimed at shaping culture and values are critical for complementing technical anti-fraud measures. While significant research on social accountability has focused on healthcare and medical education (e.g., WHO, 1995; Ritz et al., 2016), there has been no deliberate application to public financial management through this integrated framework. The literature confirms that Education shapes behavior and operational efficiency (Arlinghaus & Johnston, 2017; Chang et al., 2022), and that civic education, specifically, is a tool for instilling integrity and combating corruption, though current methods are often inadequate for complex issues (Marquette, 2007) such as public budgetary fraud.

Therefore, by synthesizing the theoretical triad, this study posits that a structured, principle-based intervention (ACE) can enhance internalized social controls (SAC), which in turn should directly influence ethical behavior in budgeting. This conclusion leads to two foundational hypotheses:

Hypothesis 1: ACE correlates positively with ethical budgeting (direct effect).

Hypothesis 2: ACE correlates positively with awareness of and support for a Fair Rewards System in the public sector (direct effect).

2.3.2 The Fair Wage-Effort Theory: Fair Rewards System (FRS)

Akerlof and Yellen's (1990) fair wage–effort theory, further developed by Chen and Liu (2018), among others, posits that equitable compensation in the public sector attracts honest individuals and deters corruption by aligning wages with effort and accountability. Central to this theory is the idea that fair wages-*defined as remuneration reflect living standards, effort, and egalitarian principles*-reduce incentives for malfeasance. Employees motivated by financial security and ethical reciprocity are less likely to engage in corruption, as they fear dismissal and reputational costs.

Bronkhorst (2020) emphasizes that fair wages must, at a minimum, meet living wage benchmarks, calculated in consultation with workers, and never fall below legal or poverty thresholds. Therefore, sustainable wage policies, supported by labor unions and responsive to economic conditions, enable workers to meet basic needs, thereby reducing vulnerability to unethical behavior. Similarly, Chzhan (2022) highlights egalitarian salary systems in the public sector that minimize income disparities across roles by blending market principles with equity. Such systems foster morale, productivity, and ethical budgeting. When employees perceive their wages as fair, they internalize a moral duty to reciprocate with integrity. Empirical evidence largely supports these claims. For example, Cohn et al. (2013) found that workers who felt underpaid increased productivity when wages rose, while those already satisfied with their pay maintained their effort, demonstrating the link between perceived fairness and performance. Gose (2013) similarly affirmed that wage increases correlate with effort, reinforcing Akerlof and Yellen's hypothesis. Meanwhile, Cornell and Sundell (2020) demonstrated that higher public-sector wages reduce corruption, particularly when salaries exceed subsistence levels, though substandard pay can also incentivize graft.

However, outcomes are context-dependent. Chen and Liu (2018) observed diminishing returns in China: while lowering wages curbed corruption, higher wages required complementary measures, such as stricter penalties, to sustain ethical standards. Demirgüç-Kunt et al. (2021) noted that wage increases reduce corruption more effectively in nations with low-income inequalities. Yui (2016) challenged the universality of wage effects, arguing that the interplay of politics, subjective income expectations, and greed influences public-sector wages and collectively limits comparisons between the public and private sectors, as well as their impacts on corruption. Furthermore, Gawel's (1997) study, which examined teacher motivation using Maslow's hierarchy of needs, found that a lack of financial security leads workers to prioritize monetary rewards over higher-order needs, such as esteem. This result suggests fair wages form the foundation for ethical motivation. Nevertheless, Szulist (2016) and Williams (1956) caution against purely economic analyses and advocate holistic frameworks that integrate social justice, psychological needs, and institutional trust. For instance, Simarasl et al. (2024) link FRS to entrepreneurial innovation, illustrating how wage fairness fosters environments where ethical and productive behaviors thrive.

In summary, effective anti-corruption strategies must pair wages with ethical training and egalitarian policies while addressing systemic inequities and political realities. By ensuring financial security and perceived justice, institutions cultivate a workforce intrinsically motivated to reject corruption, thereby enhancing public trust and organizational efficacy. Accordingly, we hypothesize:

H3: Fair rewards system correlates positively with levels of ethical budgeting (direct effect).

Moreover, drawing on social movement theory, which conceptualizes public servants as collective intellectuals who internalize ethical agency through civic advanced education, we propose that fair reward systems partially mediate the ACE–ethical budgeting relationship. However, we acknowledge the alternative rational choice perspective, which suggests full mediation. We therefore specify:

H4: A fair rewards system partially mediates the relationship between advanced civic education and ethical budgeting behavior, such that:

- H4a: ACE positively influences ethical budgeting directly.
- H4b: ACE positively influences fair reward systems, which in turn positively influence ethical budgeting.

H5: A fair rewards system positively moderates the relationship between ACE and SAC, such that the effect of ACE on SAC is stronger when public servants perceive the rewards system as fair (specific interaction effect).

In summary, hypotheses 1-5 describe the potential impact of ACE and FRS (social controls) on addressing agency model dilemmas, fostering a culture of accountability and ethical budgeting in public sector governance.

2.4 Conceptual framework

The conceptual framework and research model below (cf. Figure 1) depict the relationships among three latent constructs/variables: Advanced Civic Education as X, Fair Rewards System (FRS) as Mediator and Moderator, and Social Accountability Consciousness (SAC)-*ethical budgeting*-as Y.

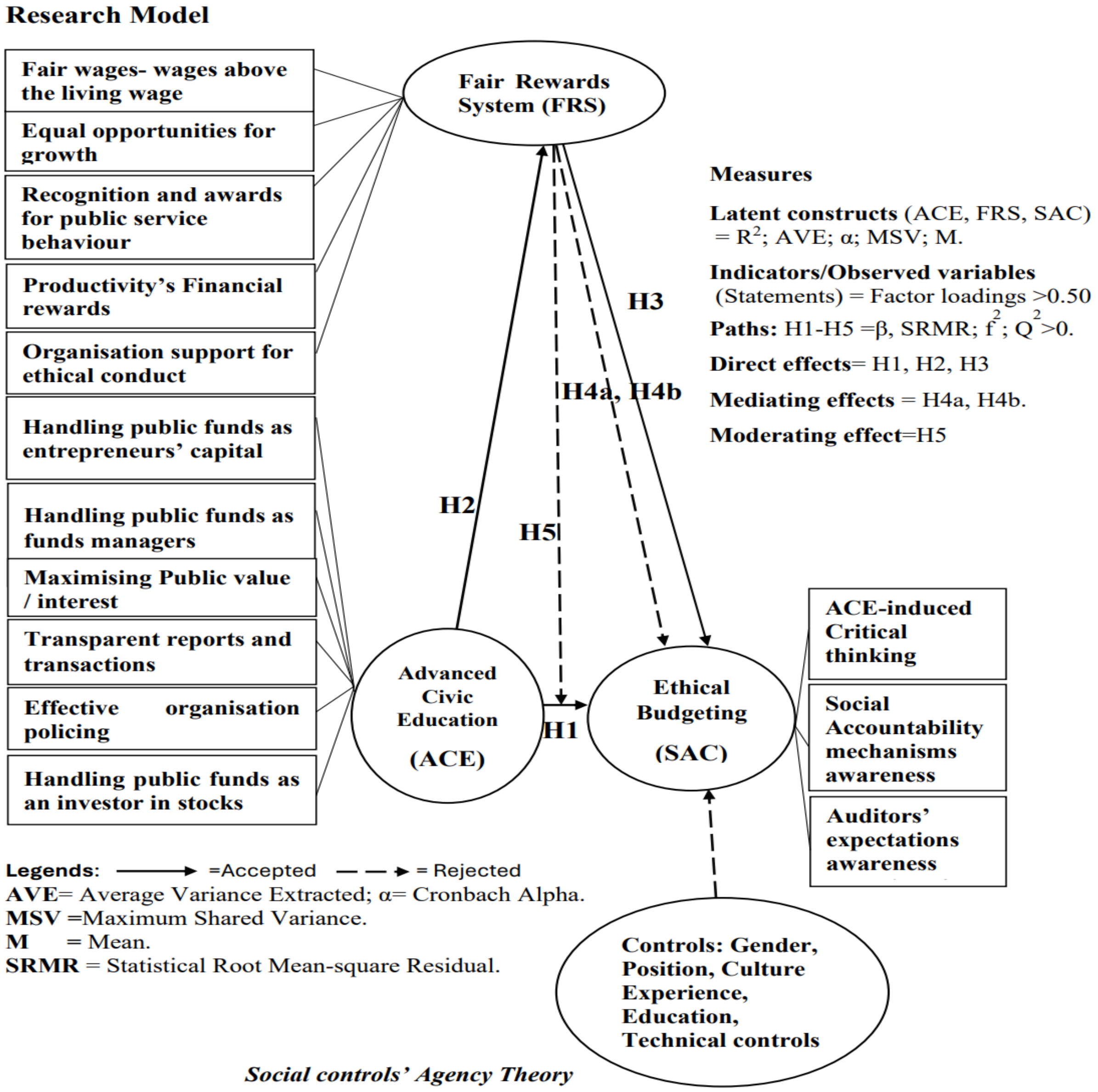


Figure 1 Conceptual framework/research model - Hypothesized effects of ACE and FRS on public servants' ethical budgeting behavior

The research model presented in Figure 1 above also serves as the conceptual model for the current research. It also virtually represents the relationships among the key variables under investigation. The researcher carefully selected each element within this model to reflect the core aspects of the research problem, offering a structured approach to understanding the dynamics at play. The following sections provide detailed explanations for a more comprehensive analysis and in-depth discussion of these variables. These discussions will examine the significance of each variable, its interconnections, and its relevance to the overall research objectives.

In the model, fair wages act as both a mediator and a moderator. As a mediator, fair wages act as a mechanism through which advanced civic education (IV) influences ethical budgeting behavior (DV). Mediation answers how/why civic education affects behavior via fair wages.

Equally, as a moderator, fair wages condition the strength/direction of the relationship between civic education (IV) and ethical behavior (DV). Moderation tests under what conditions (e.g., high vs. low wages) civic education's effect is stronger/weaker. The statistical analysis results will reveal the significance of FRS' mediation or moderation role.

2.5 Variables

This study uses ACE and FRS to explain and measure a public servant's ethical budgeting behavior (also known as Social Accountability Consciousness) with fair wages, serving as both a mediator and a moderator. The statistical analysis results will ultimately determine the significance of FRS's role in the calculus.

2.5.1 Dependent variable: Social Accountability Consciousness (SAC)

In this study, public servants' SAC serves as a proxy for ethical budgeting behavior (also, budgetary slack fraud-free behavior). It is the dependent variable (DV). This DV is measured as average of three items in a Likert-scale questionnaire given below ranging from 1= strongly disagree to 5= strongly agree. These items are:

1. Awareness of the nature of social accountability mechanisms (participatory budgeting, public expenditure tracking, the commission of inquiries, etc.) could instill inner strength against budget-related fraud (Ventres et al.,2018; Drucker,1954; Coşkun et al.,2023; Muhammed et al.,2020).
2. There is a need to increase awareness and promote a deliberate strategy for social accountability (Pereira & Figueira,2021; Bemelmans-Videc,2017; Ritz et al., 2014; Peruzzotti & Smulovitz,2006; Ackerman,2005; Milena et al.,2004).
3. Social accountability and auditing are important tools for organizations to be accountable to stakeholders beyond financial reporting. (Boydell et al.2019; Fox,2015).

These items reflect the inherent three practical dimensions under investigation:
(1) the inner strength against budget-related fraud stemming from public servants' consciousness of social accountability tools (SAC1) (Muhammed et al., 2020; Ventres et al., 2018; Drucker, 1954).
(2) the successful implementation of a deliberate strategy on social accountability (SAC2) (Pereira & Figueira, 2021; Bemelmans-Videc, 2017; Ritz et al., 2014; Peruzzotti & Smulovitz, 2006; Ackerman, 2005; Milena et al., 2004); and,
(3) the perceived importance of social accountability mechanisms for stakeholders beyond financial reporting (SAC3) (Boydell et al., 2019; Fox, 2015).

104 questionnaires that operationalized these dimensions captured the viewpoints of Gambian public sector employees. Appendix 1 presents the survey items (cf. supplementary file).

According to Derfuss (2012), measuring budget slack presents challenges due to its inherent non-observability as an attitude. Researchers have therefore defined and measured it in four main ways: the individual manager's tendency to create slack; the perceived achievability of budget goals; the extent of managers' slack-creation behaviors; and the use of archival data at the company, segment, or department level. Derfuss (2012) further suggests that while actual slack and a manager's propensity to create slack are assumed to be highly correlated, the available correlations are not particularly strong. However, measures based on the tendency to create slack, archival data, and slack creation behavior tend to show stronger correlations than those based on the perceived achievability of budget goals.

2.5.2 Independent variable

Advanced civic education (ACE) is a conceptualization in this study. It is a civic education that incorporates auditing principles to match the level of corruption sophistication in developing economies, as observed by donor agencies (Marquette, 2007). It is a measure of the average response to the six items on a 5-point Likert scale, ranging from 1=strongly disagree to agree 5=strongly. The items reflect their potential to:

1) shift attitudes against fraud (Aksinudin, 2022; Malena et al.,2004),
2) facilitate the effectiveness of public sector audits (Smolentseva,2023; Adigwe,2022; Owusu-Agyeman & Fourie-Malherbe,2021),
3) constrain the use of the public budget as a fraud conduit pipe (Marquette, 2007; Heliantono et al., 2020; Fahmi et al., 2021; Adigwe, 2022, and Teichmann and Falker,2020), and
4) Inculcate in citizens virtues of good citizenship, such as the necessary knowledge and skillsets for political and social participation (Adigwe, 2022); and,
5) influence relevant curriculum development (Marquette, 2007).

Each question is measured on a scale from 1 (strongly disagree) to 5 (strongly agree) and factor loadings (cf. Table 2). Other measures include Cronbach's Alpha for scale reliability, the Pearson correlation coefficient, and factor analysis to assess the construct validity of the measurement.

2.5.3 The mediating variable

The study used 5 dimensions to represent the fair wage incentive system as the mediator, which included:

1) top leadership support (Chen & Liu, 2018);
2) fair wages (Demirgüç-Kunt et al., 2023; Szulist,2016; Gose,2013; Akerlof and Yellen's (1988, 1990));
3) recognition and rewards for public service-oriented behaviors (Chzhan's, 2022; Williams,1956).
4) job satisfaction or opportunities for meaningful jobs (Cohn et al.,2013); and,
5) financial rewards, including incentives like subsidies (Demirgüç-Kunt et al., 2023; Cornell & Sundell,2020; Yui,2016).

The survey results are tabulated and weighted according to respondents' rankings. Each question is measured on a scale from 1 (strongly disagree) to 5 (strongly agree). The study assessed the scale's reliability using Cronbach's Alpha, and evaluated its construct validity through Pearson correlation coefficients and factor loadings (cf. Table 2).

2.5.4 Moderating variables

Five dimensions indicate a fair wages incentive system, also tested as the moderator, including:

1) top leadership support (Chen & Liu, 2018);

2) fair wages (Demirgüç-Kunt et al., 2023; Szulist,2016; Gose,2013; Akerlof and Yellen's (1988, 1990));

3) recognition and rewards for public service-oriented behaviors (Chzhan's, 2022; Williams,1956).

4) job satisfaction or opportunities for meaningful jobs (Cohn et al.,2013); and,

5) financial rewards, including incentives like subsidies (Demirgüç-Kunt et al., 2023; Cornell & Sundell,2020; Yui,2016).

2.5.5 Control variables

We consider five control variables: work experience, position within the organization, educational level, gender, and culture. Because the data were cross-sectional, other control variables, such as GDP, were not used. More public service experience and higher positions might correlate with a lower propensity for fraud due to familiarity with procedures, higher salaries over the years, and potential consequences, if culpable. But such experience and positions can also create opportunities for abuse. Each multiple regression coefficient and its corresponding p-value were measured.

Below is the definition for each control variable and its theoretically expected relationship with SAC:

1. Gender: A binary variable for self-identified gender (male or female), included to account for demographic variance with no directional hypothesis regarding its effect on SAC.
2. Experience: The study hypothesized that the number of years in the profession has a positive association with SAC due to greater internalization of professional norms.
3. Culture: Culture is more complex. National/regional cultural background is included to isolate primary effects from this source of variance, especially given the Gambia's collectivist context.
4. Education level: The highest formal education level attained, expected to correlate positively with SAC through enhanced cognitive moral development.
5. Technical controls: A set of variables (e.g., internal audit, regulations, performance targets) hypothesized to positively influence SAC by making expectations salient and potentially internalizing external benchmarks.

The study used auxiliary variables-sector, tenure, and role-to mitigate self-selection bias, thereby ensuring alignment with The Gambia's population profile (notably a single national university and a population of approximately 2 million).

2.5.6 Model specification

To assess the empirical validity of the hypotheses formulated above, the following OLS regression is performed for the models:

Model 1(Direct effect-H1): *Social Accountability Consciousness (SAC) =* = $\alpha_0 K + \alpha_1$ *Advanced Civic Education (ACE)* + α_2 *Work Experience* + α_2 *Position* $_{+}\alpha_2$ *Gender* + α_2 *Education* + α_2 *Culture* $+\varepsilon$

Model 2 (Direct effect-H2):
Fair Rewards System (FRS)= $\alpha_0 K + \alpha_1$*Fair Rewards System (FRS)* + α_2*Work Experience* + α_3*Position* +α_4 *Gender* + α_5*Education* + α_6*Culture* $+\varepsilon$

Model 3 (Direct effect-H3):
Social Accountability Consciousness (SAC) = = $\alpha_0 K + \alpha_1$*Fair Rewards System (FRS)* + α_2*Work Experience* + α_3*Position* +α_4 *Gender* + α_5*Education* + α_6*Culture* $+\varepsilon$

Model 4 (Full mediation: Specific indirect effect-H4a):
Social Accountability Consciousness (SAC) = $\alpha_0 K + \alpha_1$*Advanced Civic Education (ACE)*+α_2*Fair Rewards System (FRS)*+α_3*Work Experience+4Position +5Gender+* α_6*Education* + α_7*Culture* $+\varepsilon$

Model 5 (Partial mediation: Direct effect-H4b):
Social Accountability Consciousness (SAC) =$\alpha_0 K + \alpha_1$ *Advanced Civic Education (ACE)*+α_2*Fair Rewards System (FRS)*+α_3*Work Experience*+α_4*Position* +α_5*Gender* + α_6*Education* + α_7*Culture* $+\varepsilon$

Model 6 (Moderation: Specific interaction effect-H5): *Social Accountability Consciousness (SAC)* = $\alpha_0 K + \alpha_1$ *Advanced Civic Education (ACE)* + α_2*Fair Rewards System (FRS)*+ α_3 *Advanced Civic Education * Fair Rewards System* + α_4*Work Experience*+α_5*Position* +α_6*Gender* + α_7*Education* + α_8*Culture* $+\varepsilon$

Where:
Dependent variable: Social Accountability Consciousness (proxy, Ethical Budgeting).
Independent (test) variable:
ACE = (the level of) Advanced Civic Education of the public servants
FRS = (the level of a) Fair Reward System
α_{0-8} = regression coefficients

2.5.7 Testing for the mediating effect of a fair rewards system

To test H3, which posits that Fair wages tend to correlate with SAC and reduced budgetary slack fraud, and to examine the mediating role of ACE on ethical budgeting, we conduct a mediation analysis of effect sizes.

2.5.8 Testing for the moderating effect of a fair rewards system

To test H5, which posits that a fair reward system influences (amplifies) the effectiveness of ACE on budget slack fraud or ethical budgeting, we conduct a moderation analysis for interaction effect sizes.

3. RESEARCH METHODOLOGY

The methodology outlines the research strategy and explains how the study will be conducted. This section provides an overview of the research philosophy, methodology, and design employed in this study. Specifically, it details the research methods and scientific approaches deemed appropriate for this research. This section also clarifies the nature of data and inquiry, data collection and analysis techniques, and sample size determination. Furthermore, it discusses the chosen research paradigm and the rationale for its selection, along with other relevant considerations.

3.1 Preamble

"In short methodology constitutes a whole range of strategies and procedures that include developing a picture of an empirical world; asking questions about that world and turning these into research problems; finding the best means of doing so-that involve choices about methods and the data to be sought, the development and use of concepts, and the interpretation of findings." (Blumer,1969:23).

3.2 Research Design: Mixed Method Concurrent Triangulation

According to Saunders et al. (2016), a research design outlines the systematic approach researchers will take to answer their research questions. The key components of a research design include the research approach, strategy, philosophy, data collection methods, and analysis. Saunders et al. (2016) propose a "research onion" (cf. Figure 2) framework for understanding the research process. The model consists of six layers, each representing a distinct stage: philosophy, approach, methodological choice, strategies, time horizon, and techniques and procedures.

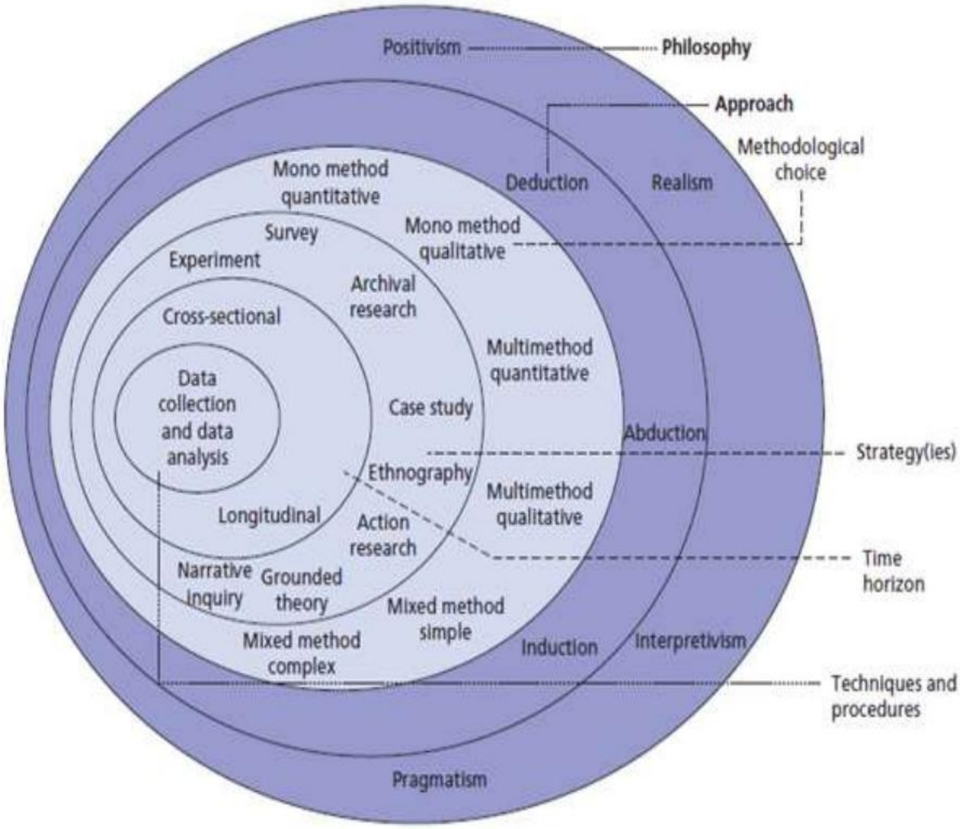


Figure 2 Research onion (Source: Saunders et al., 2016)

The following sections discuss the key layers of the research onion as applied in this study.

3.2.1 Research Philosophy (Paradigm)

Saunders et al. (2016) define a research philosophy as a set of underlying beliefs and assumptions that shape the research process, influencing understanding of reality (ontology), knowledge (epistemology), and methods (methodology). Melnikovas (2018) identifies four primary paradigms: positivism, interpretivism, pragmatism, and realism.

This study adopts a mixed-methods approach, combining elements of both positivism and interpretivism. Positivism guided the collection and analysis of quantitative, objective data, while interpretivism was used to explore participants' subjective experiences and interpretations qualitatively. This dual approach aims to provide a comprehensive understanding of the effectiveness of pro-auditing social accountability education with fair wages (epistemology) to counter fraudulent use of budgetary slack (ontology) (Johnson et al., 2007).

3.2.2 Research Time Horizon

This study used a cross-sectional design to collect data within a limited timeframe (2022-2023), gathering quantitative data from multiple cases at a single point in time (Bell et al., 2018; De Vaus, 2013).

3.2.3 Empirical Context

The study focuses on the Gambian public sector as a representative case of developing economies for three key reasons: recent fair wage reforms implemented in collaboration with Ghana; economic dependence on tourism and foreign aid, mirroring fiscal constraints common in developing nations; and shared systemic issues such as low public-sector wages, corruption, and budget mismanagement. Additionally, we selected The Gambia for cost-effective data accessibility and alignment with broader developing-world challenges.

3.3 Quantitative Methodology

3.3.1 Sampling strategy and sample size

The quantitative component employed a cross-sectional perception survey design within The Gambia's public sector, including both a pilot study and the main study.

Pilot Study: The pilot phase involved 79 practitioners with financial knowledge, determined using G*Power analysis (cf. Figure 3 and Table 1) with an estimated a priori effect size of 0.35. Of the 79 practitioners initially selected, 65 from the Gambian public sector participated, yielding an 82% response rate.

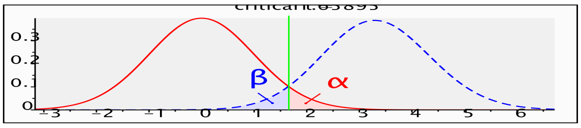


Figure 3 Distributions plot for a priori sample size (Source: Author)

Table 1: A priori computed required sample size

Input Parameters		Output Parameters	
Tail	One	Non-centrality parameters δ	3.32.
Effect size |Þ|	0.35	Critical t	1.66
α err prob	0.05	Df	77
Power (1-β prob)	0.95	Total sample size	79
		Actual power	0.95

Main Study: Based on insights from the pilot study, we refined the survey instrument and distributed via email to 307 practitioners, using purposive snowball sampling. This approach resulted in 104 responses, a 34% response rate, consistent with the 34.6% average for electronic surveys (Cook, Heath, & Thomson, 2000). We deliberately selected the public budget managers because as strategic 'gatekeepers' their resource allocation decisions shape the connection between public financial management research and practice. Following Tucker and Parker (2014), these managers signal which financial strategies are 'acceptable'. Their perceptions directly influence the operationalization of ACE and FRS. Aligned with Bukh et al. (2021), they translate abstract accountability frameworks into actionable practices, mediating the relationship between institutional policy and street-level implementation.

3.3.2 Questionnaire administration and response rates

The questionnaire was pilot tested with three senior public sector managers (not subsequently included in the sample) to ensure variable relevance and unambiguous questions. The present study could not secure the services of psychometricians to establish content and face validity. Their involvement could have led to minor changes in wording, format, and presentation. However, this has been noted as a minor limitation but reserved for future studies.

We emailed questionnaires over 5 months. Comparison of mean scores for the first and last 20% of returns revealed no significant differences ($p<0.05$), supporting the absence of obvious response bias between early and late respondents.

3.3.3 Demographic Profile of Respondents

Table 2: Demographics of respondents

Name	Count	%
Work experience (1-10 years)	84	0.80
Work experience (Above 10 years)	20	0.20
Position (Lower management)	38	0.36
Position (Middle management)	56	0.53
Position (Senior management)	10	0.11
Gender (Male)	60	0.57
Gender (Female)	40	0.43
Education (University)	73	0.70
Education (Professional)	4	0.04
Education (University and Professional)	27	26
Total	104	1

3.3.4 Measurement of Constructs

Given the limited availability of established measures to assess the relationship between social accountability mechanisms and ethical budgeting in the Gambian public sector, we developed tailored measurement instruments based largely on prior writings- behavioral models within social psychology and social science fields that shape mindsets and culture. The questionnaire comprised four sections, each presented as a five-point Likert scale (1=strongly disagree to agree 5=strongly).

Section 1: Collected demographic data including sector, nationality, education, position, tenure, and income level.

Section 2: Social Accountability Consciousness (SAC) – three items measuring perceived hypothesized relationships with SAC:

- Awareness of social accountability mechanisms (e.g., participatory budgeting, public expenditure tracking)- Boydell et al. (2019); Coşkun *et al.* (2023).
- University and/or professional education in auditing principles (Smolentseva,2023)
- Awareness of auditors' expectations regarding public fund management (Boydell et al., 2019; Pereira & Figueira, 2021; Fox, 2015)

Section 3: Advanced Civic Education (ACE) – six items measuring the perceived hypothesized relationship between mindset transformation curriculum elements and ACE:

- Entrepreneurial mindset in handling public funds
- Investor mentality- prudence in expenditure
- Funds manager mindsets (Aksinudin, 2022; Smolentseva, 2023; Teichmann and Falker, 2020; Marquette, 2007)
- Public interest value maximization
- Honesty in financial transactions and reporting
- Effective organization policing and internal controls

Section 4: Fair Rewards System (FRS) – five items assessing:

- Top leadership support
- Fair wages
- Recognition and rewards for public service-oriented behaviors
- Job satisfaction and meaningful work opportunities
- Financial rewards for public sector professionals (Demirgüç-Kunt et al., 2023; Chen and Liu, 2018; Akerlof and Yellen, 1988; Cohn et al., 2013)

3.3.5 Validity and Reliability

The constructs in this study are first-time conceptualizations adapted from extant literature to fit the study's context (Ventres et al., 2018; Drucker, 1954; Coşkun et al., 2023; Muhammed et al., 2020). Table 3 presents survey questions with principal component analysis standardized factor loadings, Cronbach's α values, and Average Variance Extracted results.

Table 3: Survey questions and principal component analysis (factor loadings, Cronbach's α, AVE)

Concepts	**Measures (answered on the five-point Likert scale: 1=strongly disagree and 5=strongly agree)**	**PCA standardized loadings (*p*-value)**	**Cronbach's α (>0.70) (AVE>0.50)**
Social Accountability Consciousness (SAC) -essence of public service	University and/or professional education in auditing principles enhances critical thinking and reduces susceptibility to fraud involvement.	0.73(0.00)	0.75 (0.67)
	Awareness of the nature of social accountability mechanisms* could instil inner strength against budget-related fraud.	0.88(0.00)	
	Awareness of auditors' expectations regarding management of public funds could strengthen the mind against budget-related frauds. * *Participatory budgeting, public expenditure tracking, commission of enquiries, civic engagement,sanctions, rewards etc*	0.83 (0.00)	
Fair Rewards System	Fair Rewards System for public servants' to be effective must include:		
	Fair Wages i.e wages above the living wage	0.77(0.00)	0.83 (0.60)
		0.76(0.00)	

	Recognition and awards for public service–oriented behaviours Job satisfaction and equal opportunities for meaningful job i.e growth Financial rewards for outstanding job performance Respect by peers and supervisors for ethical behaviour	0.82(0.00) 0.78(0.00) 0.74(0.00)	
Advanced Civic Education (ACE)	Civic education curriculum reflecting managing public funds as if it is an investor's capital can discourage fraud behaviour-public trust. Civic education curriculum emphasising exercise of prudence over the handling of public funds as an entrepreneur can reshape mindsets against corruption-skill and care. Civic education curriculum infusing public interest value maximization i.e. spending public funds in the best interest of society can discourage budget-related fraud and behavior-public interest. Civic education curriculum teaching honesty in financial transactions and	0.81(0.00) 0.86(0.00) 0.85(0.00) 0.83(0.00)	0.88 (0.68)

	reporting with the use of public funds can reshape mindsets against budget-related frauds and behavior-information asymmetry. Civic education curriculum on effective organization policing* over management of public funds can reshape mindsets against fraud behavior-goal congruence. * *Effectiveness in design of strong internal controls and implementation with understanding.* Civic education curriculum teaching handling public funds as entrepreneurs can reshape mindsets against fraud and corruption behaviour	0.77(0.00)	

Note: Items that have been struck out were initially selected but found to have a principal component analysis (PCA) standardized loading of less than 0.6.

3.3.6 Data Analysis Techniques

Quantitative data were analyzed using SMARTPLS software and cross-validated with IBM SPSS. Scores for items comprising each construct were summated into composite scores for further analysis.

3.4 Qualitative Methodology

3.4.1 Philosophical Framework

The qualitative study adopts an interpretivist paradigm to gain a deep, context-rich understanding of how budgetary fraud manifests from the experience of public-sector budget managers. By leveraging participants' lived experiences, interpretivism enhances both the validity and overall quality of the inquiry (Creswell, 2003). The study employs the interpretative phenomenology tradition because it can capture participants' personal meanings and experiences related to the subject.

3.4.2 Purpose Statement and Research Question

This study aims to understand public servants' perspectives on the manifestations of waste, fraud, and abuse in the public sector budgets of developing economies, and to address them through ACE and FRS.

3.4.3 Sampling Strategy

A purposeful snowball sampling approach was employed to deliberately target public servants with firsthand experience in public-sector budgeting and budgetary slack. Selection criteria encompassed individuals in middle and senior management roles within the public sector, with a background in auditing at the academic or professional level, and experience in budget participation.

We recruited a total of 45 participants (23 *consented to telephone interviews; 22 preferred completing online Google forms*) but achieved saturation with 14 interviewees, exceeding the minimum of 10 recommended for qualitative studies (Sandelowski, 1995) and aligning with evidence suggesting that 12 participants can achieve saturation (Marshall et al., 2013). Participants included public-sector practitioners from government agencies and NGOs, representing accounting, audit, and operations functions.

Table 4: Characteristics of participants (Source: Author)

No.	Participants (code)	Position	Organization	Experience (Years)
1	FM	Financial Manager	NGO	>10
2	AC	Senior Accountant	NGO	8-10
3	PM	Procurement Manager	Agency	>12
4	FM	Financial Manager	NGO	>10
5	FC	Financial Controller	Agency	>10
6	SM	Senior Manager	Agency	>10
7	MLM	Middle-level Manager	Agency	>10
8	M	Manager	NGO	>10
9	FM	Finance Manager	Agency	>10
10	A	Accountant	Agency	8-10
11	FM	Finance Manager	Agency	>12
12	FM	Financial Manager	Agency	>12
13	PM	Programme Manager	NGO	10
14	A	Accountant	Agency	>10

3.4.4 Data Collection Methods

Multiple techniques were employed to gather rich qualitative data, principally semi-structured interviews and complementary surveys, ensuring triangulation of perspectives.

Interview Protocol: Interviews were conducted by telephone, each lasting approximately 60-80 minutes, recorded with respondents' consent, and later transcribed verbatim (Pham et al., 2019). Although the researcher used a semi-structured topic guide, interviewees were encouraged to speak freely to surface unanticipated insights. The open-ended interview protocol covered:

- Descriptions of organizational budgeting practices
- Clarification of ambiguous areas in responses
- Reminders about omitted areas such as fraud control and mindset training
- Prospects for fraud-control training on civic education and auditing principles

Pilot Phase: An initial pilot with three phone interviews informed enhanced structured questions for the remaining participants. From a quantitative sample of 104 practitioners, the researcher selected forty senior and middle management officials for follow-up study. Eighteen participated in oral interviews, while twenty-two provided responses via Google Forms. However, saturation was reached after the 14th telephone interviewee; thus, responses beyond this point were inconsequential and unutilized.

Integrated Feedback Loop: Each interview transcript informed subsequent interviews, allowing for iterative refinement of questions.

3.4.5 Data Management and Thematic Analysis

Interview recordings and detailed field note diaries were reviewed iteratively by the researcher. The researcher also systematically analyzed transcripts for thematic patterns, following the methods outlined by Thomas and Harden (2008). Afterwards, the researcher used ChatGPT to manage, organize, code, and analyze interview transcripts. Thematic analysis revealed that data saturation was reached after the fourteenth transcript, as no new themes emerged. Analysis of Google Forms responses yielded themes like those from oral interviews.

Table 5: Coding Framework for Interview Responses

Domain	Sub-Domain	Theme	Code	Excerpt
Budgeting System	Budgeting Approach (NGO vs. Government)	Budgeting Practices	Mixed Budgeting Systems (NGO)	“We use a mix of zero-based/activity-based program budgeting system as an NGO”
Budgeting System	Budgeting Approach	Budgeting Practices	Incremental Budgeting (Government)	“We use incremental/traditional

	(NGO vs. Government)			budgeting system in government"
Budgeting System	Basis for Overestimating Expenses	Budgetary Slack Rationale	Budget Cut Mitigation	"Basically, it's the same reason-to guide against budget cuts"
Budgeting System	Basis for Overestimating Expenses	Budgetary Slack Rationale	Inflation/Market Anticipation	"Basically, it's inflation anticipation and market conditions"
Budgeting System	Basis for Overestimating Expenses	Budgetary Slack Rationale	Estimation Without Basis	"Market condition, time value of money and inflation; we use estimate when there is no basis."
Budgeting System	Fraud Techniques (Commissions, Collusion)	Budget Fraud Mechanisms	Commission Incorporation	"What they do is to build their commission/cuts into the budgets by budget officers or those in charge of grant awards."
Budgeting System	Fraud Techniques (Commissions, Collusion)	Budget Fraud Mechanisms	Vendor Collusion	"Collusion with vendors to fake invoices and culture of insiders".
Budget Fraud Techniques	Collusion & Training Misuse	Ethical Challenges	Training Budget Exploitation	"Training is even being used to exhaust budgets. So, what is needed is deterrence like sanctions".
Budget Fraud Techniques	Collusion & Training Misuse	Ethical Challenges	Lack of Ethical Training	"We do not target themes on the ethical side for our budget training."
Budget Fraud Techniques	Collusion & Training Misuse	Mitigation Strategies	Integrity & Accountability	"Integrity is part of our core values. We participate to ensure that we have a good budget".
Impact of Comparable Salaries	Fair Wages & Mindset	Wage-Fraud Relationship	Wage Sufficiency Debate	"It will help a lot; salary is never enough; it will reduce fraud."
Impact of Comparable Salaries	Fair Wages & Mindset	Wage-Fraud Relationship	Temptation & Low Wages	"If someone is given a budget of 3m dollars on a salary of less than 1000 dollars can be tempting."

Impact of Comparable Salaries	Fair Wages & Mindset	Non-Monetary Factors	Mindset/Patriotism	“I think it is more of mindset and patriotism”.
Impact of Comparable Salaries	Fair Wages & Mindset	Mitigation Strategies	Sanctions Over Wages	“To some extent, but sanctions are better.”

3.5 Data Triangulation

Triangulation is a methodological approach employed to verify and establish the validity of study findings. Carter et al. (2014) identify various types, including data triangulation, investigator triangulation, theory triangulation, methodological triangulation, and environmental triangulation.

This research utilizes theory triangulation, methodological triangulation, and data triangulation. Data triangulation involves using multiple sources of data to cross-verify findings, helping ensure the reliability and validity of research outcomes (Guion et al., 2011; Johnston et al., 2010). Moreover, the study employs a concurrent triangulation mixed-methods design (Cooper & Hall, 2016; Creswell, 2009) that integrates quantitative and qualitative methods to investigate fraudulent budgetary slack thoroughly. By integrating emerging qualitative themes with quantitative findings, the approach combines individual interviews and survey data for holistic problem-solving.

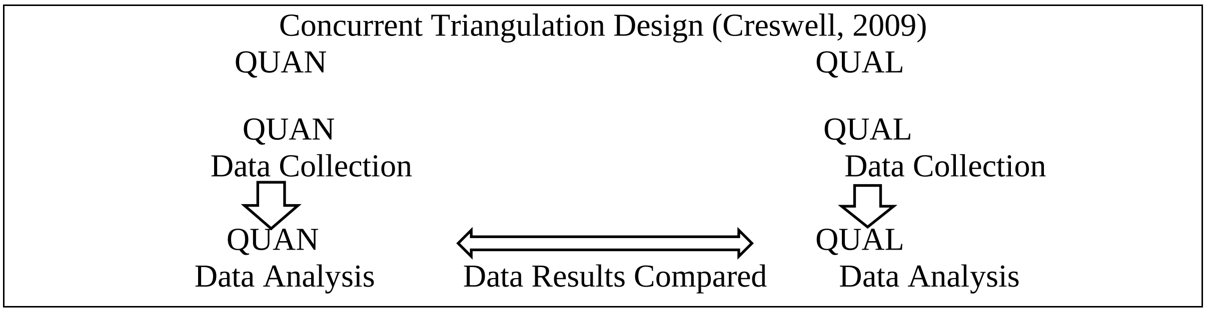


Figure 4 Graphical representation of mixed methods design

(Source: Cooper & Hall,2016, p.49)

Table 6: Summary of Research Methodology

Research Paradigm	**Positivism**	**Interpretivist**
Research Methodology/Approach	Mixed Methods	
	Qualitative	Quantitative
Data Collection Technique	Semi-structured Interview	Primary survey data
Sample size	Twenty three practitioners used telephone and voice recordings, while 22	The pilot study involved 65 practitioners, while the main study involved 104 practitioners.

	used a preferred web-based Google form.	
Study context	Developing countries: The Gambia	
Data Analysis Techniques	All interview contents were re-typed and saved in a Microsoft word file-case by case	Measurement assessment -Descriptive Statistics -Correlation Analysis -Regression Analysis

3.6 Summary of Research Methodology

This chapter has outlined the mixed-methods concurrent triangulation design employed to investigate the relationship between social accountability mechanisms (Advanced Civic Education and Fair Rewards Systems) and ethical budgeting behavior in the Gambian public sector. The quantitative phase involved 104 survey respondents, with constructs measured through validated scales demonstrating acceptable reliability (Cronbach's α: SAC=0.75, FRS=0.83, ACE=0.88). The qualitative phase achieved data saturation with 14 in-depth interviews, providing rich contextual understanding of budgetary practices, fraud mechanisms, and potential mitigations. Data triangulation enhances the validity and credibility of the findings presented in the following chapter.

4. RESULTS

4.1 Quantitative study results

4.1.1 Descriptive statistics

To give a general picture of how the researcher structured and characterized the evaluation systems, I provide some descriptive statistics -i.e., means and standard deviations. Table 7 shows the descriptive statistics we provide to address our research questions and explain according to the practitioners' perception: (1) how ACE influences ethical budgeting behavior, (2) how FRS influences ethical budgeting behavior as a mediator, and (3) how FRS influences ethical budgeting behavior as a moderator.

Table 7: Descriptive statistics (Author's contribution)

Items	**Mean**	**SD**
Position	1.2	0.402
Gender	1.72	0.628
Education	1.43	0.497
Culture	1.55	0.877
SAC1- University and/or professional education in auditing principles enhances critical thinking and reduces susceptibility to fraud involvement	4.50	0.502
SAC2-Awareness of the nature of social accountability mechanisms*[1] could instil inner strength against budget-related fraud. *[1] *Participatory budgeting, public expenditure tracking, commission of enquiries, civic engagement,sanctions, rewards etc*	4.25	0.890
SAC3- Awareness of auditors' expectations regarding management of public funds could strengthen the mind against budget-related frauds.	4.31	0.669
ACE1- Civic education curriculum reflecting managing public funds as if it is an investor's capital can discourage fraud behaviour-public trust.	4.12	0.715
ACE2- Civic education curriculum reflecting managing public funds as if it is an investor's capital can discourage fraud behaviour-public trust.	4.05	0.829
ACE3- Civic education curriculum infusing public interest value maximization i.e. spending public funds in the best interest of society can discourage budget-related fraud and behavior-public interest.	4.10	0.795
ACE4- Civic education curriculum teaching honesty in financial transactions and reporting with the use of public funds can reshape mindsets against budget-related frauds and behavior-information asymmetry.	4.10	0.718

ACE5-Civic education curriculum on effective organization policing*[2] over management of public funds can reshape mindsets against fraud behavior-goal congruence. *[2] *Effectiveness in design of strong internal controls and implementation with understanding*	4.16	0.777
ACE6- Civic education curriculum teaching handling public funds as entrepreneurs can reshape mindsets against fraud and corruption behaviour	4.17	0.703
Fair Rewards System for public servants' to be effective must include FRS1-5: FRS1- Fair Wages i.e wages above the living wage	4.07	0.779
FRS2- Recognition and awards for public service–oriented behaviours	4.34	0.771
FRS3- Opportunities for growth-Job satisfaction	4.40	0.646
FRS4- Financial rewards for improved productivity-job performance	4.37	0.626
FRS5 -Respect by peers and supervisors for ethical behaviour	4.40	0.690

Source: Author * Insignificant *p*-values

The means and standard deviations summarize the variables themselves and describe the sample's composition, unlike the p-values. The p-values are about the relationship between these variables and the outcome.

The three SAC items, measured on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), show high agreement among respondents. SAC1 has the highest mean (4.5, SD = 0.50), indicating near-universal consensus (responses clustered around "agree/strongly agree"). SAC3 follows (mean = 4.31, SD = 0.67), with moderate variability. SAC2 has the lowest mean (4.25) and the greatest variability (SD = 0.89), suggesting more divergent responses (e.g., some neutral/disagree ratings amid overall agreement). Thus, all items reflect strong social accountability consciousness, though SAC1 shows the most consistency, while SAC2 has the least.

The six items measuring advanced civic education (5-point Likert scale) show consistently high agreement, with means ranging from 4.05 to 4.17 (near "Agree" to "Strongly Agree"). Standard deviations (0.703–0.829) indicate moderate variability, with responses clustering around the upper end of the scale. ACE6 (highest mean: 4.17, lowest SD: 0.703) reflects the strongest agreement, while ACE2 (lowest mean: 4.05, highest SD: 0.829) shows slightly more dispersion. In summary, respondents strongly supported ACE concepts with limited disagreement.

The five FRS items, measured on a 5-point Likert scale, show high agreement (means: 4.07–4.40; all near the upper bound of 5) with low to moderate variability (SDs: 0.626–0.779). FRS3 and FRS5 have the highest means (4.40), while FRS1 has the lowest (4.07). Standard deviations are smallest for FRS4 (0.626) and largest for FRS1 (0.779), suggesting slightly more consensus on FRS4 and relatively more dispersion on FRS1. Overall, responses skew strongly toward the positive end of the scale.

To mitigate social desirability bias concerns from the high mean scores (4.1–4.5), the survey ensured strict anonymity and confidentiality, a method shown to reduce social approval effects by minimizing respondents' fear of judgment. Furthermore, it is worth noting that the constructs measured are inherently positive (e.g., prudent financial management, fair incentive satisfaction, and public trust), and we expect high averages within a healthy organizational context.

The descriptive statistics also summarize the sample's characteristics for four control variables (Position, Gender, Education, Culture), which were included in a statistical model but showed no significant association with the outcome ($p > 0.05$). Position had a mean of 1.2 (SD=0.402), suggesting that most respondents were in the lower management category (1=lower management; 2=middle management; 3=senior management). Gender had a mean of 1.72 (SD=0.628), indicating a skew toward the female category (coded as 1=male, 2=female). Moreover, education had a mean of 1.43 (SD=0.497), indicating university -Bachelor- level education dominance. Finally, culture had a mean of 1.55 (SD=0.877), with moderate diversity (a higher spread than the others). However, although we controlled for these variables, their non-significant p-values imply they did not meaningfully predict the outcome in the model. Their inclusion helps isolate the effects of other variables of interest as common practice, despite their lack of statistical significance here.

4.1.2 Measurement models

Principal Component Analysis: Sampling adequacy

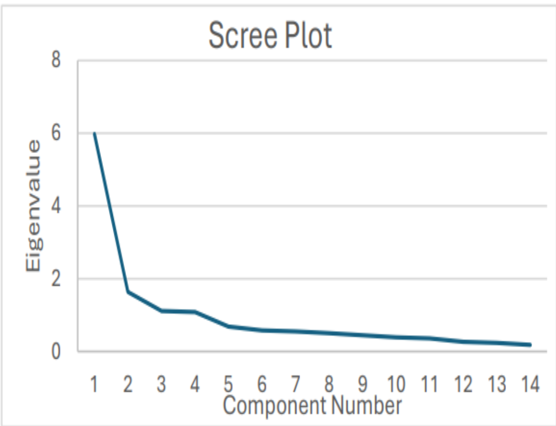
I conducted Principal Component Analysis (PCA) in SMARTPLS and SPSS to test sampling adequacy and assess the extent of variable intercorrelation as a basis for factor analysis, using the Kaiser-Meyer-Olkin (KMO) statistic and Bartlett's Test of Sphericity. The overall KMO ranges from 0 to 1, with higher values above 0.70 indicating better suitability. The KMO statistic (0.87) and Bartlett's Test of Sphericity (χ^2=685.133, df=91, $p<.001$) confirm the suitability of the data for factor analysis. The KMO value falls in the "meritorious" range (0.8–0.9), indicating strong shared variance and adequate sample size. All variables exceeded the 0.70 sampling adequacy threshold, with most (e.g., ACE5=0.920, ACE1=0.895) above 0.80. The lowest MSA (FRS5=0.778) remained acceptable, although weaker. Bartlett's test rejected the null hypothesis ($p<.001$), confirming the presence of sufficient correlations among the variables. With 14 variables and robust statistical support, the data meet all assumptions for extracting meaningful latent factors via PCA/factor analysis.

Common Method Bias

The researcher evaluated Common method bias using Harman's single-factor test (Podsakoff et al., 2003). I entered all the independent and dependent measures into an unrotated exploratory factor analysis. As shown in Table 8 (and supported by the scree plot in Figure 5), the analysis yielded a four-factor solution: eigenvalues exceeding 1.0 accounted for approximately 70 percent of the variance. When I forced a one-factor solution, that single factor accounted for only 42.7 percent of the total variance-below the 50 percent cutoff suggested by Kassinis and Soteriou (2003). The result indicates that common method bias is minimal.

Table 8- Harman’s single-factor test results (Source: Author’s extraction)

	Eigenvalue	Variance proportion	Variance cumulative
Component 1	5.980	0.427	0.427
Component 2	1.636	0.117	0.544
Component 3	1.108	0.079	0.623
Component 4	1.085	0.078	0.701



	Initial Eigenvalues		
Component	Total	% of Variance	Cumulative %
1-Advanced Civic Education	5.980	42.716	42.716
2-Fair Rewards System	1.636	11.688	54.404
3-Social Accountability Consciousness	1.108	7.918	62.321
4-Technical controls and others	1.085	7.751	70.072

Figure 5: Scree Plot (Source: Author’s extraction)

Confirmatory Factor Analysis

The principal component analysis (PCA) was accompanied by a theory-driven confirmatory factor analysis (CFA) following Hair et al. (2009), to examine the hypothesized structure between scale items and the underlying constructs (cf. Figure 6 and Table 9).

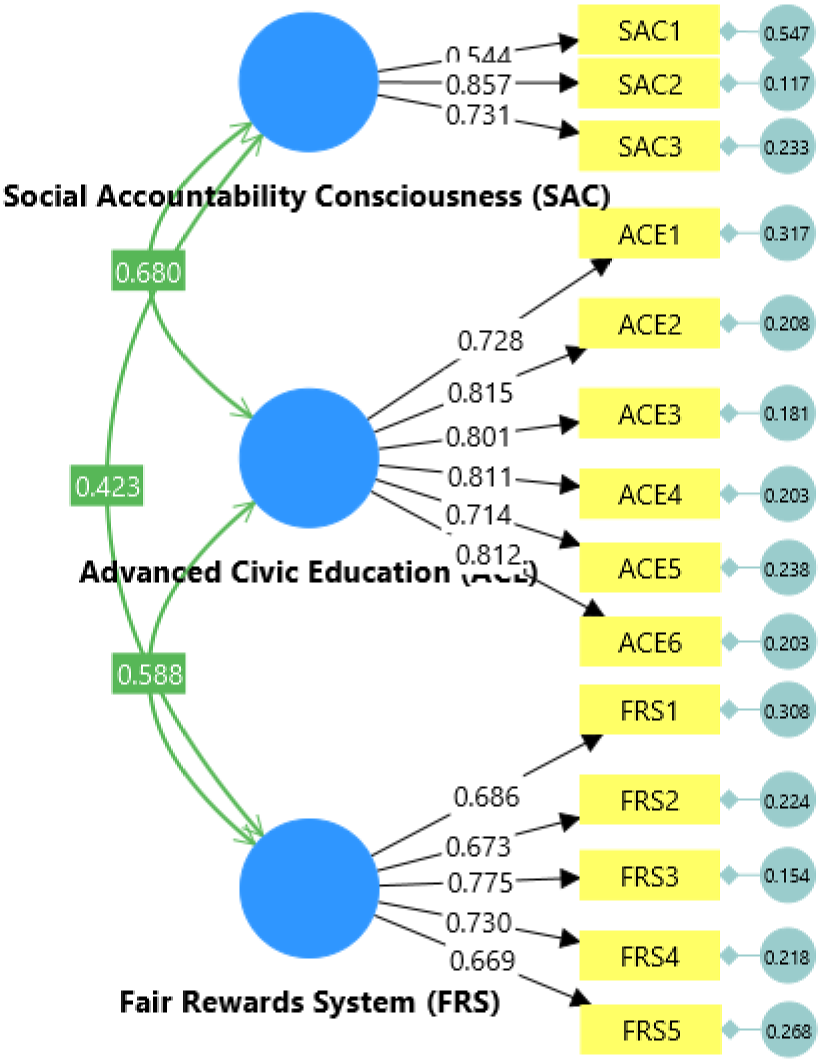


Figure 6: Confirmatory factor analysis graphical output

Table 9. Model fit statistics (Source: Author's work)

Index	Estimated Model	Threshold	Judgment
χ^2/df	1.515	1–3	Excellent
RMSEA	0.071	≤ 0.08	Acceptable
SRMR	0.055	≤ 0.08	Good
CFI	0.946	≥ 0.95	Excellent
TLI	0.934	≥ 0.90	Good
NFI	0.860	≥ 0.90	Marginal
GFI/AGFI	0.874/0.821	≥ 0.85 (lenient)	Borderline

I performed the confirmatory factor analysis inter-item variance and covariance matrices. The three latent variables fitted the data acceptably well (Relative χ 2 [χ 2 /d.f.] = 1.515; standardized root mean squared residual [SRMR]=0.055; goodness of fit index [GFI] =0.874; comparative fit index [CFI]=0.946; Tucker-

Lewis Index [TLI]= 0.934; root mean square error of approximation [RMSEA]=0.071).

Reliability and validity of measurement models

This analysis covers the quality of the measurement models for the latent variables. The mean is the composite mean of all responses and measurement statistics for the latent construct. Other statistics are the psychometric test statistics of the instrument. Table 10 below presents the three latent variables' means, standard deviations, reliability, validity and correlations.

Table 10: Reliability and validity of measurement models

Construct	Mean	SD	Cronbach Alpha	rho_C*	AVE	ACE	FRS	SAC
ACE	4.107	.760	0.903	0.902	0.606	0.680		
FRS	4.369	.681	0.833	0.832	0.501	0.588	0.588	
SAC	4.224	.750	0.747	0.751	0.504	0.423	0.423	0.423

*Composite reliability (rho_C)- a form of reliability but calculated with the PLS weights- is conceptually equivalent to MaxR(H) in SPSS

The results indicate strong reliability and validity for the constructs ACE, FRS, and SAC. Regarding reliability, all constructs demonstrate good internal consistency (Cronbach's α and rho_C > 0.7), with ACE being excellent (α/rho_C = 0.903/0.902), FRS strong (0.833/0.832), and SAC acceptable (0.747/0.751). Convergent validity measuring Average Variance Extracted (AVE) meets the ≥0.5 threshold for all (ACE = 0.606, FRS = 0.501, SAC = 0.504), though FRS and SAC are marginal.

Moreover, Discriminant Validity (Table 11) measured as the square roots of AVE for each construct exceed their correlations with others (e.g., ACE's √AVE = 0.778 > correlations with SAC [0.680] and FRS [0.588]), confirming distinctness.

Relationships reveal moderate-to-strong correlations between constructs (e.g., ACE→SAC = 0.680, ACE→FRS = 0.588, FRS→SAC = 0.423–0.442; all $p < 0.001$), suggesting related but distinct factors. In summary, the measures are reliable and demonstrate adequate convergent and discriminant validity. SAC's marginally lower reliability and FRS/SAC's borderline AVE warrant caution but remain acceptable. Correlations support theoretically expected relationships.

Table 11: Discriminant Validity (Source: Author's calculations)

	AMOS				Fornell-Larcker		
Path	Corr.	Corr.^{2}	MSV	AVE>MSV	√AVE	√AVE>Corr.	Validity
ACE->SAC	0.680	0.46	0.46	0.610 > .46	√ .610=0.78	0.78>0.680	Good
ACE->FRS	0.588	0.35	0.46	0.588 > .46	√ .588=0.77	0.77>0.588	Good
FRS->SAC	0.423	0.18	0.46	0.521 > .46	√ .521=0.72	0.72>0.423	Good

Discriminant validity established under both AMOS (AVE >Maximum Shared Variance) and Fornell-Larcker Criterion (√ AVE> Raw correlations).

4.1.3 Structural equation modelling

In line with Holmbeck's (1997) five-step approach to testing mediational models in developmental research, I first tested the direct effect models (ACE → SAC), (ACE → FRS), and (FRS → SAC). The direct effect model (H1) indicated that ACE has a significant relationship with SAC (β=0.586**;f2,0.51) and had a good model fit (χ 2 /d.f.= 1.536 (good, <3); RMSEA = 0.071(acceptable, <0.08); TLI = 0.935, and CFI = 0.948 (both excellent, >0.90); SRMR = 0.06 (good, <0.08), R^2 =0.352(PLS-SEM traditionally prioritizes predictive validity over covariance fit by CB-SEM). The model demonstrates reasonable fit (per SRMR and bootstrap tests in SmartPLS4) and explains 35.2% (benchmark: 0.20-0.50) of the variance, supporting its validity for prediction-focused contexts (cf., Figure 7).

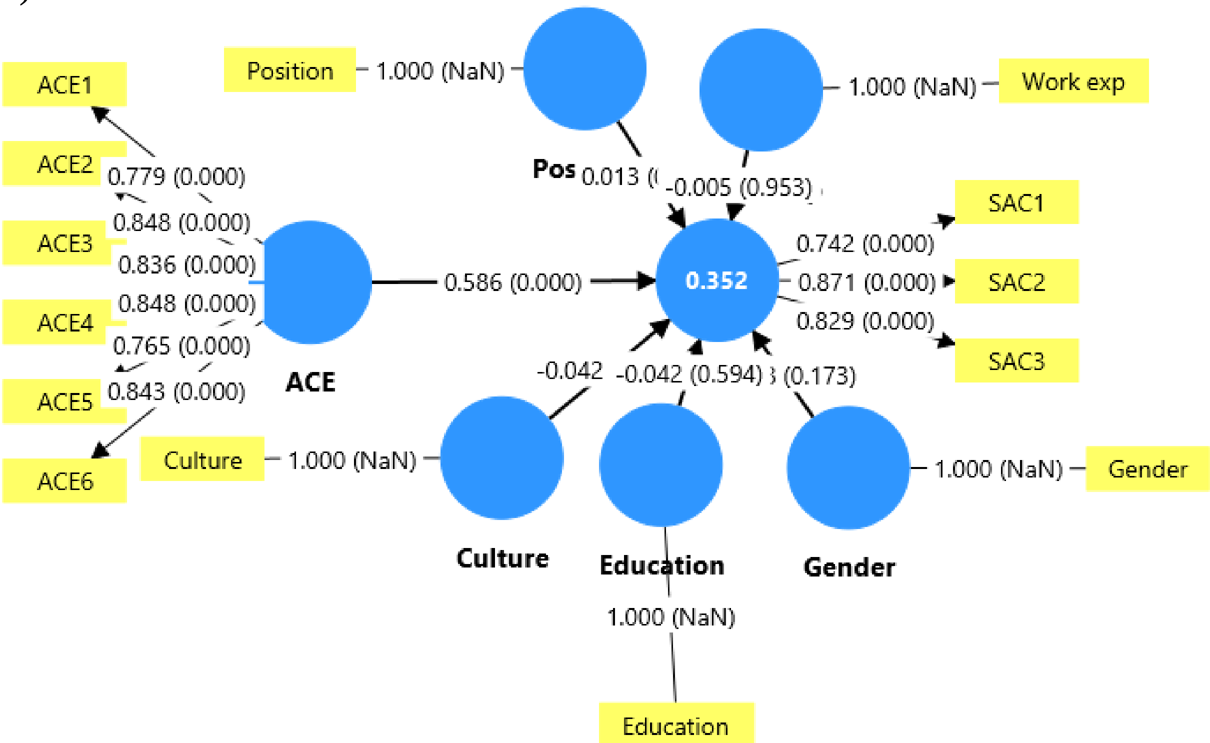


Figure 7: (ACE → SAC) Direct effect Model (H1)-Holmbeck,1997

Similarly, (ACE→ FRS) direct effect model (H2) indicated that ACE is positively associated with civic right awareness of and support for FRS in the public sector (β, 0.510 (0.000); f² = 0.359(0.000) and had a good model fit (SRMR = 0.06** (good, <0.08), R^2 =0.30. The model demonstrates reasonable fit (per SRMR and bootstrap tests in SmartPls4) and explains 30% (benchmark,0.20-0.50) of variance, supporting its validity for prediction-focused contexts (cf., Figure 8).

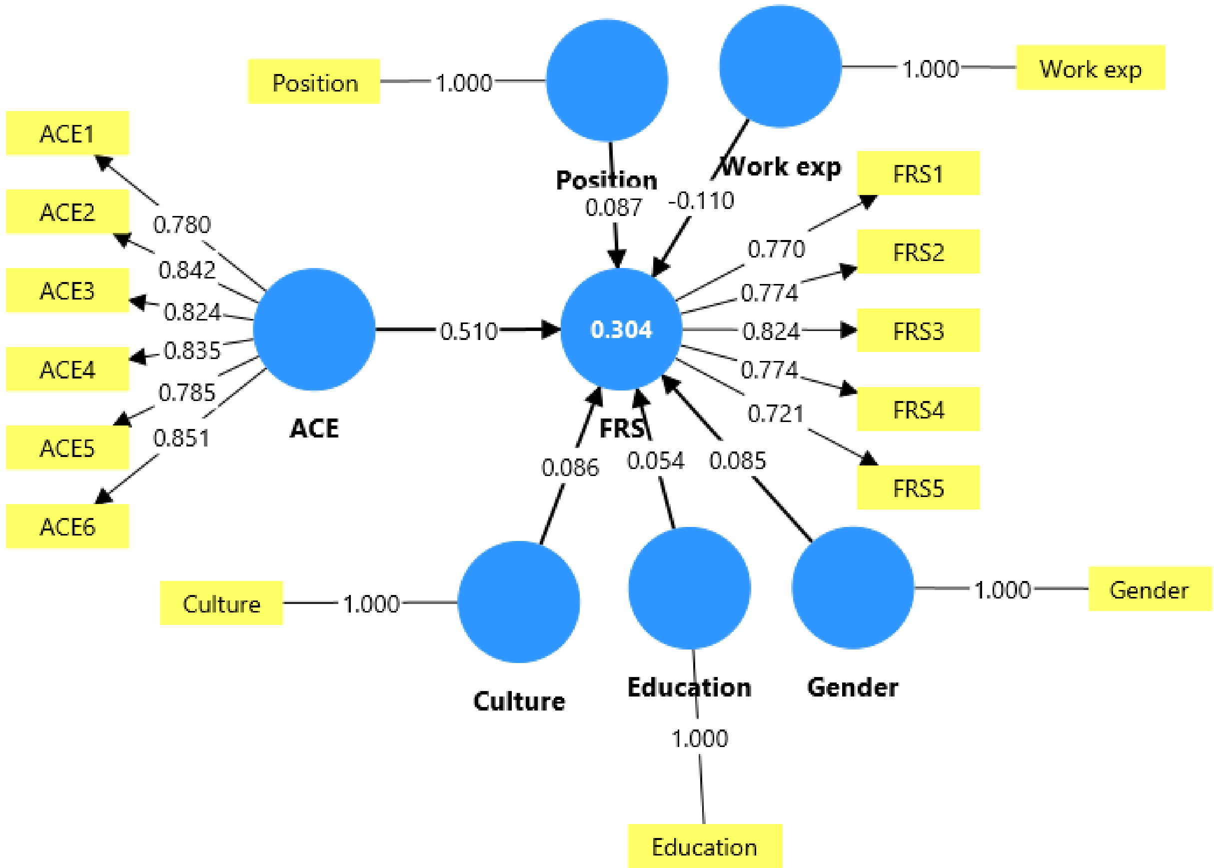


Figure 8: (ACE→ FRS) Direct effect Model graphical output (H2)-Holmbeck,1997

Finally, (FRS→ SAC) direct effect model (H3) indicated that FRS enhances SAC in the public sector and reduces corruption - β, 0.346 (0.000); f² = 0.132(0.205) - and had a good model fit (SRMR = 0.068 (good, <0.08), R^2 =0.138. The model demonstrates reasonable fit (per SRMR and bootstrap tests in SmartPls4) and explains 13.8% (benchmark,0.20-0.50) of variance, also supporting its validity for prediction-focused contexts (cf., Figure 9).

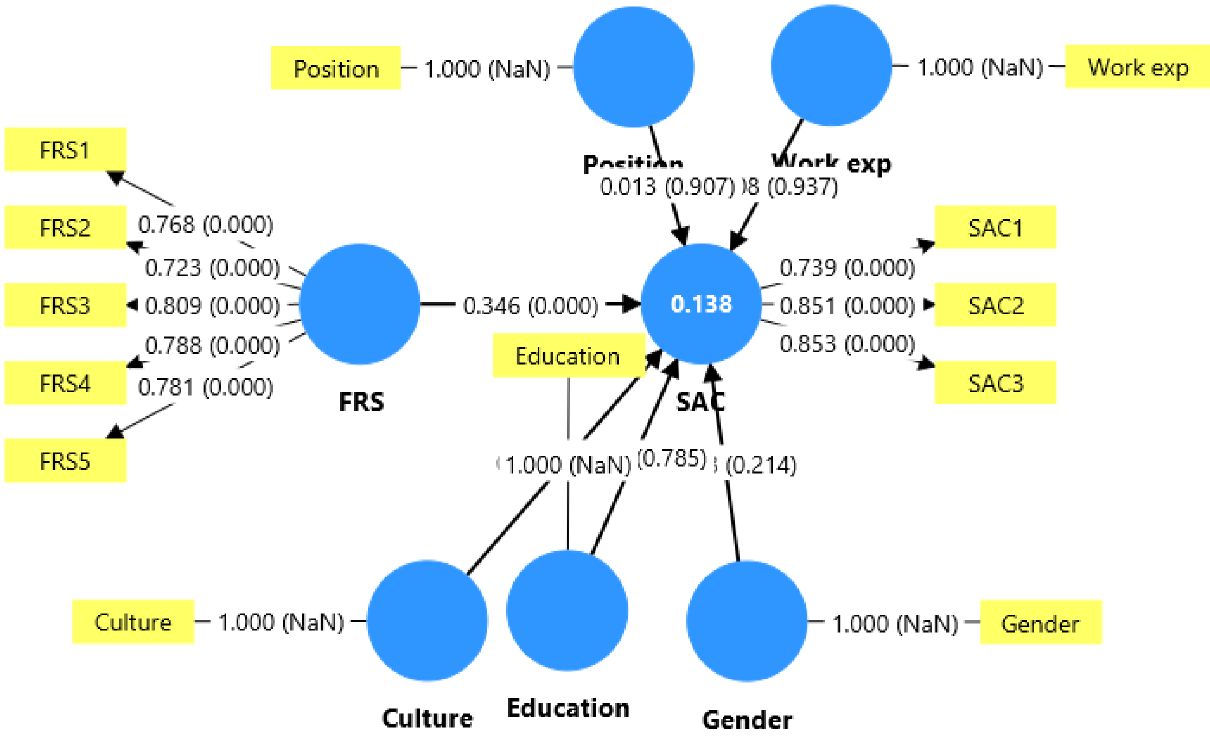


Figure 9: (FRS → SAC) direct effect model graphical output (H2)

With the three models demonstrating a good fit, we proceeded to test our hypotheses by examining the path coefficients and their significance. ACE showed a strong direct effect on SAC ($\beta = 0.561$, $p < 0.001$; $f^2=0.51$, $p<0.05$), as well as a positive and significant association with FRS ($\beta = 0.526$, $p < 0.01$; $f^2=0.359$, $p<0.05$). Similarly, FRS showed a direct significant influence on SAC ($\beta = 0.346$, $p < 0.001$), but a practically insignificant effect ($f^2 = 0.132$, $p > 0.05$). The R^2 values indicate that ACE explains 35.5% of the variance in SAC ($p = 0.000$) and 27.7% of the variance in FRS ($p = 0.087$), suggesting strong explanatory power for SAC and modest explanatory power for FRS.
Furthermore, we found that culture, education, and demographics (Gender, Position, Work Experience) had no meaningful impact on SAC (all $p > 0.05$). In summary, our findings support hypotheses 1, 2, and 3 (Table 12).

Table 12- Standardized regression coefficients.

Path/model component	**(β)**	**p-value**	**f^2**	**R^2**	**Q^2**	**SRMR**
Direct effects						
ACE → SAC (H1-accepted)	0.561	< 0.001	0.510	0.355	-	0.073
ACE → FRS (H2-accepted)	0.526	< 0.010	0.359	0.277	-	≤ 0.068
FRS → SAC (H3-accepted)	0.346	< 0.001	0.132	-	-	-

Mediation & Interaction						
Indirect (Full): ACE→FRS→SAC (H4a-rejected)	0.182	< 0.010	-	-	-	-
Indirect (Partial): ACE→FRS→SAC (H4b-rejected)	0.029	0.616	-	-	-	-
Interaction: ACE × FRS → SAC (H5-rejected)	0.022	0.730	0.001	-	-	-
Full Model (SAC)	-	-	-	0.355	0.313	0.073
Control Variables on SAC	≤ 0.05	> 0.05	-	-	-	-

Mediation Analysis: Constrained vs. Unconstrained Models (cf.Appendix 4)

Following Holmbeck's (1997) guidelines, we compared two structural models to evaluate the mediating role of FRS in the relationship between ACE and SAC: a constrained model (where I fixed to zero the direct path from ACE to SAC) and an unconstrained model (where the direct path is freely estimated).

The constrained model demonstrated an acceptable model fit, with SRMR = 0.073, below the 0.08 threshold. Although the d_ULS (Unweighted Least Squares Discrepancy) value (0.553) was only acceptable for the saturated model, d_G (Geodesic Discrepancy) (0.254) met acceptable levels for both saturated and estimated models. The model showed strong predictive relevance for FRS (Q^2_predict = 0.248) and moderate predictive relevance for SAC (Q^2_predict = 0.167). At the manifest variable level, Q^2 values for FRS indicators ranged from 0.082 to 0.197, while SAC indicators ranged from 0.087 to 0.151, indicating low to moderate item-level predictive relevance.

The R^2 values indicate that ACE explains 28.1% of the variance in FRS ($p = 0.000$) and 13.6% of the variance in SAC ($p = 0.087$). This result suggests a modest explanatory power for SAC when the direct effect path is excluded. Moreover, the total indirect effect of ACE on SAC via FRS was significant ($\beta = 0.182$, $p = 0.012$), supporting a full mediation model. The total effect of ACE on FRS was strong and significant ($\beta = 0.530$, $p = 0.000$), and FRS significantly influenced SAC ($\beta = 0.344$, $p = 0.000$). Effect size statistics (f^2) revealed a large effect of ACE on FRS ($f^2 = 0.390$, $p = 0.028$) and a moderate effect of FRS on SAC ($f^2 = 0.130$, $p = 0.205$). In summary, our findings rejected hypotheses 4a,4b, and 5 (Table 12).

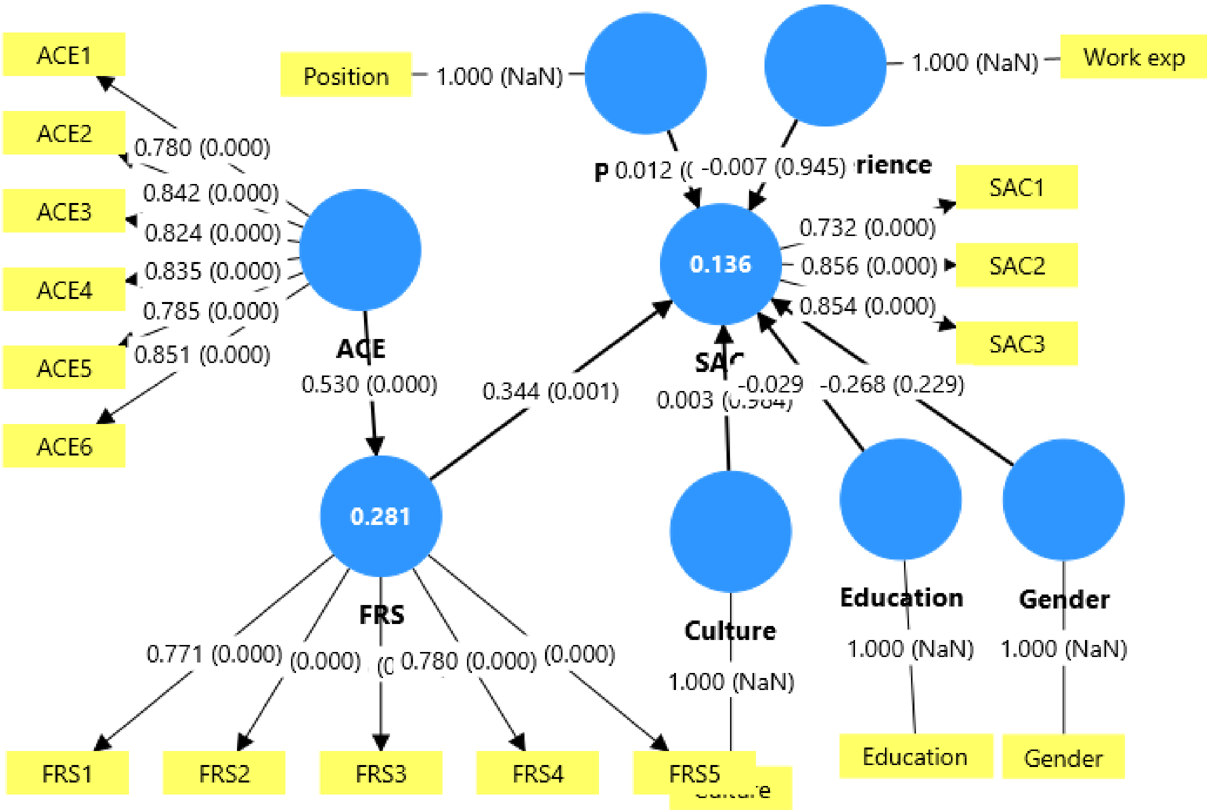


Figure 10 Constrained Model (No Direct Effect) graphical output

Unconstrained model (direct path included)

The unconstrained model also demonstrated good fit (SRMR = 0.073), with d_ULS (0.556) and d_G (0.251) within acceptable limits for both saturated and estimated models (SmartPLS 4). Predictive power improved for SAC in this model, with Q^2_predict = 0.307 (Constrained, 0.248). Manifest variable Q^2 values for SAC indicators increased (SAC1 = 0.158; SAC2 = 0.299; SAC3 = 0.161), indicating improved item-level prediction over the constrained model.

The R^2 for SAC increased to 0.341 (p = 0.000) compared to 28.1% of the variance in FRS (p = 0.000) earlier, suggesting substantially improved explanatory power when the model includes the direct path from ACE to SAC. The R^2 for FRS remained relatively stable at 0.277 (p = 0.001). In this model, the total indirect effect of ACE on SAC (ACE→FRS → SAC) dropped sharply and became non-significant (β = 0.029, p = 0.616), while the direct effect of ACE on SAC became strong and significant (β = 0.582, p = 0.000). The effect of FRS on SAC also declined and became non-significant (β = 0.055, p = 0.602).

ACE had a large effect size (f^2) on FRS (f^2 = 0.383, p = 0.029) and a moderate effect on SAC (f^2 = 0.337, p = 0.016). However, the effect of FRS on SAC was negligible (f^2 = 0.030, p = 0.887), indicating minimal explanatory contribution when the model included the direct path. Effect sizes (f^2) showed a large effect of ACE on FRS (f^2 = 0.383, p = 0.029) and a moderate effect of ACE on SAC (f^2 = 0.337, p = 0.016). However, the effect of FRS on SAC was negligible (f^2 = 0.030, p = 0.887), indicating minimal explanatory contribution when the direct path is modeled.

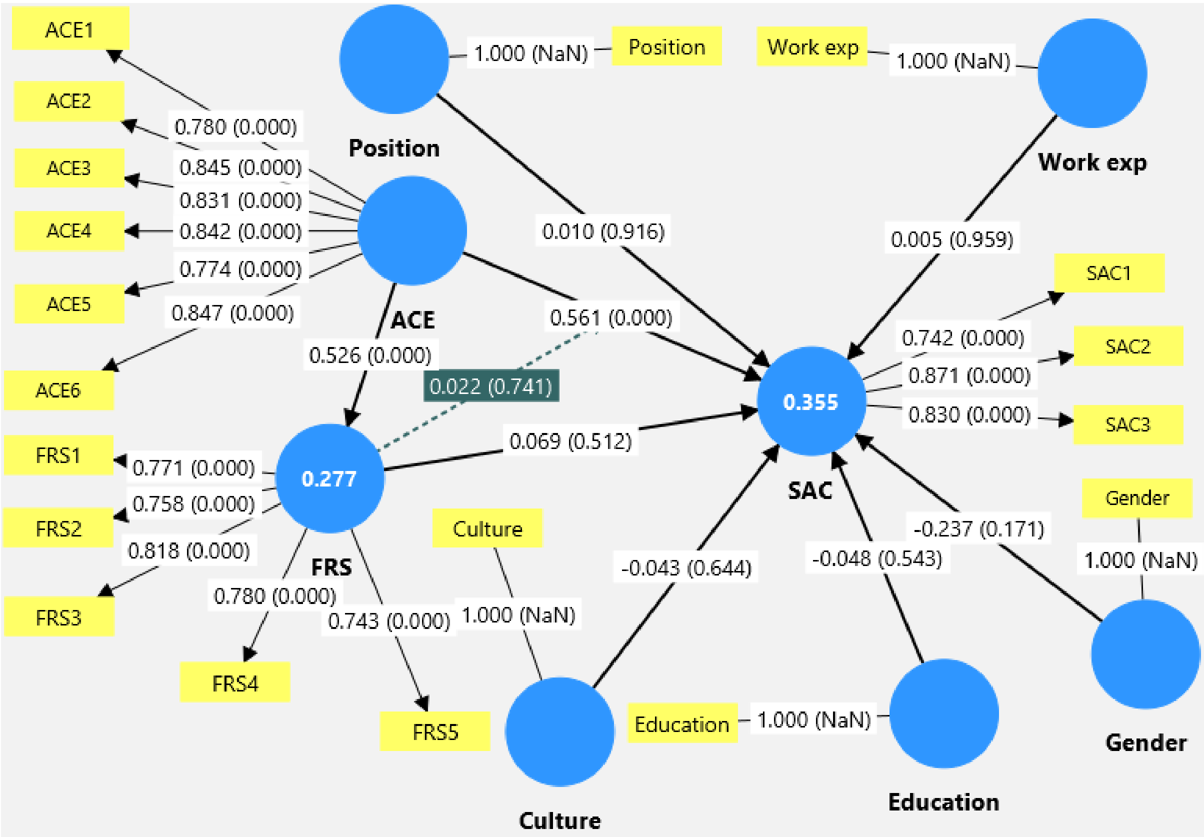


Figure 11 Unconstrained Model (Direct Path Included) graphical output

Comparison and Interpretation

The results from the constrained model suggest full mediation, with ACE influencing SAC entirely through FRS. In contrast, the unconstrained model indicates a dominant direct effect of ACE on SAC, rendering the mediation pathway statistically non-significant. The shift in significance and explanatory power (R^2) between models indicates that FRS serves as a meaningful mediator only in the absence of the direct ACE → SAC path. Based on Holmbeck's (1997) criteria, these findings support partial mediation at best, but they also demonstrate the dominance of the direct path from ACE to SAC. The evidence therefore favors a model in which ACE is the primary driver of SAC, with FRS playing a secondary, context-dependent role.

Moderation analysis and control variables

To further examine robustness, I examined whether FRS moderates the relationship between ACE and SAC (H5) by introducing an interaction term (FRS × ACE → SAC) into the model. SmartPLS Process macro was used under bootstrapping to generate the conditional effects, while the path analysis generated the simple slope analysis (cf. Figure 12). The interaction effect was statistically non-significant ($\beta = 0.022$, $p = 0.730$), with an almost negligible effect size ($f^2 = 0.001$). The upward, parallel-sloping lines further illustrate the insignificant effect on each other (cf. Figure 12). The explanatory power ($R^2 = 0.342$) and predictive relevance for SAC (Q^2_predict = 0.313) remained comparable to the unconstrained mediation model. These results indicate that FRS does not moderate the relationship between ACE and SAC,thus rejecting H5. Moreover, control variables (Culture, Education, Gender, Position, Work Experience) had no statistically significant impact on SAC (all $p > 0.05$), with negligible effect sizes.

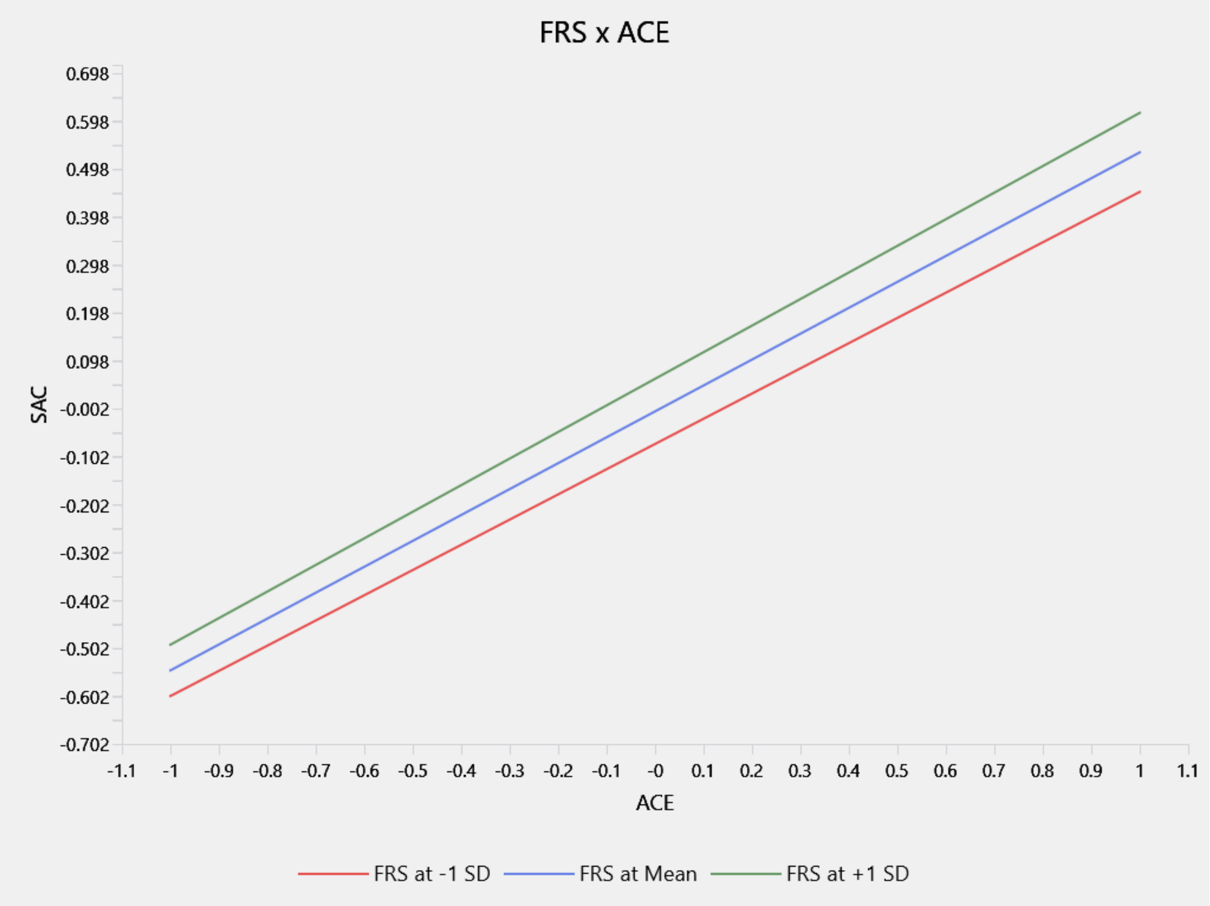


Figure 12 SmartPls Process Macro Simple Slope Analysis (insignificant moderation)

Summary

The comparative mediation analysis supports partial mediation, with FRS significantly mediating the effect of ACE on SAC only when the direct path is constrained. However, this mediation effect loses significance once we introduce the direct ACE → SAC path into the model, suggesting that ACE primarily influences SAC directly. The moderation analysis revealed no significant interaction effect, also indicating that FRS does not alter the strength or direction of the relationship between ACE and SAC. Overall, ACE emerges as the primary driver of SAC, independent of FRS's limited mediating function and its lack of a moderating role, as well as contextual controls. In summary, our findings rejected hypotheses 4a,4b, and 5 (Table 12).

4.2 Qualitative study results

4.2.1 Methodological Approach

Research Tradition

This qualitative study employed an interpretivist phenomenological paradigm, chosen for its capacity to capture participants' lived experiences and subjective meanings regarding budgetary fraud and social controls (Creswell, 1999). This approach enabled the exploration of how public servants make sense of their budgeting practices, the rationalizations underlying budgetary slack, and their perceptions of civic education and fair rewards as accountability mechanisms.

Sampling Strategy

We used a purposive snowball sampling approach to target participants with direct, firsthand experience in public-sector budgeting. Our inclusion criteria required participants to: (1) hold middle or senior management positions in Gambian public sector institutions; (2) have an academic or professional background in auditing; and (3) actively participate in the budget preparation process or oversight. We excluded people without direct budget function or those in purely administrative roles unconnected to financial management.

We recruited 45 senior and middle-level budget officers from the quantitative survey, who had agreed to follow-up interviews. 22 opted to complete a Google Form, and 23 consented to participate in a recorded telephone interview. The final sample comprised 18 government officials and 5 NGO managers, representing accounts, budget, audit, and operations departments (see Table 6). Politicians could not be reached but would be included for future studies.

We analyzed interviews one after the other to reach theoretical thematic saturation at the 14th interview, at which point the marginal utility of new data dropped to zero. Interviews 15–23 served to validate and confirm existing themes rather than extract new ones. Consistent with the principle that saturation often occurs within the first 12–16 interviews in homogeneous samples (Marshall et al., 2013; Sandelowski, 1995), I confirmed sampling adequacy when interviews beyond the 14th added no new themes or insights.

Interview Procedures

I conducted semi-structured telephone interviews lasting 60–120 minutes per participant. All interviews were audio-recorded with the participant's consent and subsequently transcribed verbatim (Thomas & Harden, 2008). An initial pilot with three telephone interviews informed refinement of the interview guide, enhancing question clarity and flow. A topic guide structured discussions around: (1) budgeting systems and practices; (2) manifestations and management of budgetary slack; (3) perceptions of fair rewards; (4) role of civic education; and

(5) integration of controls. However, participants were encouraged to elaborate freely, allowing unanticipated themes to emerge. I also documented detailed interview notes in Microsoft Word, titled "Budget Slack Fraud Free Behavior Interview."

Coding and Analysis

I analyzed the transcripts for common themes (thematic analysis) following the six-phase framework of Braun and Clarke (2006). The six phases are as follows:

1. Data familiarization: The researcher reads the transcripts repeatedly to achieve immersion.
2. Initial code generation: The researcher employed ChatGPT as a coding aid to systematically identify meaningful units of text. The researcher provided the AI with clear prompts requesting identification of all text segments relevant to budgeting practices, fraud rationalizations, fair rewards, civic education, and accountability mechanisms. This process generated an initial codebook of 15 codes (cf. Table 7).
3. Theme development: I grouped the codes into potential themes through iterative comparison and review. Moreover, I grouped related codes to form broader patterns.
4. Theme review: Themes were checked against coded extracts and the entire dataset to ensure they accurately represented participant responses.
5. Theme refinement and naming: Themes were refined for internal consistency and given clear, conceptual labels mapping onto the study's theoretical constructs.
6. Reporting: I documented final themes with illustrative quotations.

To enhance analytical rigor, two researchers should independently review a subset of transcripts and compare code assignments to help resolve discrepancies through discussion. This process, while not constituting formal inter-coder reliability testing, provides some triangulation of investigators. However, this aspect was not done in the study because it was a solo dissertation and therefore a minor limitation. Instead, I employed three strategies to improve trustworthiness and mitigate potential bias.

1. I maintained a reflexive journal throughout the analysis to document analytical decisions, emerging interpretations, and personal assumptions.
2. I re-coded two complete transcripts (representing 25% of the data) after a two-week interval and compared the two coding iterations to resolve any potential discrepancies through reflexive memoing.
3. I preserved an audit trail of all coding iterations, theme development, and data extracts.

I accept that these procedures do not fully replace independent double coding advised by Braun and Clarke (2006). Yet Nowell et al. (2017) posit that they substantially strengthen the analysis's credibility within the constraints of a solo dissertation. A limitation of this approach is the absence of full investigator triangulation; however, the deep familiarity with the data afforded by solo analysis also supports interpretive coherence.

Trustworthiness

I established trustworthiness through two primary strategies. First, participant involvement' in the post-pilot phase ensured that refined questions reflected respondent understandings and priorities. Second, data triangulation' between qualitative findings and quantitative survey results enabled cross-validation of emerging patterns (see Section 4.3). Negative cases were actively sought and are reported where they diverge from dominant themes, ensuring comprehensive representation of participant perspectives.

Researcher Reflexivity

As the sole researcher, I interviewed public servants including academics in a public university with backgrounds in accounting and public financial management. Participants brought prior assumptions about the efficacy of technical controls. To enhance trustworthiness and mitigate potential bias, I maintained reflexive notes throughout data collection and analysis stages to document how personal perspectives might influence interpretation. Using ChatGPT as a coding aid provided an additional layer of analytical distance, though I subsequently reviewed and refined all AI-generated code to ensure interpretive validity.

4.2.2 Results

Three fundamental themes emerged from the analysis, each mapping directly onto the study's core constructs: Fraud manifestation (context for SAC), 'FRS', and 'ACE'. Within each theme, sub-themes captured participants' nuanced perspectives (cf. Table 7).

Theme 1: Fraud manifestation as rationalized budgetary slack (context for SAC)

Participants consistently identified incremental budgeting as the primary practice across Gambian public-sector institutions. Within this system, budget over-estimation was described not as aberrant misconduct but as a rational response to structural pressures.

Sub-theme 1.1: Drivers of over-estimation

Three primary drivers of budget padding emerged: inflation uncertainty, anticipated budget cuts, and initial under-budgeting. Participants explained that price volatility for goods and services in The Gambia creates genuine uncertainty, making over-estimation a defensive strategy rather than fraud.

Common comments were as follows:

'The reason used is that prices of certain goods in The Gambia fluctuate with

time. Even if you know the actual price during the budget preparation, the likelihood for it to increase before the next financial year is high.' (Participant 3, Government).

'The initial budget is not always enough.' (Participant 7, NGO)

'Budget augmentation is normally approved by Parliament in unforeseen difficulties or challenges due to improper budget, e.g., payment of salaries.' (Participant 11, Government)

Sub-theme 1.2: Normalization of Cuts

Participants described budget approval as a negotiation process wherein cuts are expected and anticipated. This creates a perverse incentive: over-estimation becomes necessary to secure adequate funding after inevitable reductions. Common comments were as follows:

'No, there are always cuts. Always adjustments.' (Participant 5, Government)

'Budget is developed internally and then sent for approval-they always reduce something.' (Participant 9, NGO)

Sub-theme 1.3: Handling Unspent Balances

Year-end unspent balances were described as problematic, with organizations resorting to last-minute spending on training or unbudgeted activities to avoid signaling that original requests were excessive. Common comments were as follows:

'*Use as training at year end*.' (Participant 2, Government)

'*Re-programming to new activities. Gives a wrong impression*.' (Participant 8, Government)

'*Used for unbudgeted expenditure*.' (Participant 12, NGO)

Interpretive note: These findings directly contextualize the 'SAC' construct by revealing the institutional logic within which ethical or unethical behavior occurs. SAC represents the capacity to resist these rationalizations-to recognize that inflation-driven padding, while explicable, constitutes a form of budgetary slack that undermines public trust.

Theme 2: Fair Rewards System as incentive and insufficient condition (FRS)

Participants strongly affirmed that fair salaries matter, but their responses revealed a nuanced understanding of 'how' and 'why' they matter.

Sub-theme 2.1: Fair salaries reduce financial pressure

The dominant narrative positioned fair wages as removing the material desperation that drives fraud. Participants consistently linked low pay to increased fraud risk. Common comments were as follows:

'*Good salaries can reduce frauds in public sector as most frauds are caused by financial pressure*.' (Participant 4, Government)

'*Of course, incentives have always been critical in the fight*.' (Participant 10, NGO)

'*Lower salary for a higher position, is a recipe for fraudulent practice. The salary and position mismatch in public sector encourages fraud*.' (Participant 13, Government)

'*Low salaries in the public sector may be a breeding ground for fraud*.' (Participant 6, Government)

Sub-theme 2.2: Skepticism that salary alone suffices

Despite affirming the importance of fair wages, many participants expressed skepticism that salary increases alone would transform ethical behavior. This sub-theme represents a critical divergence from purely economic explanations. Common comments were as follows:

'*I believe the issue of fraud in public sector is not because of low salary scale but instead it has to do with integrity, honesty and contentment*.' (Participant 1, Government)

'*No, it cannot reduce fraud because increment in the government salary is in connection with increment of revenue... we have to be production… at least to be 50% self-sufficient*.' (Participant 14, NGO)

'*What is needed is deterrence and sanctions*.' (Participant 8, Government)

Sub-theme 2.3: The private sector comparison

Participants frequently invoked private sector salaries as a benchmark, though views diverged on whether parity was achievable or desirable.

'*If civil servants are paid handsomely as the private sector, budget fraud will be minimized as they will have enough take home and they will have honesty*.' (Participant 5, Government)

'*Salaries will never be close because of the level of operation. Taxpayers' money is being used to run public sector*.' (Participant 11, Government)

Interpretive note: These findings illuminate the FRS construct by revealing its dual nature: fair wages are viewed as 'necessary' (removing pressure) but not 'sufficient' (requiring complementarity with other controls). This aligns with the quantitative finding that FRS exerts a modest but significant direct effect on SAC (H3) while failing to mediate or moderate ACE's effects (H4-5).

Theme 3: Advanced Civic Education (ACE) and mindset transformation

The theme is the most conceptually rich theme concerning the role of education, training, and mindset in shaping ethical behavior. Participants articulated a sophisticated understanding of how civic education operates.

Sub-theme 3.1: Civic education cultivates ethical disposition

Participants affirmed that training in principles like honesty, public interest, and accountability consciousness is foundational to ethical behavior. Common comments were as follows:

> ‘*Civics and ethical education is an education that helps citizens to live with various social realities, rule of law, justice and human and democratic values. It has been playing its prominent role in enhancing popular participation*."(Participant 7, NGO)
>
> ‘*Budget fraud can be prevented when clear budget objectives are set and there is honesty in financial transactions and reporting*.’ (Participant 3, Government)
>
> ‘*Role of mindset such as patriotism is key*.’ (Participant 12, NGO)

Sub-theme 3.2: Education alone is insufficient without disposition

A critical nuance emerged: participants distinguished between ‘knowledge’ and ‘disposition’, arguing that training cannot manufacture integrity where none exists.

> ‘*Staff training in these areas will reduce the use of budget fraud but it wouldn't be enough*.’ (Participant 9, Government).
>
> ‘*Training could be used to perpetrate frauds*.’ (Participant 2, Government)-'a striking insight suggesting that educated fraudsters may be more dangerous.’
>
> ‘*If an individual has the wrong mindset, the right education may be pointless*.’ (Participant 10, NGO)

Sub-theme 3.3: Mindset as the foundation

Participants repeatedly invoked "mindset" as the critical variable, positioning both education and incentives as inputs that shape-but do not determine-ethical consciousness. Common comments were as follows:

> ‘*The mindset plays an important role in this and when people in the public sector change their mindset and focus on setting clear budget objectives and spend budget money on budgeted items only, budget fraud will be eradicated*." (Participant 4, Government).
>
> ‘*A good salary in an organization may have an impact in positive budget fraud behavior*." (Participant 6, Government)-'note the conditional "may," suggesting mindset mediates the salary–behavior link.’
>
> ‘*Positive mindset plus good salary will reduce budget fraud*.’ (Participant 13, Government)
>
> ‘*Strong internal control system will change negative mindset to good and positive mindset irrespective of salary involved*.’ (Participant 1, Government)

‘Sub-theme 3.4: The necessity of integrated controls’

The most consistent finding across all interviews was the conviction that no single mechanism suffices. Participants advocated for combining ACE, FRS, and robust internal controls. Common comments were as follows:

‘What is needed is deterrence and sanctions.’ (repeated by multiple participants)
‘If public sector salaries/pay scheme (with better control system) is comparable to private sector it will drastically help reduce fraud.’ (Participant 8, Government)
‘Effective controls can prevent budget fraud.’ (Participant 5, Government)

Interpretive note: These findings directly support the ACE construct by demonstrating that civic education is understood by practitioners as cultivating the ‘right mindset’-precisely the internalized normative commitment that SAC operationalizes. The emphasis on integration validates the study's multi-faceted theoretical framework and explains why quantitative analyses showed ACE as the dominant predictor: education shapes the core of a person’s character; other mechanisms only support it.

4.2.3 Discussion

The qualitative findings deepen understanding of the quantitative results in three critical ways. First, they contextualize fraud manifestation. Participants revealed that budgetary slack is not merely individual misconduct (*social psychology scientific field*) but a systemic adaptation to institutional pressures-inflation uncertainty, anticipated cuts, and year-end spending norms (*social science scientific field*). This explains why ‘SAC’ is essential: it represents the capacity to resist these normalized rationalizations and maintain ethical commitment despite structural incentives to pad budgets.

Second, they clarify the mechanisms of FRS. While participants affirmed that fair wages reduce financial pressure for fraud, they simultaneously expressed skepticism that salary alone transforms ethical disposition. The recurring assertion that "*fraud has to do with honesty, not salary*" explains the quantitative finding of a modest but significant FRS→SAC effect (H3). FRS operates at the level of ‘*removing obstacles*’ to ethical behavior, not ‘*generating*’ ethical commitment. This hygienic role (Herzberg, 1968) means FRS is necessary but insufficient-a conclusion that aligns with the failure of FRS to mediate or moderate ACE's effects (H4, H5).

Third, they illuminate the primacy of ACE. Participants' emphasis on "mindset," "integrity," "honesty," and "patriotism" maps directly onto the SAC construct. Civic education is understood by practitioners as the mechanism that cultivates this internalized ethical character-transforming public servants from passive rule-followers into active stewards of public resources. This finding explains why ACE emerged as the dominant predictor in quantitative analyses: it targets the cognitive and normative foundations of behavior that other controls merely support.

Fourth, they validate the integrated framework. The consistent call for combining ACE, FRS, and robust controls confirms that practitioners recognize the complementarity of these mechanisms. This triangulated view supports the study's central conclusion: sustainable ethical reform requires a multi-faceted strategy integrating intrinsic motivation (ACE), extrinsic fairness (FRS), and strong systemic deterrence (internal controls). No single mechanism suffices, each addresses a different dimension of the accountability challenge.

5. DISCUSSIONS

We examined how ACE and FRS-*separately and in combination*-influence ethical budgeting in the public sector, drawing on principal–agent, fair wage–effort and social movement theories. Our discussion proceeds in four parts: 1) Direct effects & principal–agent theory: how civic education and rewards shape agents' integrity and accountability; 2) Fair rewards as outcome: why FRS emerged as a direct consequence rather than a mediating factor; 3) non-significant moderation: implications of the absent interaction between education and rewards for the underlying theories; 4) Model robustness & predictive relevance: tests confirming the stability and practical utility of our framework.
Finally, we integrate quantitative results with qualitative insights to situate our findings within the broader literature on ethical public-sector budgeting.

Direct Effects and Principal-Agent Theory

The significant direct effects of ACE on SAC ($\beta = 0.586$, $p < 0.001$; $f^2 = 0.51$) and FRS ($\beta = 0.510$, $p < 0.001$; $f^2 = 0.359$), and FRS on SAC ($\beta = 0.346$, $p < 0.001$; $f^2 = 0.132$, $p > 0.05$), align with principal-agent theory, underscoring education's role in mitigating agency problems by internalizing accountability norms-*reducing reliance on external monitoring*. Empirical studies (Arlinghaus & Johnston, 2017; Chang et al., 2022; Adigwe, 2022; Feitosa, 2020; Galais, 2018) collectively affirm civic education's capacity to instill ethical values (e.g., integrity, self-reliance) and civic duty, fostering leaders equipped to counter corruption.

Marquette (2007) emphasizes that sustained, transformative pedagogy is critical to reshaping citizens' attitudes. - a position equally shared by Mendez, Pegan and Triga (2024). Mendez, Pegan and Triga (2024) emphasize the importance of citizen engagement in decision-making processes, through building capacity, co-creating policies with the public, and involving citizens in dialogue for improved engagement and outcomes, ultimately enhancing transparency, ownership, and trust in regional policies. This study advances practical application in developing economies by integrating auditing principles into civic education, shifting public servants' value systems from budget abuse to ethical agency-*a novel operationalization of donor-agency recommendations (Marquette, 2007)*. Marquette (2007) argues that donors increasingly recognize civic education must transcend superficial efforts, requiring sustained, pedagogically complex programs to reshape citizens' perceptions of their roles.

For anti-corruption initiatives to succeed, underlying values and attitudes toward corruption must also shift, necessitating formalized civic education targeting these deeper societal conditions. Unlike pedagogical literature, this study's approach emphasizes behavioral constraints through cultural and social controls (Merchant & Van der Stede, 2017; Chenhall, 2003), addressing complex corruption mutations via actionable, norm-driven change from within.

The second path (H2) demonstrates that ACE significantly influences FRS implementation in the public sector (56% effect)-*positive awareness of and support for FRS*. This occurs through heightened civic awareness among public servants, enabling them to advocate for equitable wages above living standards, growth opportunities, recognition for public-service behavior, productivity-based rewards, and respect from colleagues for ethical conduct. The pathway explains a moderate effect size ($f^2 = 0.36 < 0.05$), underscoring ACE's role in empowering public servants to secure commitments from principals for effort-aligned rewards. For example, Smolentseva (2023) highlights higher education's transformative capacity in equipping individuals to address societal challenges, aligning with ACE's mechanism of fostering critical awareness.

The third path (H3) demonstrates that FRS significantly influence social accountability consciousness (SAC) in the public sector (34.6% effect). This aligns with literature on wage-corruption dynamics, though Van Rijckeghem & Weder (2001) caution that the relationship is intricate. While higher wages often correlate with reduced corruption, budgetary constraints and cultural norms mediate outcomes: fiscally strained governments may lack resources for competitive wages, perpetuating low compensation and high corruption. Conversely, in societies where corruption is normalized, wage hikes alone may fail to curb unethical behavior, reinforcing systemic cycles.

The fair-wage hypothesis (Akerlof & Yellen, 1990) supports this nuance, linking motivation to perceived wage fairness. Subsistence-level or equitable wages can reduce corruption, yet models like shirking suggest excessively high wages may be impractical for complete eradication. Moreover, case studies from Ghana, Peru, and Uganda (Van Rijckeghem & Weder, 2001) show improved compensation can enhance performance and reduce corruption, though confounding factors complicate causal claims. These dynamics may explain the insignificant effect size ($f^2 = 0.132$, $p>0.05$) observed in FRS-SAC linkage, underscoring the need for balanced wage policies alongside broader economic and cultural reforms.

Fair Reward Systems (FRS) as an outcome, not a mediator

While FRS significantly predicts SAC without any mediation implying theoretical and conceptual relevance but practically the relationship is insignificant ($\beta = 0.344$, $p < 0.001$; f^2,.130; $p>.05$, H4a). However, the analysis reveals that while FRS fully mediate the link between ACE and SAC with a significant indirect effect ($\beta = 0.182$, $p < 0.05$), partial mediation and overall practical relevance are statistically insignificant ($\beta = 0.029$, $p > 0.05$; $f^2 \leq 0.130$, H4b). This challenges fair wage-effort theory, which posits extrinsic rewards as motivators, suggesting instead that intrinsic factors (e.g., integrity, civic values) drive SAC. Furthermore, qualitative interviews corroborate this, with participants emphasizing integrity over material incentives (e.g., “fraud… has to do with honesty, not salary”) and critiquing systemic issues in tax-dependent economies like The Gambia. These results align with mixed findings from Akerlof & Yellen (1990) and Yui (2016), underscoring that public-sector ethical behavior may stem more from internalized norms than extrinsic rewards, complicating traditional wage-motivation models. Theoretical and practical implications highlight the need to prioritize intrinsic civic education over wage adjustments in public-sector anti-fraud strategies.

Non-Significant Moderation and Theoretical Implications

The non-significant moderation of FRS on the ACE→SAC relationship ($f^2 = 0.001$, $p = 0.918$; H4) suggests that extrinsic rewards neither strengthen nor weaken the influence of ACE on SAC. This contradicts theories arguing for synergistic incentive→education effects and instead supports principal–agent models that emphasize intrinsic drivers of public-service ethics. Comparable studies report mixed outcomes: Chen and Liu (2018) show that “carrot” incentives curb corruption only at low wage levels, necessitating “stick” measures at higher pay; Demirgüç-Kunt et al. (2023) find salary increases reduce corruption where wage inequality is low; Dekker (2013) cautions that insatiable desire for money can override these effects; and Gertrude (1956) and Yui (2016) highlight the overlooked social, psychological, and political dimensions of public remuneration. Together, these findings underscore the primacy of intrinsic motivators and contextual factors over simple pay adjustments.

Model robustness and predictive relevance

Both models exhibit strong fit (SRMR = 0.073) and predictive relevance ($Q^2 > 0$ for the constructs). However, the unconstrained model’s higher explanatory power for SAC ($R^2 = 0.341$ vs. 0.121) underscores ACE’s direct dominance over mediated pathways.

6. CONCLUSIONS

The dissertation concludes that ACE appears foundational for fraud control in public budgeting based on its significant direct effect on SAC ($\beta = 0.586$, $p < 0.001$, $R^2 = 0.341$ out of 35.5% overall). ACE seemingly helps internalize civic norms that provide the perceived 'ability to account' and self-control (Flint, 1988; Drucker, 1954). This internalization potentially yields a capacity for reducing theoretical over-reliance on external monitoring-*a key agency model's insight consistent with transformative power of education* (Marquette, 2007; Smolentseva, 2023). Moreover, the model's robustness (SRMR = 0.073<0.08) confirms ACE's dominant predictive role over FRS.

An important finding refines the perceived role of FRS. Contrary to Akerlof & Yellen's (1990) fair wage-effort theory, FRS demonstrated only a limited direct effect on SAC ($\beta = 0.346$) and minimal practical relevance ($f^2 = 0.132$). Furthermore, FRS appeared to function as an outcome of ACE rather than a mediator or moderator. The critical findings on FRS align with mixed evidence on wages' impact on corruption (Van Rijckeghem & Weder, 2001), which suggests that systemic and cultural factors often override wage adjustments (Chen & Liu, 2018). The study also implies that public-sector ethics may be driven by internalized civic values and public service motivation, perhaps less so by performance incentives (Yui, 2016; Williams, 1956).

7. CONTRIBUTION, LIMITATION AND FUTURE RESEARCH DIRECTIONS

The study demonstrates the interplay between ACE and FRS as managerial social controls in reshaping attitudes, norms and values of public servants towards ethical budgeting. Consequently, it makes significant theoretical and other contributions within few limitations which inform future research directions.

7.1 Theoretical Contributions

Theoretically, the study advances public administration and critical accounting scholarship on accounting’s societal role by synthesizing agency, fair wage, and social movement theories. It reframes 'management accounting's societal relevance' (Modell, 2014) towards social emancipation (Catchpowle & Smyth, 2016), and operationally 'turning management accounting inside out' (Van der Stede, 2011) towards mindset transformation of public agents. The primary theoretical contribution, therefore, can be seen as the novel SAC construct, which conceptualizes an agent's internalized cost consciousness and psychological ownership of public funds. The upgraded agency model positions ACE-*a potent, non-financial control that potentially reduces agency costs*-as central to cultivating SAC, representing a notable shift from purely technical control models. Together with FRS, ACE transforms agents into ‘collective intellectuals’ to champion a bottom-up accountability social movement within the bureaucracy.

7.2 Expected benefit to practice

Practically, the research highlights the effectiveness of ACE as an intervention tool for strengthening internal accountability and reducing inefficiencies in public resource management (Marquette,2007; Heliantono et al.,2020; Aksinudin et al.,2022; Fahmi et al.,2021; Adigwe’s,2022). Public sector organizations, particularly, can leverage ACE programs as part of their human capital development strategies to foster SAC and reduce opportunistic behavior among employees. Additionally, the study calls into question the overreliance on monetary incentives alone, suggesting the need for more nuanced and context-sensitive approaches to employee motivation in non-market settings.

7.3 Contribution to Policy

The findings suggest that policymakers could consider prioritizing institutionalizing sustained ACE in governance reforms - *to enhance efficient use of public funds*- over incentives system adjustments (Houdek et al. ,2021; Benartzi et al.,2017; and Walton & Wilson,2018). However, the evidence prompts advocating for complementary non-material incentives that align with civic responsibility and public interest goals. The study methodologically adopts an engaged, interventionist philosophy, aiming to provide a replicable framework that mobilizes public servants as agents of change.

7.4 Limitations

This study is subject to several limitations that should be acknowledged. Regarding generalizability, although based on cross-sectional data from The Gambia, this budget fraud control framework may offer insights applicable across contexts where waste, fraud, and abuse are perceived in public budgeting. Moreover, because The Gambia represents a microcosm of developing economies, sharing characteristics such as survival public-sector wages, foreign aid dependency, and the poverty-corruption nexus, the cross-sectional design suggests that these findings may have broader relevance. Finally, given the high mean scores (4.1–4.5) and concerns about social desirability bias, future research should incorporate a social desirability scale to further validate these findings.

7.5 Future research directions

Future research should adopt longitudinal designs to establish causality and explore ACE's perceived efficacy across different cultures (Chenhall, 2003; Merchant & Van der Stede, 2017). Moreover, building on the current findings, the next phase could involve engaging curriculum experts to develop training modules based on the six mindsets (entrepreneurial, investor, fund manager, public value maximization, credible reporting, and organizational policing), establishing a consultancy to deliver the training, and scoring participants on the ACE framework. The impact on managing unspent budget balances could then be measured over a longitudinal period, generating interview and survey data that serve dual purposes: creating an economy around this training while contributing to solving the budgeting paradox. Civic education (ACE) arguably shapes the perceived 'desire' to act ethically, while living wages may help align expected ethical agency with actual practice. Together, these elements appear to mutually reinforce and potentially transform budgetary practice into a tool of social accountability and ethical professionalism.

7.6 Ethical questions related to the methods and material

No potential conflict of interest was reported.

Notes

Principles of auditing

Philosophy of Auditing by Mautz and Sharaf (1961, p. 42)

‘The Philosophy of Auditing’ was a pioneer seminal work of Mautz and Sharaf (1961, p. 42) commissioned by American Accounting Association which they began with the definition of five primary concepts of auditing (ibid.p.67) which can be seen to be relevant to the present day. These concepts included: evidence, due audit care, fair presentation, independence and ethical conduct. Next, they offered eight tentative postulates of auditing:
(1) Financial statements and financial data are verifiable.
(2) There is no necessary conflict of interest between the auditors and the management of the enterprise under audit.
(3) The financial statements and other information submitted for verification are free from collusive and other unusual irregularities.
(4) The existence of a satisfactory system of internal control eliminates the probability of irregularities.
(5) Consistent application of generally accepted accounting principles (GAAP) results in the fair presentation of financial position and the results of operations.
(6) In the absence of clear evidence to the contrary, what has held true in the past for the enterprise under examination will hold true in the future.
(7) When examining financial data for the purpose of expressing an independent opinion thereon, the auditors act exclusively in the capacity of auditor.
(8) The professional status of the independent auditor imposes commensurate professional obligations.

The implications of each of these postulates, and their relevance or otherwise to contemporary auditing, are issues well worthy of study (Mautz,1961). Evaluation of Mautz and Sharaf's (1961) eight postulates or hypotheses which can only be validated empirically as discussed below.

Postulate No.1: Financial statements and financial data are verifiable.

This is still valid because audit process is driven by users' effective demand for credibility of financial statements as a basis of economic decision making. The auditors' opinions give investors, creditors, and other users' confidence in the accuracy of financial data. Today, financial statements and financial data are still verifiable through auditors' expertise in technical accounting, auditing, and knowledge of business. Current audit practices and standards reflect belief in this postulate through the uses of audit programs. That is, the auditors have to gather audit evidence, assess risks, conduct analytical procedures, develop expectations about account balances, test account balances, and assess and test internal control to proof the reliability of financial statements.

Postulate No.2: There is no necessary conflict of interest between the auditor and the management of the enterprise under audit.

Assessment of Current Validity:

This postulate is no longer considered valid. Contemporary research and audit failures demonstrate that the relationship between management and auditors is inherently susceptible to conflict, coercion, and compromised independence, rather than being fundamentally cooperative.

Current Evidence and Practices:

The assumption of a cooperative relationship has been fundamentally challenged by high-profile corporate scandals and empirical research. The case of Arthur Andersen and Waste Management (1993) is a seminal example, where management's refusal to correct $128 million in misstatements highlighted a critical power imbalance. This dynamic is not historical; it persists in modern contexts. Studies, such as those by Koh and Woo (2001), established that the self-interests of auditors and managers rarely align, creating a persistent 'audit expectation gap'.

Recent evidence further underscores this conflict. Regulatory inspections and enforcement actions routinely reveal instances where management pressure, fee dependence, and the threat of client loss unduly influence audit judgments. The core issue is that auditors face an inherent conflict: they are hired and paid by the very entity they must objectively evaluate, creating a fundamental tension between professional skepticism and client retention.

Reflection in Current Standards and Regulations:

The invalidity of this postulate is directly reflected in the radical overhaul of audit regulation, most notably through the Sarbanes-Oxley Act of 2002 (SOX). This legislation was predicated on the recognition that a purportedly cooperative relationship had failed to protect the public interest. SOX and subsequent global regulations enforce structural separation and heightened accountability to mitigate this conflict:

1. Prohibition of Certain Non-Audit Services: Audit firms are restricted from providing many consulting services to their audit clients to reduce economic dependence and conflicts of interest.
2. Mandatory Audit Partner Rotation: Lead audit partners must rotate off an engagement every five years to mitigate overly familiar relationships with management.
3. Enhanced Management Accountability: The CEO and CFO must personally certify the accuracy of financial statements, imposing direct legal liability.
4. Protection for Auditors: It is a federal offense for management to fraudulently influence, coerce, manipulate, or mislead an auditor.
5. Cooling-Off Periods: An audit firm cannot audit a company if its senior management includes a former audit partner from that firm for a specified period.

Implication for Current Audit Practice:

The rejection of this postulate has fundamentally reshaped the audit environment. Modern audit practice is now explicitly designed around *professional skepticism* and the management of *client advocacy risk*. Standards require auditors to approach management representations with doubt, to rigorously assess fraud risks, and to design procedures that are resilient to potential non-cooperation or deception. The paradigm has shifted from assuming cooperation to actively verifying and defending audit evidence against potential management override or influence.

Postulate No.3, “The financial statements and other information submitted for verification is free from collusive and other unusual irregularities”,

This principle remains critically relevant, though its assurance has evolved in response to major fraud cases such as Enron, WorldCom, Sunbeam and Tyco. These scandals demonstrated that certain financial statement items-including revenue recognition, loss contingencies, asset valuations, and acquisition reserves-are particularly vulnerable to manipulation. Consequently, the audit profession has fundamentally reformed its approach to fraud detection, moving from implicit trust in management to structured skepticism and proactive risk assessment.

Modern auditing standards and practices explicitly reaffirm the importance of this principle through enhanced procedural and regulatory frameworks. The foundational shift is embodied in the adoption of Statement on Auditing Standards

No. 99 (SAS 99), *Consideration of Fraud in a Financial Statement Audit*, and its international equivalents such as ISA 240. These standards require auditors to:
- Maintain professional skepticism and a questioning mindset, irrespective of past experience with management.
- Conduct mandatory brainstorming sessions within the audit team to identify and assess risks of material misstatement due to fraud.
- Perform enhanced analytical procedures and inquiries designed to detect fraudulent activity.
- Expand the evaluation of internal controls to include controls specifically intended to prevent and detect fraud.

Additionally, contemporary frameworks such as the COSO (Internal Control-Integrated Framework) and regulatory measures like the Sarbanes-Oxley Act have reinforced management's responsibility for fraud prevention and accurate financial reporting. Audit practice today integrates continuous monitoring, data analytics, and forensic accounting techniques to test for fraud risks throughout the audit process.

Therefore, while fraud cases historically exposed auditing's limitations, they have driven the development of more rigorous standards and methods that actively uphold the principle that financial statements should be free from material fraud. Current audit practice does not assume invalidity of the principle; instead, it operationalizes the postulate through systematic fraud consideration, making the verification process more robust and responsive to identified risks.

Postulate No. 4, "The existence of a satisfactory system of internal control eliminates the probability of irregularities".

Current Validity: This postulate is *no longer considered valid* in contemporary auditing theory and practice. The professional consensus has shifted to recognize that even a well-designed internal control system cannot guarantee effectiveness or eliminate risk, due to its inherent limitations.

Rationale for the Shift: This change reflects the understanding that internal control is inherently limited by the possibility of *human error, management override, and collusion*. Consequently, the mere presence of a control system does not ensure the reliability of financial reporting itself. Modern auditing standards explicitly acknowledge that controls provide reasonable, not absolute, assurance.

Reflection in Current Audit Practices and Standards: Contemporary practice directly embodies this updated view through a mandatory *risk-based audit approach*. Auditors are required to:

1. *Evaluate and Test Controls*: Assess the design and operational effectiveness of a client's internal control over financial reporting. A sound system may allow the auditor to assess control risk below maximum.
2. *Plan Audits Based on Risk*: Use this assessment to determine the nature, timing, and extent of necessary substantive audit procedures. Effective controls can reduce, but never eliminate, the need for substantive testing.

3. *Perform Substantive Procedures for All Material Areas*: Regardless of the assessed control risk, auditors must perform substantive procedures (tests of details or analytical procedures) for all material classes of transactions and account balances. The work on controls serves to modify the focus and extent of these substantive tests, not to replace them.

Conclusion: Therefore, while internal control evaluation remains a critical component of the audit process, its role is now that of an *informative factor in risk assessment*, not a standalone guarantee. The fundamental imperative in current practice is to obtain sufficient appropriate audit evidence through a combination of control evaluation and substantive procedures, reflecting the principle that system existence and system effectiveness are distinct concepts.

Postulate No. 5, "Consistent application of generally accepted principles of accounting results in the fair presentation of financial position and the results of operations".

This principle remains fundamentally valid because the existence of a common set of standards, such as U.S. Generally Accepted Accounting Principles (GAAP) or International Financial Reporting Standards (IFRS), is essential for ensuring comparability, reliability, and transparency in financial reporting. These frameworks provide the foundational rules and procedures that govern recognition, measurement, presentation, and disclosure. While the specific standards within GAAP and IFRS evolve and provoke ongoing debate, the financial community globally recognizes the necessity of such standardized frameworks to foster investor confidence and facilitate efficient capital allocation. Regulatory bodies like the U.S. Securities and Exchange Commission (SEC) affirm their support, mandating compliance for public companies.

Current audit practices and standards are built upon this postulate. The central objective of a financial statement audit is to express an opinion on whether the statements are presented fairly, in all material respects, in accordance with the applicable financial reporting framework (e.g., GAAP or IFRS). Auditors are required to obtain an understanding of the entity's application of the framework, evaluate the appropriateness of accounting policies, and assess the reasonableness of estimates made by management. Modern auditing involves rigorous procedures to test compliance, including evaluating complex judgments around revenue recognition, asset impairments, and fair value measurements. If auditors determine that the financial statements contain a material departure from the relevant framework, the audit report must explicitly describe the nature of the departure and, if practicable, its financial effect, leading to a qualified or adverse opinion. Thus, the entire audit process serves to verify adherence to this essential principle of standardized financial reporting.

Postulate No.6, "In the absence of clear evidence to the contrary, what has held true in the past for the enterprise under examination will hold true in the future".

This principle requires revision because it is no longer valid to assume the continuity of an organization’s control environment, risk profile, or operational conditions from one period to the next. Modern audit standards and practices explicitly reject over-reliance on past audits, recognizing that such reliance creates significant audit risk. An entity with strong controls in one year may experience material degradation under new management, due to economic shifts, technological changes, or altered internal policies.

Current audit practices and standards reflect this updated understanding by mandating a dynamic, forward-looking risk assessment at the start of each audit engagement. This is embedded in professional requirements for *due professional care* and *professional scepticism*, which direct auditors to challenge assumptions from prior years and continuously reassess audit evidence in light of current realities. For example, standards require auditors to actively guard against over-familiarity with a client and the associated risk of complacency.

Today, audit programs are designed to be responsive to the present environment. This is operationalized through procedures that require the auditor to:

* *Re-evaluate the control environment* anew each period, irrespective of prior conclusions.
* *Perform updated risk assessment procedures* that consider current market conditions, competitor actions, economic pressures, and changes in the entity's operations.
* *Exercise professional judgment* in determining the nature, timing, and extent of audit procedures based on current information, rather than automatically replicating prior-year approaches.
* *Treat prior-year audit findings and workpapers as informational only*, not as a substitute for current-year evidence-gathering and analysis.

Therefore, while historical knowledge informs the audit process, contemporary auditing is fundamentally grounded in a fresh evaluation of present circumstances, invalidating the outdated notion that past audit work can serve as a sufficient foundation for the current period’s opinion.

Principle No. (7): When examining financial data for the purpose of expressing an independent opinion thereon, the auditors act exclusively in the capacity of auditor.

This principle remains fundamentally valid because public trust in the audit function is wholly contingent upon the auditor's independence and objective mindset. Stakeholders rely on the audit opinion precisely because it is an assessment free from conflicts of interest or partisan influence. Today, acting exclusively as an auditor is not merely an ideal but a codified professional and legal mandate. Current auditing standards, regulations, and ethical codes reflect an unwavering belief in this postulate through strict requirements governing independence, objectivity, and professional skepticism.

That is, auditors must rigorously evaluate and confirm their independence from the client, identifying and mitigating any financial, familial, or managerial relationships that could impair objectivity. They maintain professional skepticism throughout the engagement, questioning evidence and challenging management assertions without bias. Furthermore, the structure of the audit report itself formalizes this exclusive role, as the opinion is expressed explicitly "in the capacity of an independent auditor," distinguishing it from any other service or relationship. This clear demarcation is what preserves the integrity and credibility of the final opinion for users.

Principle No. 8: The professional status of the independent auditor imposes commensurate professional obligations.

This remains valid because the credibility of the audit profession hinges upon public trust, which is sustained only when auditors uphold a high standard of professional responsibility. Users of financial statements rely not only on auditors' technical competence but also on their ethical integrity and independence. In today's complex and highly regulated financial environment, the expectations of stakeholders-including investors, regulators, and the public-reinforce the necessity for auditors to meet significant professional obligations.

Current auditing standards and frameworks reflect a sustained commitment to this principle through the establishment and enforcement of rigorous ethical codes, ongoing professional education, quality control systems, and regulatory oversight. For example, auditors are obligated to maintain independence in both fact and appearance, exercise due professional care, demonstrate professional skepticism, and comply with standards such as the IESBA (International Ethics Standards Board for Accountants) Code of Ethics and national regulatory requirements. These obligations are operationalized in practice through peer reviews, audit firm governance mechanisms, mandatory continuing professional development, and transparent reporting on audit quality.

Thus, the professional status of the auditor continues to entail a duty to act in the public interest, ensuring that the role remains anchored in accountability, objectivity, and trust.

Flint (1988) 7 principles of auditing

Flint (1988) gives a survey of the philosophy and principles of auditing more recent than Mautz and Sharaf's. The postulates he proposes as a basis for the development of audit theory are:

(1) The primary condition for an audit is that there is a relationship of accountability.

(2) The subject matter accountability is too much remote, too complex, and/or too great significance for the discharge of the duty to be demonstrated without the process of audit.

(3) Essential distinguishing characteristics of audit are the independence of its status and its freedom from investigatory and reporting constraints.
(4) The subject matter of audit, for example conduct, performance or achievement or record of events or state of affairs, or a statement or facts relating to any of these, is susceptible to verification by evidence.
(5) Standards of accountability, for example of conduct, performance, achievement and quality of information, can be set for those who are accountable; actual conduct, performance, achievement, quality and so on can be measured and compared with these standards by reference to known criteria; and the process of measurement and comparison requires skill and the exercise of judgment.
(6) The meaning, significance and intention of financial and other statements and data which are audited are sufficiently clear that the credibility which is given thereto as a result of audit can be clearly expressed and communicated.
(7) An audit produces an economic and social benefit.

Evaluation of the principles

Principle No. 1: The primary condition for an audit is that there is a relationship of accountability.

This principle remains fundamentally valid because an audit is conceptually and practically rooted in the need to assess and affirm the discharge of accountability. The relationship exists when one party (the accountor or agent) is obliged to report on, and provide assurance for, the management of resources or performance of duties to another party (the accountee or principal) who has a right to that assurance. The auditor's independent examination serves as the mechanism that makes this accountability relationship meaningful and functional.

Today, this postulate is reflected in the very purpose of an audit, which is to provide an independent opinion on whether the accountor's representations on financial position, performance and cashflows (typically financial statements) are fairly presented. Current audit practices and standards explicitly assume and operationalize this condition. For instance, International Standards on Auditing (ISA) require the auditor to understand the entity and its environment, including the "applicable financial reporting framework" and the "need for the financial statements to achieve fair presentation." This understanding is predicated on the entity's accountability to stakeholders. The audit process-*from planning and risk assessment to evidence gathering and reporting*-is designed to test the accountor's assertions against objective criteria, thereby closing the accountability loop. This relationship is evident across sectors, whether in corporate audits (management accountable to shareholders), public sector audits (government accountable to citizens), or grant audits (recipients accountable to donors).

Principle No. 2: The subject matter accountability is too remote, too complex, and/or of too great significance for the duty to be discharged or demonstrated without the process of audit.

This principle remains fundamentally valid due to the increasing scale, complexity, and consequence of modern economic activity. The separation between those who manage resources (agents) and those who own or depend on them (principals) has widened, creating an inherent accountability gap. Stakeholders cannot personally verify the stewardship of management due to geographical distance, technical complexity, or the sheer volume of transactions.

The audit process serves as an essential, independent mechanism to bridge this gap and make accountability tangible. The auditor's role is to act as a verified and expert intermediary, transforming remote and complex operations into a credible account of financial stewardship. This is critical for subjects of great significance-*such as public finances, systemic financial institutions, or large-scale investor funds*-where the cost of failure or misrepresentation is unacceptably high for society or the market.

Contemporary audit practices and standards are built upon this foundational belief. This is evidenced by the mandatory requirement for statutory audits of public companies, the development of specialized audit frameworks for complex industries (like financial services or extractive industries), and the rigorous assessment of systemic risk. The audit process, through its structured methodology-*including risk assessment, testing of controls, substantive procedures, and evaluation of going concern*-provides the necessary assurance that the duty of accountability has been discharged in a manner that is both demonstrable and reliable.

Principle No. 3: Essential distinguishing characteristics of audit are the independence of its status and its freedom from investigatory and reporting constraints.

This principle remains fundamentally valid because public trust in the audit function is wholly contingent upon the auditor's objective and unimpeded ability to examine evidence and communicate findings without fear of reprisal or limitation. The auditor's opinion derives its credibility not merely from technical skill but from the perceived integrity and unbiased perspective of the auditor.

Today, the independence of status is rigorously enforced through regulatory frameworks, professional ethical codes, and governance structures. This is reflected in mandates for audit firm rotation, strict limitations on non-audit services for clients, and the empowered oversight of independent audit committees. Similarly, freedom from investigatory and reporting constraints is upheld through professional standards that grant auditors full access to information and the unambiguous right to report all material misstatements.

Current practices affirm belief in this postulate through mechanisms that protect the auditor from undue influence, ensuring that the audit serves the public interest rather than the interests of management. That is, auditors must maintain both independence in mind (an objective state of judgment) and independence in appearance (avoiding circumstances that would compromise perceived objectivity) and must have the authority to pursue all necessary audit evidence and to issue an opinion without modification by the reporting entity.

Principle No. 4: The subject matter of audit, for example conduct, performance or achievement or record of events or state of affairs, or a statement or facts relating to any of these, is susceptible to verification by evidence.

This principle remains fundamentally valid because the entire audit process is predicated on the ability to objectively examine and substantiate an assertion. Whether auditing financial statements, compliance with regulations, operational performance, or environmental impact, the auditor's role is to form a conclusion based on a sufficient and appropriate body of evidence. Stakeholders rely on this verification to trust reported information, ensure accountability, and make informed decisions.

Contemporary audit standards and practices are built upon this foundational postulate. The core methodologies of evidence collection-*such as inspection, observation, inquiry, confirmation, and recalculation*-are designed precisely because the subject matter is verifiable. Modern frameworks, including ISA for financial audits or performance audit guidelines, mandate a risk-based approach where the auditor's procedures are directly tailored to gather evidence that can support or refute the given assertion.

Current practice reflects this belief through systematic procedures. For example, to verify a state of affairs like the existence of physical assets, an auditor performs *physical inspection*. To verify a record of events such as sales transactions, they *test documentary evidence* and seek *external confirmations*. To assess the achievement of a performance goal, they *analyze operational data* and *reconcile it* with reported metrics. The development of audit software and data analytics tools further underscores this principle, enabling the examination of entire populations of data to find verifiable evidence for conclusions.

Principle No.5: Standards of accountability, for example of conduct, performance, achievement and quality of information, can be set for those who are accountable; actual conduct, performance, achievement, quality and so on can be measured and compared with these standards by reference to known criteria; and the process of measurement and comparison requires skill and the exercise of judgment.

This principle remains fundamentally valid because effective governance and stewardship in both the public and private sectors are predicated on the ability to define expectations and objectively assess performance. Stakeholders-*including* *citizens, investors, regulators, and donors*-demand transparent mechanisms to hold agents accountable for their actions and results. The entire edifice of audit, oversight, and performance management is built upon this foundational belief that accountability is not merely aspirational but can be operationalized through defined standards and evaluation.

Contemporary practices and frameworks explicitly reflect this postulate. The proliferation of performance audits, key performance indicators (KPIs), governance codes of conduct, and quality management systems (e.g., ISO standards) institutionalize the setting of standards. The measurement and comparison process is executed through skilled professional judgment in activities such as:

* *Conducting performance audits*, where auditors assess economy, efficiency, and effectiveness against predefined objectives and benchmarks.
* *Evaluating internal controls and compliance*, where practitioners test procedures against regulatory frameworks and organizational policies.
* *Applying professional skepticism and judgment* to interpret complex evidence, weigh its sufficiency, and determine the extent of deviation from agreed-upon standards, such as in sustainability reporting assurance or integrity investigations.

Thus, modern accountability systems inherently rely on the skilled calibration of actual outcomes against established criteria, affirming the enduring relevance of this principle.

Principle No. 6: The meaning, significance and intention of financial and other statements and data which are audited are sufficiently clear that the credibility which is given thereto as a result of audit can be clearly expressed and communicated.

This principle remains fundamentally valid because the ultimate value of an audit hinges on the auditor's ability to form a clear opinion and communicate its meaning unambiguously to users. An audit adds credibility only if the assurance provided is understandable and actionable. Today, the clarity of audited information and its resulting assurance is more critical than ever for stakeholders navigating complex financial ecosystems.

Current audit practices and standards explicitly uphold this postulate through rigorous reporting frameworks. Standards such as ISA 700 (Forming an Opinion and Reporting on Financial Statements) require the audit report to be precise, structured, and free from ambiguous language. The move toward extended reporting, including Key Audit Matters (KAMs), directly addresses this principle by forcing explicit communication about the most significant judgments in the audit. That is, auditors must evaluate the clarity and completeness of the financial statements themselves, ensure their opinion is unequivocal (e.g., unqualified, qualified, or adverse), and articulate the basis for their conclusion in a way that is comprehensible to a knowledgeable user. This process ensures that the credibility conferred by the audit is not an opaque claim but a clearly expressed and communicated assurance.

Principle No. 7: An audit produces an economic and social benefit.

This principle remains fundamentally valid. The audit process is driven by the broader societal need for accountability, transparency, and the efficient functioning of capital markets and public institutions. The auditor's work provides essential economic utility by enhancing the reliability of information used for investment, lending, and governance decisions, thereby reducing risk and transaction costs for all market participants. Concurrently, it delivers a profound social benefit by reinforcing institutional trust, promoting ethical conduct, and safeguarding public interest.

Contemporary audit practices and evolving standards reflect a deep-seated belief in this postulate. This is evident in the expansion of the audit mandate beyond historical financial data to include forward-looking information, sustainability reporting (ESG), and internal controls over financial reporting, as seen in frameworks like the Sarbanes-Oxley Act. The profession's focus on fraud detection, going concern assessments, and the communication of key audit matters directly addresses the economic need for risk mitigation and the social demand for corporate accountability. Furthermore, the growth of performance auditing in the public sector explicitly links audit activity to the evaluation of economy, efficiency, and effectiveness in the use of public funds, translating directly into social value. Thus, through its role in verifying information, deterring misconduct, and providing independent assurance, the audit function continues to be a cornerstone for economic confidence and social equity.

Basic Principles in Government Auditing – INTOSAI

The basic principles are:

(1) The SAI should consider compliance with the INTOSAI auditing standards in all matters that are deemed material. Certain standards may not be applicable to some of the work done by SAIs, including those organised as Courts of Account, nor to the non-audit work conducted by the SAI. The SAI should determine the applicable standards for such work to ensure that it is of consistently high quality (see paragraph 8).

Interpretation

Par. 9. In general terms, a matter may be judged material if knowledge of it would be likely to influence the user of the financial statements or the performance audit report.

Par. 10. Materiality is often considered in terms of value but the inherent nature or characteristics of an item or group of items may also render a matter material--for example, where the law or regulation requires it to be disclosed separately regardless of the amount involved.
Par.11. In addition to materiality by value and by nature, a matter may be material because of the context in which it occurs. For example, considering an item in relation to: (a) the overall view given to the financial information; (b) the total of which it forms a part; (c) associated terms; (d) the corresponding amount in previous years.
Par.12. SAIs often carry out activities that by strict definition do not qualify as audits, but which contribute to better government. Examples of non-audit work may include (a) gathering data without conducting substantial analysis, (b) legal work, (c) an information mission of the elected Assembly as regards the examination of draft budgets, (d) an assistance mission for members of the elected Assemblies as regards investigations and consultations of SAIs' files, (e) administrative activities and (f) computer-processing functions. These non-audit activities provide valuable information to decision-makers and should be of consistently high quality.
Par.13. Because of the approach and structure of some SAIs, not all auditing standards apply to all aspects of their work. For example, the collegial and judicial nature of the reviews conducted by Courts of Account make aspects of their work fundamentally different from the financial and performance audits conducted by SAIs which are organised under a hierarchic system led by an Auditor-General or a Comptroller General.
Par.14. To ensure that high quality work is done, appropriate standards must be followed. The objectives of the particular type of work or the particular assignment should dictate the specific standards that are followed. Each SAI should establish a policy on which INTOSAI standards, or other specific standards, should be followed in carrying out the various types of work that the organisation conducts to ensure that the work and products are of high quality.

Evaluation

Principle No. 1: The SAI should consider compliance with the INTOSAI auditing standards in all matters that are deemed material.

This principle remains fundamentally valid as it establishes the INTOSAI standards as the essential framework for credible and professional public sector audit work. Compliance is driven by the need for SAIs to uphold supreme audit quality, thereby reinforcing their legitimacy, independence, and the public trust placed in their findings.

Today, the systematic consideration of these standards in material matters is reflected in several key practices. SAIs integrate the INTOSAI framework-encompassing foundational principles, prerequisites, and performance standards-into their internal policies, methodologies, and quality assurance systems. This ensures a disciplined approach to planning, executing, and reporting on audits. For instance, the standards mandate rigorous processes for risk assessment, evidence gathering, and forming objective conclusions, which are operationalized through detailed audit manuals and checklists.

The principle appropriately acknowledges that certain standards may not be fully applicable to all SAI activities. This is particularly relevant for:

1. *Supreme Audit Institutions organised as Courts of Account (Jurisdictional SAIs)*: Their unique judicial or quasi-judicial functions, which may involve issuing legally binding rulings or imposing sanctions, operate under distinct procedural legal frameworks that necessarily take precedence over general auditing standards in those specific contexts.
2. *Non-audit work conducted by the SAI*: Activities such as consultancy, capacity-building projects, or academic research fall outside the strict definition of an audit and therefore are not governed by audit standards.

In both cases, the onus is on the SAI to actively "determine the applicable standards." This involves a conscious process of identifying which INTOSAI principles (e.g., those related to ethics, transparency, or quality control) remain relevant and should be adhered to as benchmarks of professional excellence. By doing so, the SAI ensures that all its outputs, even those not strictly defined as audits, are of consistently high quality and integrity.

Principle No.2: The SAI should apply its own judgement to the diverse situations that arise in the course of government auditing (see paragraph 15).

Explanation

Par.15. The basic auditing principles stipulate that The SAI should apply its own judgement to the diverse situations that arise in the course of government auditing (see paragraph 6b).

Par. 16. Audit evidence plays an important part in the auditor's decision concerning the selection of issues and areas for audit and the nature, timing and extent of audit tests and procedures.

Par. 17. The terms of the audit mandate with which the SAI is endowed override any accounting or auditing conventions with which they conflict and hence have a crucial bearing on the auditing standards that the SAI applies. Consequently, the INTOSAI auditing standards-*and indeed any auditing standards external to the SAI*-cannot be prescriptive or have a mandatory application to the SAI or members of its staff.

Par.18. The SAI must judge the extent to which external auditing standards are compatible with the SAI's fulfilment of its mandate. The SAI should recognise, however, that the INTOSAI auditing standards embody a consensus of opinion among government auditors and try to apply them where they are compatible with the SAI's mandate. The SAI should seek removal of incompatibilities where this is necessary to permit the adoption of desirable standards.

Par.19. For some elements of the SAI's mandate, particularly in regard to the audit of financial statements, the SAI's audit objectives may be akin to the objectives of audits in the private sector. Correspondingly, private sector standards for financial statements auditing which are promulgated by official regulatory bodies might be applicable to the government auditor.

Evaluation

This principle remains fully valid because the complex, varied, and often unique nature of public sector operations necessitates a flexible and principled approach beyond rigid, one-size-fits-all rules. The rationale for professional judgement is driven by the need to adapt core auditing standards to diverse contexts-such as different levels of government, various public programs, and emerging risks-while consistently upholding audit quality and objectivity.

Today, the application of professional judgement is fundamental to credible and relevant government auditing. It is exercised through the auditor's expertise in public administration, legal frameworks, and the specific subject matter of the audit.

Current audit practices and standards reflect this postulate by empowering auditors to tailor their approach. That is, auditors must use their judgement to interpret criteria, assess materiality and significance, evaluate the appropriateness of management's assumptions, design context-specific audit procedures, and weigh audit evidence to form conclusions and recommendations that are both sound and actionable within the specific public sector environment.

Principle No.3: With increased public consciousness, the demand for public accountability of persons or entities managing public resources has become increasingly evident so that there is a need for the accountability process to be in place and operating effectively (see paragraph 20).

Explanation

Par.21. In some countries, arrangements require the accountable entities to report to a President, Monarch or State Council, but in most they report to an elected legislature, either directly or through the executive branch of government. Certain SAIs have a jurisdictional status. This jurisdictional power is exercised, depending on the country, over the accounts, over the accountants, or even over administrators. The judgements and decisions that these institutions make are natural complements to the administrative audit function with which they are charged. Their jurisdictional actions should be seen as part of the logic of the general objectives pursued by external audit and in particular those objectives which relate to accounting questions.

Par.22. Public enterprises are also required to fulfil public accountability obligations. Public enterprises may include commercial undertakings, e.g., entities established by statute or executive order or in which the Government has a controlling interest. Irrespective of the manner in which they are constituted, their functions, degree of autonomy or funding arrangements, such entities are ultimately accountable to the supreme law-making body.

Evaluation

This principle remains critically valid. Heightened public awareness, fueled by digital media, global transparency movements, and high-profile scandals, has intensified societal demand for stewards of public funds to justify their actions and outcomes. Citizens, civil society organizations, and international bodies now explicitly expect robust accountability mechanisms as a fundamental component of good governance.

Current practices and standards directly reflect this imperative. The proliferation of integrated reporting, sustainability audits, and mandatory public sector transparency initiatives operationalizes the demand for accountability. Standards and frameworks increasingly mandate not only financial probity but also the demonstration of economy, efficiency, effectiveness, and ethical conduct in the use of public resources.

Specific mechanisms have been institutionalized to fulfill this postulate. These include:

* *Social Audits and Participatory Budgeting*, which directly involve stakeholders in reviewing performance and allocating resources.
* *Performance Audits* conducted by supreme audit institutions (SAIs) that assess whether public resources are managed properly and achieve intended objectives.
* *Public Transparency Portals* and mandatory disclosure regimes that provide accessible data on budgets, spending, and contracts.
* *Whistleblower Protection Laws* that encourage the reporting of malfeasance.

Therefore, the accountability process is no longer an abstract concept but is embodied in concrete, evolving practices designed to validate the responsible management of public resources and maintain public trust.

Principle No.4: Development of adequate information, control, evaluation and reporting systems within the government will facilitate the accountability process. Management is responsible for correctness and sufficiency of the form and content of the financial reports and other information (see paragraph 23).

Explanation

Par. 24. The correctness and sufficiency of the financial reports and statements are the entity's expression of the financial position and the results of operations. It is also the entity's obligation to design a practical system which will provide relevant and reliable information.

Evaluation

This principle remains fundamentally valid because public accountability is contingent upon the existence of robust systems that generate reliable and timely information. The effective demand for transparent governance and the stewardship of public resources requires mechanisms that track performance, safeguard assets, and ensure compliance. Management's explicit responsibility for the "correctness and sufficiency" of reports establishes a clear foundation for holding public officials answerable for their use of resources.

Today, this principle is operationalized through comprehensive public financial management (PFM) frameworks. The development of adequate systems is reflected in the implementation of integrated financial management information systems (IFMIS), internal control standards, performance evaluation frameworks, and standardized public sector reporting. Current practices and international standards, such as those promoted by the International Public Sector Accounting Standards (IPSAS) and INTOSAI, embody the belief in this postulate. That is, governments are expected to establish internal controls to prevent error and fraud, design evaluation systems to assess economy and efficiency, maintain information systems that capture accurate transactional data, and produce reports that fairly present financial position and performance. These systems collectively facilitate accountability by providing the auditable evidence and structured information necessary for oversight bodies, such as supreme audit institutions (SAIs), legislators, and the public, to assess management's discharge of its responsibilities.

Principle No.5: Appropriate authorities should ensure the promulgation of acceptable accounting standards for financial reporting and disclosure relevant to the needs of the government, and audited entities should develop specific and measurable objectives and performance targets (see paragraph 25).

Explanation

Par. 26. The SAIs should work with the accounting standards setting organisations to help ensure that proper accounting standards are issued for the government.

Par.27. The SAIs should also recommend to the audited entities that measurable and clearly stated objectives be established and that performance targets be set for these objectives.

Evaluation

This principle remains fundamentally valid. Its necessity is driven by the public's and oversight bodies' demand for *transparency, accountability, and performance assessment* in the use of public resources. Authoritative standards provide a consistent, comparable framework for reporting, while clear objectives and targets are essential for moving beyond mere compliance to demonstrate efficiency, effectiveness, and the achievement of public policy goals.

Current public sector financial management frameworks globally reflect a steadfast belief in this dual postulate. The widespread adoption of *International Public Sector Accounting Standards (IPSAS)* or similar accrual-based standards by national authorities fulfils the first half, creating a common language for credible financial reporting. Concurrently, the integration of *performance-based budgeting and* requirements for *Strategic Plans* with *Key Performance Indicators (KPIs)* operationalizes the second half, mandating that entities define and measure their outcomes.

In practice, this principle is upheld through a linked cycle of standard-setting, planning, execution, and audit:

1. *Standard Promulgation*: Legislative bodies and finance ministries (e.g., the U.S. FASAB, national treasuries) mandate the use of specific accounting standards (e.g., IPSAS, GAAP) through laws and regulations.
2. *Objective & Target Setting*: Audited entities are required to develop strategic and operational plans that translate their mission into specific, measurable, achievable, relevant, and time-bound (SMART) performance targets.
3. *Integrated Reporting*: Entities must then produce financial statements compliant with the promulgated standards alongside performance reports that detail results against their stated objectives.
4. Audit Verification: Supreme Audit Institutions (SAIs) conduct not only financial audits to verify compliance with accounting standards but also *performance audits* to assess whether entities have met their stated objectives economically, efficiently, and effectively. This process proves both the reliability of the financial data and the substantiation of reported performance.

Principle No.6: Consistent application of acceptable accounting standards should result in the fair presentation of the financial position and the results of operations (see paragraph 28).

Explanation

Par. 29. The assumption that consistency in application of accounting standards is a prerequisite of fairness means that an audited entity must comply with accounting standards appropriate in the circumstances, as well as the requirement of applying such accounting standards in a consistent manner. An auditor should not consider compliance with accounting standards in a consistent manner as a definitive proof of presenting fairly the various financial reports. Fairness is an expression of an auditor's opinion that goes beyond the limits of consistent application of accounting standards. Such an assumption emphasises that the auditing standards are no more than the minimum requirements for an auditor's obligation. Going beyond that minimum is for the auditor's judgement.

Evaluation

This principle remains fundamentally valid because the integrity and comparability of financial information depend on the uniform application of established frameworks. Investors, regulators, and other users rely on the consistent use of standards like IFRS or GAAP to make meaningful comparisons across periods and between entities. Auditors play a critical role in upholding this principle by evaluating whether accounting policies are applied consistently from one period to the next and in accordance with the relevant financial reporting framework.

Current audit practices and standards reflect a deep-seated belief in this postulate. A core objective of an audit is to obtain reasonable assurance that the financial statements are free from material misstatement, whether caused by error or fraud. To achieve this regarding consistency, auditors must perform procedures such as reviewing accounting policy disclosures, testing significant transactions and balances for appropriate classification and measurement, and evaluating any changes in accounting policies or estimates. The issuance of an unmodified audit opinion implicitly affirms that, in the auditor's judgment, the principle of consistent application has been adhered to, thereby supporting the fair presentation of the entity's financial performance and position.

Par.30-Principle No.7: The existence of an adequate system of internal control minimises the risk of errors and irregularities.

Explanation

Par. 31. It is the responsibility of the audited entity to develop adequate internal control systems to protect its resources. It is not the auditor's responsibility. It is also the obligation of the audited entity to ensure that controls are in place and functioning to help ensure that applicable statutes and regulations are complied with, and that probity and propriety are observed in decision making. However, this does not relieve the auditor from submitting proposals and recommendations to the audited entity where controls are found to be inadequate or missing.

Evaluation

This principle remains valid because organizations and stakeholders fundamentally rely on structured internal processes to ensure operational integrity, safeguard assets, and ensure the reliability of financial reporting. A well-designed internal control system provides reasonable assurance that transactions are properly authorized, recorded, and reported, thereby directly reducing the probability of unintentional mistakes (errors) and intentional fraud (irregularities). In today's complex regulatory and digital environment, this framework is critical not only for financial accuracy but also for compliance, cybersecurity, and effective governance.

Contemporary practices and standards reflect a sustained belief in this postulate through the widespread adoption of integrated control frameworks such as COSO

(Committee of Sponsoring Organizations of the Treadway Commission). This is operationalized by organizations and auditors who:

* *Perform risk assessments* to identify and prioritize areas susceptible to errors or fraud.
* *Design and implement control activities* (such as approvals, reconciliations, segregation of duties, and IT general controls) to mitigate identified risks.
* *Establish information systems and communication channels* to capture and process relevant data accurately.
* *Conduct ongoing monitoring and separate evaluations* to ensure controls function effectively over time.
* *Rely on and test these controls* during financial audits, which allows auditors to tailor the nature and extent of substantive testing based on the control environment's strength.

Thus, the principle endures as a cornerstone of reliable financial management and accountability.

Principle No.8: Legislative enactments would facilitate the co-operation of audited entities in maintaining and providing access to all relevant data necessary for a comprehensive assessment of the activities under audit (see paragraph 32).

Explanation

Par. 33. The SAI must have access to the sources of information and data as well as access to officials and employees of the audited entity in order to carry out properly its audit responsibilities. Enactment of legislative requirements for access by the auditor to such information and personnel will help minimise future problems in this area.

Evaluation

This principle remains fundamentally valid because the audit function's effectiveness is contingent upon unfettered access to information. In an era of increasing organizational complexity, digital data, and heightened risks (e.g., cybersecurity, fraud), reliance on voluntary cooperation is insufficient. Legislative mandates provide the necessary authority and legal foundation for auditors to obtain complete, timely, and unaltered data, which is the bedrock of an independent and objective assessment.

Current audit practices and regulatory standards reflect a deep-seated belief in this postulate. This is evidenced by laws and regulations that empower supreme audit institutions and external auditors, such as compulsory production orders, rights of access, and penalties for obstruction. The modern audit framework legally obligates entities to maintain robust internal controls and accurate record-keeping systems, explicitly to enable this access.

That is, legislative enactments facilitate cooperation by:

1. *Mandating Record Maintenance*: Requiring entities to keep complete financial and performance records for a defined period.

2. *Granting Right of Access*: Providing auditors with the statutory authority to access all relevant documents, data, and personnel without hindrance.
3. *Imposing Obligations for Cooperation*: Legally requiring management and officials to provide information, explanations, and assistance to auditors.
4. *Establishing Consequences for Non-Compliance*: Defining penalties for the failure to maintain records, provide access, or cooperate with audit inquiries, thereby ensuring the principle is enforceable.

Principle No.9: All audit activities should be within the SAI's audit mandate (see paragraph 34).

Explanation

Par. 35. SAIs generally are established by the supreme lawmaking body, or by constitutional provision. In some cases elements of the SAI's role may be by convention rather than by specific legal provision. Commonly, the establishing law or regulation sets out the form of the SAI (such as court, board, commission, statutory office or ministry), the terms and conditions of incumbency, tenure, powers, duties, functions and general responsibilities, and other matters governing the holding of office and the discharge of the functions and duties to be performed.

Par.36. Whatever the arrangements, the essential function of the SAI is to uphold and promote public accountability. In certain countries, the SAI is a court, composed of judges, which has authority over State accountants who must render accounts to it. This jurisdictional function requires the SAI to make sure that whoever is charged with dealing with public funds is accountable to it and is in this regard subject to its jurisdiction.

Par.37. There exists an important complementarity between this jurisdictional authority and the other characteristics of audit. The characteristics should be viewed as part of the logic of the general objectives pursued by external audit and more particularly those which relate to accounting management.

Par.38. The full scope of government auditing includes regularity and performance audit.

Par.39. Regularity audit embraces:

(a) attestation of financial accountability of accountable entities, involving examination and evaluation of financial records and expression of opinions on financial statements.
(b) attestation of financial accountability of the government administration as a whole.
(c) audit of financial systems and transactions including an evaluation of compliance with applicable statutes and regulations.
(d) audit of internal control and internal audit functions;
(e) audit of the probity and propriety of administrative decisions taken within the audited entity; and
(f) reporting of any other matters arising from or relating to the audit that the SAI considers should be disclosed.

Par.40. Performance audit is concerned with the audit of economy, efficiency and effectiveness and embraces:
(a) audit of the economy of administrative activities in accordance with sound administrative principles and practices, and management policies;
(b) audit of the efficiency of utilisation of human, financial and other resources, including examination of information systems, performance measures and monitoring arrangements, and procedures followed by audited entities for remedying identified deficiencies; and
(c) audit of the effectiveness of performance in relation to the achievement of the objectives of the audited entity, and audit of the actual impact of activities compared with the intended impact.

Par.41. In practice there can be an overlap between regularity and performance auditing, and in such cases classification of a particular audit will depend on the primary purpose of that audit.

Par.42. In many countries the mandate for performance auditing will stop short of review of the policy bases of government programs. In any case the mandate should clearly delineate the SAI's powers and responsibilities in relation to performance auditing in all areas of government activity, among other things to facilitate the application of appropriate auditing standards by the SAI.

Par.43. In some countries the constitution or legislation in force do not always confer on the SAI the authority to audit "effectiveness" or "efficiency" of the financial management of the Executive. In these cases evaluation of the appropriateness or the utility of administrative decisions and the effectiveness of management is for Ministers, to whom is given the task of the organisation of administrative services and who are responsible for their management before the legislative body. The expression which would appear in this case to be the most adequate to describe the audits of the SAI which go beyond the traditional framework of regularity and legality is that of "audit of good management." Such an audit aims to proceed with an analysis of public expenditure in the light of general principles of sound management. The two types of audit--of regularity and of management--can in practice be carried out in one operation, the more so since they are mutually reinforcing: audits of regularity being able to prepare audits of management, and the latter resulting in the correction of situations causing irregularities.

Par.44. Public accountability will be more effectively promoted where the mandate enables the SAI to conduct, or direct the conduct of, regularity and performance auditing of all public enterprises.

Evaluation

This principle remains fundamentally valid because the legitimacy and authority of a Supreme Audit Institution (SAI) derive solely from its legally defined mandate. Acting within this prescribed scope is essential to maintain public trust, ensure legal defensibility, and uphold the rule of law. The mandate establishes the boundaries of the SAI's jurisdiction, the types of audits it may conduct, and the entities it may examine, thereby preventing overreach and protecting its independence from perceptions of arbitrary action.

Current audit practices and standards reflect belief in this postulate through strict adherence to foundational laws and frameworks. That is, auditors must first reference constitutional provisions, audit acts, or other legislative instruments to define the scope of an engagement. All planning, execution, and reporting are then deliberately scoped to fall within these legal parameters, ensuring that findings and recommendations are legally grounded and enforceable. This is operationalized through practices such as mandate-based strategic planning, jurisdictional checks prior to engagement initiation, and clear disclosures in audit reports outlining the legal basis for the audit.

Principle No.10: SAIs should work towards improving techniques for auditing the validity of performance measures (see paragraph 45).

Explanation

Par.46. The expanding audit role of the auditors will require them to improve and develop new techniques and methodologies to assess whether reasonable and valid performance measures are used by the audited entity. The auditors should avail themselves of techniques and methodologies of other disciplines.

Par.47. The scope of the audit mandate will determine the scope of the standards to be applied by the SAI

Evaluation

This principle remains valid because the demand for credible and meaningful performance information has significantly increased, driven by the public's and policymakers' need to assess whether government programs achieve intended outcomes efficiently and effectively. The legitimacy and utility of performance auditing rely on the accuracy, relevance, and reliability of the performance measures themselves. Therefore, Supreme Audit Institutions (SAIs) must continuously refine their methodologies to evaluate not just whether reported performance data is accurate, but whether the measures are well-designed, appropriate, and truly indicative of program success or failure.

Current practices and evolving standards reflect this imperative. SAIs work to improve techniques by developing specialized audit frameworks that assess the inherent validity of performance metrics-examining their alignment with objectives, freedom from bias, and sensitivity to program effects. This involves moving beyond traditional financial verification to employ methods such as criteria development with stakeholders, data reliability testing, logical framework analysis, and the application of data analytics to identify anomalies or patterns that indicate measurement flaws. By systematically auditing the design and implementation of performance measurement systems, SAIs help ensure that reported outcomes are a sound basis for public accountability and informed decision-making.

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Appendix 1- Research questionnaire structure

(1) Personal data: sector, nationality, gender, education, position/role, work experience/ organizational tenure; prior audit experience, institution, department, and annual income level.

(2) Three items focused on social accountability consciousness:

(a) awareness of the nature of social accountability mechanisms (e.g participatory budgeting, public expenditure tracking, the commission of inquiries, etc)- (Pereira & Figueira,2021; Bemelmans-Videc,2017; Ritz et al.,2014**;** Peruzzotti and Smulovitz,2006; Ackerman,2005; Milena et al.,2004.

(b) University and/or professional education in auditing principles enhances critical thinking and reduces susceptibility to fraud involvement, and

(c) Awareness of auditors' expectations regarding management of public funds could strengthen the mind against budget-related frauds (Boydell et al.,2019; Fox ,2015).

(3) Six items focused on the influence of civic education on ethical budgeting behavior:

(a) Civic education curriculum for public servants/adults on investor mentality/entrepreneurial mindset in handling public funds as if it is personal business capital can discourage fraud behaviour (Aksinudin, 2022; Malena et al.,2004)

(b) Civic education curriculum for public servants/adults teaching entrepreneurial mindset in the exercise of prudence over handling of public funds as if private business capital is being spent can reshape mindsets against fraud and corruption behaviour (Smolentseva,2023; Adigwe,2022; Owusu-Agyeman and Fourie-Malherbe,2021).

(c) Civic education curriculum for public servants/adults teaching public interest value maximization- spending public funds in the best interest of society can discourage budget-related frauds and behaviour (Marquette, 2007; Heliantono et al., 2020; Fahmi et al., 2021; Adigwe, 2022).

(d) Civic education curriculum for public servants/adults teaching honesty in financial transactions and reporting on the use of public funds can reshape mindsets against budget-related frauds and behaviour (Teichmann and Falker,2020; Adeyemi (2019)

(e) Civic education curriculum for public servants/adults teaching effective organization policing [effectiveness in design and implementation with understanding of strong internal controls] over management of public funds can reshape mindsets against fraud behaviour (Marquette, 2007).

(f) Civic education curriculum for public servants/adults on investor mentality/entrepreneurial mindset in handling public funds can reshape mindsets against fraud and corruption behaviour.

(4) Five items focused on the influence of fair rewards system as a social accountability tool

(a) Top leadership support is required for the proposed civic education curriculum to be effective (Chen and Liu,2018);
(b) Fair wages are needed for the effectiveness of civic education as an anti-budget-related fraud tool (Demirgüç-Kunt et al., 2023; Gose,2013; Akerlof and Yellen's,1988,1990; Szulist,2016);
(c) Recognition and rewards for public service-oriented behaviors also are needed for the effectiveness of civic education as an anti-budget-related fraud tool (Williams,1956); Chzhan, 2022);
(d) Job satisfaction or opportunities for meaningful jobs are needed for the effectiveness of civic education as an anti-budget-related fraud tool (Cohn et al.,2013).
(e)Financial rewards play a crucial role in motivating public sector professionals, improving job satisfaction, overall performance, and the effectiveness of civic education as an anti-budget-related fraud tool (Demirgüç-Kunt et al. 2023; Cornell & Sundell,2020; Yui,2016).
For all the items included in the questionnaire, participants were asked to indicate their perception on a five-point Likert scale from 1=strongly disagree to 5=strongly agree with the listed statements.

Appendix 2. Semi-structured interviews protocol

The main interview themes and sub-themes relevant for this paper are summarized below.

Interview protocol

Preamble

The interview is on budget slack practices in the public sector of developing countries. We are interviewing sectional heads and senior management at this stage who participate in budget decisions and have prior auditing education as an additional advantage.

Budget expenditure slack involves over-estimating expenditure in the budget most times to guide against budget cuts at the approval stage. The slack becomes fraud if misappropriated. We are investigating how education in social accountability can combine good salaries to deal with budget slack fraud behavior. The curriculum for education in social accountability is also based on suggested themes that could help auditors satisfy public expectations and improve public finances e.g spending public funds with investor mentality as if it is personal business capital as well as with public interest at heart. It is academic research and thus requires no identity of participants and their organizations.

Responses should briefly reflect:
1) budget slack practice;2) reason in defense of the slack; 3) how the slack is managed

Thank you for your precious time.

Main interview excerpts

Background

Q1. Can you give a brief description of your educational background and work experience
Q2. Are there any other information on your educational accomplishments and work experience that you would like this interview to capture?
Q3. (Main) Is your expenditure budget always 100% approved? If no, briefly describe the process
Q4. What type of budgeting system do you practice? E.g. traditional or incremental budgeting, zero-based budgeting etc.
Q5. What reasons are used as a basis for over-estimating expenses in your annual budget?
Q6. How do you ensure that your expenditure budget is approved or scale through approval stage?
Q7. Is your expenditure budget always 100% approved? if not, what is the procedure?
Q8. How do you handle the unspent budget (left-over) at year end or end of budget period?
Q9. How does procurement department participate in the budget process?
Q10. How does your organization handle incidence of budget frauds (if any) ?
Q11. How do you think staff training in the following areas can prevent use of budgets for frauds?
a) investor mentality i.e spending organization funds as if personal business capital is involved
b) public interest at heart in handling public funds
c) honesty in financial transactions and reports
d) clarity of budget objectives and full participation in setting budget goals
e) effective organization (policing) controls.
Q12. How do you think salaries comparable/close to that of private sector can reduce frauds in the public sector?

Table 15: Codes
Q13. Do you think training in section 11 combined with good salaries in section 12 would be enough to address use of budgets in the public sector for frauds? Otherwise briefly state your suggestions.

Q14. How do you see the role of mindset in all these-civic education plus good salary- in budget fraud behavior?

Appendix 3. Common transcript themes

Domain: Budgeting system

“We use a mix of zero-based/activity-based program budgeting system as an NGO”.
“We use incremental/traditional budgeting system in government”.

Sub-domain: Basis for overestimating expenses in annual budget

“Basically, it’s the same reason-to guide against budget cuts”
“Basically, it’s inflation anticipation and market conditions”.
“Market condition, time value of money and inflation; we use estimate when there is no basis.”

Domain**:** Budgeting system
Sub-Domain**:** Zero-based, Program budgeting, Activity-based budgeting.
Techniques: Commissions, collusion and insider culture as budget fraud techniques

“What they do is to build their commission/cuts into the budgets by budget officers or those in charge of grant awards.
“Collusion with vendors to fake invoices and culture of insiders”.

Domain: Budget fraud techniques
Sub-Domain: Collusion with vendors to inflate invoices; Use of trainings to exhaust budgets.
Common Themes: Staff training
“I think it is ethical issue. Training is even being used to exhaust budgets. So, what is needed is deterrence like sanctions”.
“This is good for capacity building and monitoring but honestly we do not targeted themes on ethical side for our budget training.”
“a) It helps staff to take ownership to avoid mis-using of funds; b) to be a good public servant-to have integrity; c) yes- will improve information accuracy/reliability; d) will organization to achieve its goals based on the information given; will help in decision making”
“Continuous training will be very important; staff need to be reminded that organizational funds are not personal funds. Integrity is part of our core values. We participate to ensure that we have a good budget”.

Domain: Impact of comparable salaries on budget fraud behavior
Sub-Domain: Fair wages Mind sets and patriotism
Common Themes: Impact of comparable wages on budget fraud
" To some extent, but sanctions are better."
"It will help a lot; salary is never enough; it will reduce fraud."
"if someone is given a budget of 3m dollars on a salary of less than 1000 dollars can be tempting."
"I think it is more of mindset and patriotism"

Appendix 4. Summary of tested hypotheses

	Holmbeck,1997				
		Mediation			
	Direct	Full	Partial	Moderation	
Hypothesis	B	B	B	B	Decision
H1: ACE → SAC	.586** f^2,.51**	N/A	.554** f^2,.337**	.598** f^2,.332**	Accepted
H2: ACE → FRS	.510** f^2,.359**	.530** f^2,.390**	.526** f^2,.383**	.526** f^2,.382**	Accepted
H3: FRS →SAC (Direct effect)	.346** f^2, .132 (p>0.05)	.344** f^2,.130 (p>.05)	.055(0.602) f^2,.003 (p>.05)	.069(p>.05) f^2, .005 (p>.05)	Mixed
H4a [Full mediation]: ACE→FRS → SAC (Specific indirect effect) **H4b** [Partial mediation]: ACE→FRS → SAC (Specific indirect effect)	N/A	.182** f^2,.130 (p>.05)	.029 (0.616) f^2,.003 (p>0.05)	.036 (0.527) f^2,.003 (p>0.05)	Falsified
H6 [Moderation]: ACE*FRS→ SAC (Conditional effect)		N/A	N/A	.022(p>.05) f^2,.005 (>.05)	Falsified
Culture → SAC	-0.043				
Education → SAC	-0.048				
Gender → SAC	-0.237				
Position → SAC	0.010				
Work experience → SAC	0.005				

Source: Author's analysis

RESEARCH WORK AND PUBLICATIONS

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[1] Udoh, S. (2022). REVIEW OF FINANCIAL MANAGEMENT IN PRIVATE FIRMS: UNLOCKING THE CASH MANAGEMENT MODEL. *International Journal of Entrepreneurial Knowledge*. Vol. 10, No. 2, pp. 95-106. https://orcid.org/0000-0002-9282-8539

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[8] Udoh, S. (2026). What Then Is Sufficient? Controls Versus Fair Wages Dilemma in Fraudulent Public Budgeting: A Qualitative Evidence. *Qualitative Research in Accounting and Management*

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Page 114

Wrong: [5] Udoh,S., Wnuk-Pel,T., & Popesko,B. (2026). Advanced Civic Education and Fair Reward System in Ethical Public Budgeting: What the Evidence Says. Accounting Forum (1467-6303).

Correct: [5] Udoh,S., Wnuk-Pel,T., & Popesko,B. (2026). Advanced Civic Education and Fair Reward System in Ethical Public Budgeting: What the Evidence Says. Accounting Forum (1467-6303). (UNDER REVIEW)

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