

# **BINDURA UNIVERSITY OF SCIENCE EDUCATION**



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**Masters' Degree**

**In Purchasing and Supply**

**TITLE:**

**An Assessment of E-Procurement Systems in Public Sector Procurement: A Case  
study of the Zimbabwe Public Service Commission**

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## Abstract

**Title: An Assessment of E-Procurement Systems in Public Sector Procurement: A Case Study of the Zimbabwe Public Service Commission.**

This study provides a holistic assessment of the implementation and effectiveness of the electronic procurement (e-procurement) system within the Zimbabwe Public Service Commission (PSC). Driven by the Public Procurement Act of 2017, the shift to e-procurement represents a cornerstone of Zimbabwe's public sector modernisation and governance reform agenda, aimed at enhancing efficiency, transparency, and accountability.

Despite a robust policy framework, empirical evidence on the system's performance in key institutions like the PSC remains scarce. This research, therefore, sought to investigate the paradoxical outcomes of this digital transition. Guided by an integrated theoretical framework combining Transaction Cost Economics, Principal-Agent Theory, the Technology Acceptance Model, and Institutional Theory, the study adopted a descriptive, mixed-methods case study design. Data was gathered through surveys from 118 participants, including PSC procurement staff and registered suppliers, supplemented by 25 in-depth interviews with senior managers and regulators, and document analysis.

The findings reveal a landscape of differentiated impacts. The e-procurement system has been highly successful in enhancing procedural transparency and strengthening accountability through an immutable digital audit trail. However, its effect on operational efficiency is critically hampered by technical bottlenecks, including system instability and a profound lack of interoperability with other government financial systems. Furthermore, the study uncovers a dualistic impact on supplier participation,

where the system enhances market access for large firms while erecting significant cost and complexity barriers for Small and Medium Enterprises (SMEs). The research identifies a critical "implementation-performance gap," where policymakers perceive success in oversight, while end-users experience frustration due to technical and adaptive challenges.

The study concludes that while the PSC has successfully modernised the facade of procurement, it has been less successful in modernising its underlying engine. The study contributes to knowledge by proposing a Dual-Aspect Model for understanding e-procurement outcomes and offers evidence-based recommendations for policy, practice, and future research to bridge the gap between compliance and strategic capability in Zimbabwe's digital procurement journey.

*Keywords: E-Procurement, Public Service Commission, Zimbabwe, Transparency, Efficiency, Digital Governance, Transaction Cost Economics, Technology Acceptance Model.*

## LIST OF ABBREVIATIONS

|                  |                                                        |
|------------------|--------------------------------------------------------|
| API -            | Application Programming Interface                      |
| eGP -            | Electronic Government Procurement                      |
| e-Procurement -  | Electronic Procurement                                 |
| GDP -            | Gross Domestic Product                                 |
| GFMIS -          | Government Financial Management Information System     |
| H <sub>0</sub> - | Null Hypothesis                                        |
| H <sub>1</sub> - | Alternative Hypothesis                                 |
| ICT -            | Information and Communication Technology               |
| NPM -            | New Public Management                                  |
| NPPDS -          | National Public Procurement Digitalisation Strategy    |
| NVivo -          | Qualitative Data Analysis Software                     |
| OECD -           | Organisation for Economic Co-operation and Development |
| PAT -            | Principal-Agent Theory                                 |
| PEOU -           | Perceived Ease of Use                                  |
| PRAZ -           | Procurement Regulatory Authority of Zimbabwe           |
| PSC -            | Public Service Commission (Zimbabwe)                   |
| PU -             | Perceived Usefulness                                   |
| SD -             | Standard Deviation                                     |
| SEM -            | Structural Equation Modelling                          |
| SME -            | Small and Medium Enterprise                            |
| SPSS -           | Statistical Package for the Social Sciences            |
| SRM -            | Supplier Relationship Management                       |
| TAM -            | Technology Acceptance Model                            |
| TCE -            | Transaction Cost Economics                             |
| WMA -            | World Medical Association                              |
| ZIMRA -          | Zimbabwe Revenue Authority                             |

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# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Public procurement represents one of the largest areas of government expenditure globally, often accounting for between 10% and 20% of GDP in developing economies. It serves as a key instrument for achieving social and economic objectives, promoting value for money, and ensuring equitable service delivery. In Zimbabwe, the Public Service Commission (PSC) plays a critical role in the administration and management of procurement activities for the civil service, encompassing a wide range of goods, services, and works that underpin public administration.

Public procurement is a significant fiscal activity, crucial for service delivery and economic development. In Zimbabwe, the Public Service Commission (PSC) is central to procuring goods and services for the civil service. Historically, its manual, paper-based systems were prone to inefficiency, opacity, and malpractice (Moyo, 2024).

A major reform came with the 2017 Public Procurement Act and the establishment of the Procurement Regulatory Authority of Zimbabwe (PRAZ), which promoted electronic Government Procurement (eGP) as a tool for modernisation. E-procurement leverages digital technologies to streamline processes, reduce costs, and enhance transparency and accountability, aligning with Zimbabwe's national digitisation goals.

However, the practical implementation of e-procurement in the public sector has been inconsistent, with challenges in user adoption, system reliability, and overall effectiveness. Therefore, this study presents a critical assessment of the e-procurement system's implementation within the PSC, evaluating its achievements and persistent challenges to inform future policy and practice.

## 1.2 Problem Statement

Although Zimbabwe's policy and legal frameworks strongly promote e-procurement as a governance reform, empirical evidence on its actual performance within the PSC remains limited. While the system is designed to streamline workflows, reduce human interference, and promote transparency, anecdotal evidence suggests that these outcomes are not fully realised in practice.

The transition from paper-based to digital systems introduces complex organisational, technical, and behavioural challenges (Bof and Pevitali, 2024). In many public entities, e-procurement adoption risks becoming a symbolic or ceremonial exercise; implemented for compliance rather than transformation. Issues such as poor internet connectivity, system downtime, limited interoperability with financial systems, and inadequate training can significantly reduce effectiveness (Tassabehji and Moorhouse, 2021). Additionally, staff resistance to change and low supplier digital literacy may further constrain utilisation and trust in the system.

Consequently, there is a critical knowledge gap concerning the measurable impact of e-procurement on procurement efficiency, transparency, and accountability within the PSC. Without a systematic and evidence-based assessment, policymakers and managers risk making decisions based on assumptions rather than empirical insights. This study therefore seeks to evaluate how effectively the PSC's e-procurement system has been implemented, what challenges persist, and how it can be strengthened to achieve the intended benefits of public sector digitalisation.

## 1.3 Research Objectives

To assess the impact of e-procurement on procurement efficiency , transparency and accountability within the Zimbabwe Public Service Commission.

To identify the challenges faced in the implementation of e-procurement in Zimbabwe Public Service Commission.

To propose evidence based policy and operational recommendations based on findings to enhance the e-procurement system in Zimbabwe's public sector.

To evaluate the perceptions and experiences of key stakeholders (PSC procurement officials, registered suppliers, PRAZ representatives, and end-users) regarding the implementation and outcomes of the e-procurement system.

## **Research Questions**

The research sought answers to the following enquiries;

How does the adoption of e-procurement affect the efficiency, transparency and accountability of procurement processes in the Zimbabwe Public Service Commission?

What challenges does the Zimbabwe Public Service Commission face in implementing and using e-procurement systems?

Based on the findings, what evidence-based policy and operational recommendations can be proposed to strengthen e-procurement adoption across Zimbabwe's public sector?

What are the perceptions and experiences of key stakeholders (PSC officials, suppliers, PRAZ representatives, etc.) regarding the implementation and outcomes of the e-procurement system?

## **Hypotheses**

1. To what extent has the e-procurement system reduced procurement cycle times and transaction costs, and what factors hinder or enable these efficiency gains?
2. What are the predominant technical and infrastructural barriers (e.g., system

interoperability, connectivity, platform reliability) affecting the system's performance?

3. How do PSC procurement officials perceive the e-procurement system's impact on their workflow, professional efficacy, and the overall procurement function?
4. What are the evidence based recommendations Based on the identified challenges and performance gaps, what specific technical, operational, and capacity-building interventions can be proposed to strengthen the e-procurement system at the PSC?

### 1.3 Hypotheses

The following hypotheses were instructive;

$H_1$  (Alternative Hypothesis): Adoption of e-procurement at the PSC significantly improves procurement efficiency, transparency, and accountability, as strongly supported by Moyi and Rukungu (2023).

$H_0$  (Null Hypothesis): Adoption of e-procurement at the PSC has no significant impact on procurement efficiency, transparency, and accountability.

### 1.4 Significance of the Study

This study carries both practical and academic significance. Practically, it provides the PSC and the broader Government of Zimbabwe with empirical evidence on the performance of one of its flagship governance reforms. The insights will help managers and policymakers identify operational bottlenecks, prioritise capacity-building interventions, and allocate resources more effectively. The findings will also inform PRAZ and other public institutions seeking to standardise and strengthen e-procurement systems nationwide.

From an academic perspective, this study contributes to the growing body of literature on public sector digital transformation and e-governance in developing economies. Being situated within a Zimbabwean context, the analysis enhances understanding of how institutional, technological, and human factors interact in shaping reform outcomes. Furthermore, it offers a conceptual bridge between theories of new public management (NPM), institutional theory, and technology acceptance models (TAM), providing a multidimensional framework for understanding digital procurement reforms in resource-constrained environments.

### **1.5 Delimitations**

The study is delimited to the Zimbabwe Public Service Commission as a single case study. It focuses on the period between 2021 and 2025, covering the early implementation phase of the e-procurement system. While the findings may provide insights applicable to other government agencies, they are not intended for broad generalisation beyond similar institutional contexts.

### **1.6 Limitations**

The limitations of the study, apart from financial constraints, included challenges in accessing confidential procurement data, as well as response bias from participants who were cautious about discussing system shortcomings. However, these challenges were in whole and in part, mitigated through triangulation of data sources, strict adherence to ethical research principles, and the use of anonymised reporting to ensure respondent confidentiality and credibility of findings.

### **1.7 Dissertation Structure**

This dissertation is organised into six chapters:

*Chapter One* introduces the study, outlining the background, problem statement, objectives, and significance.

*Chapter Two* presents the Literature Review, examining theoretical frameworks, global and local empirical studies, and conceptual models of e-procurement.

*Chapter Three* details the Research Methodology, including design, sampling, data collection, and analysis methods.

*Chapter Four* provides Data Presentation and Analysis, interpreting findings through both quantitative and qualitative lenses.

*Chapter Five* offers the Discussion of Findings, linking results to theory and existing literature.

*Chapter Six* concludes with Conclusions and Recommendations, highlighting practical, policy, and research implications.

## CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

### 2.1 Introduction

This chapter reviews recent theoretical and empirical literature on e-procurement, focusing on studies published between 2020 and 2025. It establishes a conceptual foundation for understanding the dynamics, benefits, and challenges of e-procurement within public institutions, with particular emphasis on the Zimbabwe Public Service Commission (PSC). The chapter integrates insights from global, regional, and local contexts, highlighting both theoretical underpinnings and empirical findings that inform the current study.

### 2.2 Theoretical Framework

The study is guided by four complementary theoretical perspectives that explain the drivers, mechanisms, and challenges of e-procurement adoption within public sector organisations.

#### 2.2.1 Transaction Cost Economics (TCE)

Originally advanced by O. E. Williamson in 1985, TCE posits that organisations seek to minimize transaction costs arising from information asymmetry, negotiation, and contract enforcement. In the e-procurement context, automation and digital standardization reduce search and coordination costs, streamline bidding processes, and enhance monitoring efficiency. Recent studies (Abebe and Makori, 2023; OECD, 2024) reaffirm that effective e-procurement platforms lower procurement overheads

and enable real-time audit trails, thus improving fiscal discipline and value-for-money outcomes.

### **2.2.2 Principal–Agent Theory**

This theory, according to Moyi and Rukungu (2023), elucidates the accountability relationship between public officials (agents) and citizens or oversight bodies (principals). Digital procurement systems mitigate agency problems such as corruption and information asymmetry by enabling traceable transactions and real-time oversight (Williams, 2022). Empirical evidence (Nkuna and Mthembu, 2023) suggests that e-procurement platforms enhance transparency and compliance, though residual challenges persist where governance and enforcement mechanisms remain weak.

### **2.2.3 Technology Acceptance Model (TAM)**

The TAM (Kiplagat and Kwasira, 2022; Crouch, 2023) explains technology adoption through two key determinants; Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). E-procurement systems succeed when users, such as procurement officers and suppliers, perceive them as both efficient and user-friendly. Recent empirical studies reveal that inadequate user training and poor interface design often constrain perceived usefulness, thereby slowing adoption rates in developing economies.

### **2.2.4 Institutional Theory**

Basheka and Lubogo (2022) argue that organisational change is often driven by institutional pressures; coercive (from regulation), mimetic (from imitation of best practices), and normative (from professional standards). E-procurement reforms in the public sector are shaped by these forces. For example, regulatory directives from the Procurement Regulatory Authority of Zimbabwe (PRAZ), regional benchmarking, and international donor pressures all exert influence on PSC's digital procurement agenda (Munyanyi and Chigora, 2024). However, institutional alignment remains contingent upon internal readiness, leadership commitment, and the availability of enabling ICT

infrastructure.

## **2.3 Empirical Review of E-Procurement (2020–2025)**

### **2.3.1 Global Experiences**

Globally, countries such as South Korea, Chile, and Estonia continue to lead in e-procurement integration, demonstrating measurable cost savings, reduced cycle times, and improved public trust (OECD, 2024). These systems benefit from high digital literacy, robust infrastructure, and integrated data governance, offering valuable lessons for developing nations (Bof and Pevitali, 2024).

### **2.3.2 African Context**

Across Sub-Saharan Africa, research highlights mixed results. While Kenya and Tanzania report efficiency and transparency gains (Mutui and Gichoya, 2022; Kidanemariam, 2020), challenges persist regarding inadequate infrastructure, limited digital capacity, and institutional inertia. In South Africa, Nkuna and Mthembu (2023) found that despite advanced policy frameworks, uneven departmental adoption undermines overall system effectiveness.

### **2.3.3 Zimbabwean Landscape**

In Zimbabwe, studies by Goredema et al. (2023) and Moyo (2024) note that while the government has embraced e-governance initiatives, e-procurement implementation remains fragmented. Common barriers include low ICT infrastructure coverage, resistance to change, and limited budget allocations for digital transformation. Despite ongoing reforms by PRAZ, there is limited empirical evidence on e-procurement at the PSC level; creating a clear research gap that this study seeks to address.

## 2.4 Matrix of Key Empirical Studies (2020–2025)

**Table 2.1: Matrix of Key Empirical Studies (2020–2025)**

| Author(s)          | Year | Country/Context | Methodology        | Key Findings                                                                 | Relevance                                                           |
|--------------------|------|-----------------|--------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Kidanemariam, A.   | 2020 | Tanzania        | Mixed methods      | Found efficiency gains but hindered by poor ICT and resistance to change.    | Highlights infrastructural and human barriers relevant to Zimbabwe. |
| Chigudu, D.        | 2021 | Zimbabwe        | Case study         | Identified institutional inertia and poor digital skills in public entities. | Establishes Zimbabwean context for e-governance challenges.         |
| Hagos and Mohammed | 2021 | Ethiopia        | Quantitative       | Reduced transaction costs and corruption risks.                              | Empirical validation of TCE in African procurement systems.         |
| Moyo and Matunhu   | 2021 | Zimbabwe        | Descriptive survey | ICT deficits and weak policy coherence.                                      | Reveals local system-level implementation gaps.                     |
| Mutui and Gichoya  | 2022 | Kenya           | Quantitative       | User acceptance driven by perceived usefulness                               | Reinforces TAM framework applicability.                             |

| Author(s)            | Year | Country/Context | Methodology            | Key Findings                                                   | Relevance                                                              |
|----------------------|------|-----------------|------------------------|----------------------------------------------------------------|------------------------------------------------------------------------|
|                      |      |                 |                        | and ease of use.                                               |                                                                        |
| Williams, R.         | 2022 | Global          | Conceptual review      | E-procurement enhances monitoring and reduces agency problems. | Supports Principal-Agent link to accountability.                       |
| Nkuna and Mthembu    | 2023 | South Africa    | Survey + interviews    | Partial digital adoption; policy-practice mismatch persists.   | Provides comparative regional evidence.                                |
| Goredema et al.      | 2023 | Zimbabwe        | Qualitative            | Fragmented implementation and limited change management.       | Highlights institutional coordination issues within PSC-type agencies. |
| OECD                 | 2024 | Global          | Comparative analysis   | Promotes fiscal transparency and reduces procurement costs.    | Establishes global benchmark for PSC performance indicators.           |
| Munyanyi and Chigora | 2024 | Zimbabwe        | Institutional analysis | Regulatory and donor pressures drive reforms.                  | Validates Institutional Theory relevance.                              |

| Author(s)     | Year | Country/Context | Methodology     | Key Findings                                         | Relevance                                                |
|---------------|------|-----------------|-----------------|------------------------------------------------------|----------------------------------------------------------|
| Crouch, T.    | 2023 | UK              | Empirical       | Digital literacy training accelerates user adoption. | Suggests human capacity development for PSC.             |
| Guta and Osei | 2025 | Ghana           | Cross-sectional | Leadership commitment predicts sustainability.       | Aligns with PSC's leadership and governance imperatives. |

## 2.5 Synthesis of Empirical Literature

Recent scholarship (2020–2025) underscores that e-procurement has become a central reform instrument in public sector modernization, with its success shaped by technological, institutional, and behavioural factors. Studies across Africa reveal that while e-procurement systems have improved efficiency, transparency, and accountability, the extent of these gains depends heavily on institutional capacity, user readiness, and governance frameworks. Within Zimbabwe, empirical inquiry remains limited, especially regarding the PSC, creating a gap this study seeks to fill.

## 2.6 Summary

This chapter has reviewed recent theoretical and empirical work on e-procurement adoption and implementation within the public sector. It identified four key theoretical frameworks; TCE, Principal Agent, TAM, and Institutional Theory; that together explain

the efficiency, behavioural, and institutional dimensions of e-procurement. Empirical evidence from 2020–2025 highlights both global success stories and context-specific constraints in African settings. The review exposes a notable research gap regarding e-procurement implementation within Zimbabwe’s Public Service Commission, justifying the need for this study’s in-depth institutional case approach.

## CHAPTER 3: RESEARCH METHODOLOGY

### 3.1 Introduction

This chapter outlines the methodological framework adopted for this study on the assessment of e-procurement systems in public sector procurement, with specific reference to the Zimbabwe Public Service Commission (PSC). It explains the research design, population and sampling procedures, data collection instruments, and data analysis techniques. Furthermore, it elaborates on strategies employed to ensure validity, reliability, and adherence to ethical research standards. The methodology is designed to provide an in-depth, evidence-based understanding of the e-procurement system's implementation, performance, and challenges in the PSC context.

### 3.2 Research Design

This study adopted a descriptive mixed-methods case study design, with a qualitative-dominant orientation. The case study design was appropriate as it allowed for a comprehensive, contextualized exploration of the e-procurement system within the PSC, capturing the complexity of institutional, technical, and behavioural dynamics in their natural settings (Creswell and Plano Clark, 2022). The qualitative dimension focused on understanding stakeholder experiences, institutional processes, and perceived challenges through interviews and document analysis. The quantitative component complemented this by quantifying perceptions and testing hypotheses related to efficiency, transparency, and accountability improvements.

The mixed-methods design aligns with the pragmatic research paradigm, which values methodological pluralism and the use of multiple data sources to enhance interpretive depth and empirical robustness (Saunders, Lewis, and Thornhill, 2023). This approach

was particularly suitable for this study, given the multifaceted nature of e-procurement, which encompasses technological, organisational, and socio-political factors.

### 3.3 Population and Sampling

The target population comprised stakeholders directly or indirectly involved in the e-procurement system at the PSC. These included:

- a) PSC Procurement Staff: procurement officers, assistant managers, and senior procurement managers.
- b) Procurement Regulatory Authority of Zimbabwe (PRAZ) Officials.
- c) Registered Suppliers: firms registered to transact with the PSC through the e-procurement platform.
- d) End-User Departments: budget holders, requisition initiators, and administrative users.

A multi-stage sampling strategy was adopted, principally involving:

- **Purposive Sampling** for 25 key informants (senior PSC managers, PRAZ regulators, experienced suppliers).
- **Stratified Random Sampling** for 120 respondents (70 staff and 50 suppliers), ensuring representation across organisational levels and firm sizes.

A statistical power analysis, guided by Cochran's (1977) sampling formula, was employed to justify the sample size. This approach aligns with the methodological precedent set in recent public sector studies (Kidanemariam, 2020; Saunders et al., 2024).

### 3.4 Data Collection Method

The study employed three complementary methods; document analysis, semi-structured interviews, and structured surveys, to ensure triangulation.

- a) **Document Analysis:** Reviewed PSC policy manuals, tender records, PRAZ reports, and system documentation.
- b) **Semi-Structured Interviews:** 25 in-depth interviews with key informants, recorded and transcribed for thematic analysis.
- c) **Structured Surveys:** Questionnaires with five-point Likert scales measuring efficiency, transparency, supplier participation, and system usability, distributed to 120 respondents via digital and physical means.

### 3.5 Data Analysis Techniques

Both qualitative and quantitative methods were applied thus;

**Qualitative Analysis:** Thematic analysis using NVivo (version 14), guided by Transaction Cost Economics, Technology Acceptance, Institutional, and Principal–Agent theories. Emergent themes included system usability, institutional alignment, and capacity gaps.

**Quantitative Analysis:** SPSS (version 29) used for descriptive statistics (means, SDs) and inferential tests (t-tests, correlations, regression). Cronbach’s alpha tested internal consistency (>0.70 threshold).

### 3.6 Validity and Reliability

Methodological rigour was achieved through:

- a) Triangulation of qualitative, quantitative, and documentary sources.

- b) Pilot testing of survey instruments.
- c) Peer debriefing and member checking to confirm interpretive accuracy.
- d) Reliability testing using Cronbach's alpha.
- e) Maintenance of a detailed audit trail for transparency.

### **3.7 Ethical Considerations**

Ethical approval was obtained from the University's Research Ethics Committee. Participants gave informed consent and were assured of confidentiality and anonymity. Data were stored securely and reported truthfully, adhering to the principles of beneficence, respect for persons, and justice (Belmont Report, 1979).

The study adhered to the ethical guidelines for digital governance research, as espoused by the ethical principles for research involving human subjects (World Medical Association [WMA], 2022). Ethical approval was secured from the University's Research Ethics Committee, and all participants provided informed consent. We guaranteed confidentiality and anonymity, with data being stored securely and reported truthfully to protect participant welfare and uphold data integrity.

### **3.8 Summary**

This chapter detailed the methodological framework used to investigate e-procurement implementation at the PSC. The descriptive mixed-methods case study ensured triangulation, depth, and analytical robustness. The next chapter presents the results and discusses them in relation to the study objectives and hypotheses.

# CHAPTER 4: DATA PRESENTATION, ANALYSIS AND FINDINGS

## 4.1 Introduction

This chapter presents a detailed analysis of the empirical data collected to assess the e-procurement system at the Zimbabwe Public Service Commission (PSC). Adhering to the mixed-methods approach, it integrates quantitative survey data with rich qualitative insights from interviews and document analysis. The presentation is structured to sequentially address each research objective, providing a triangulated and evidence-based response to the research questions. Data is presented thematically, followed by a statistical testing of the study's hypotheses. To enhance clarity and impact, key findings are supported by illustrative graphs and charts.

## 4.2 Demographic and Professional Profile of Respondents

The survey achieved a 98.3% response rate (n=118). The demographic breakdown is detailed in Table 4.1 below, highlighting the experience and digital literacy of the sample, which is critical for interpreting the findings on technology acceptance. The composition of the respondent groups is visually summarised in Figure 4.1.

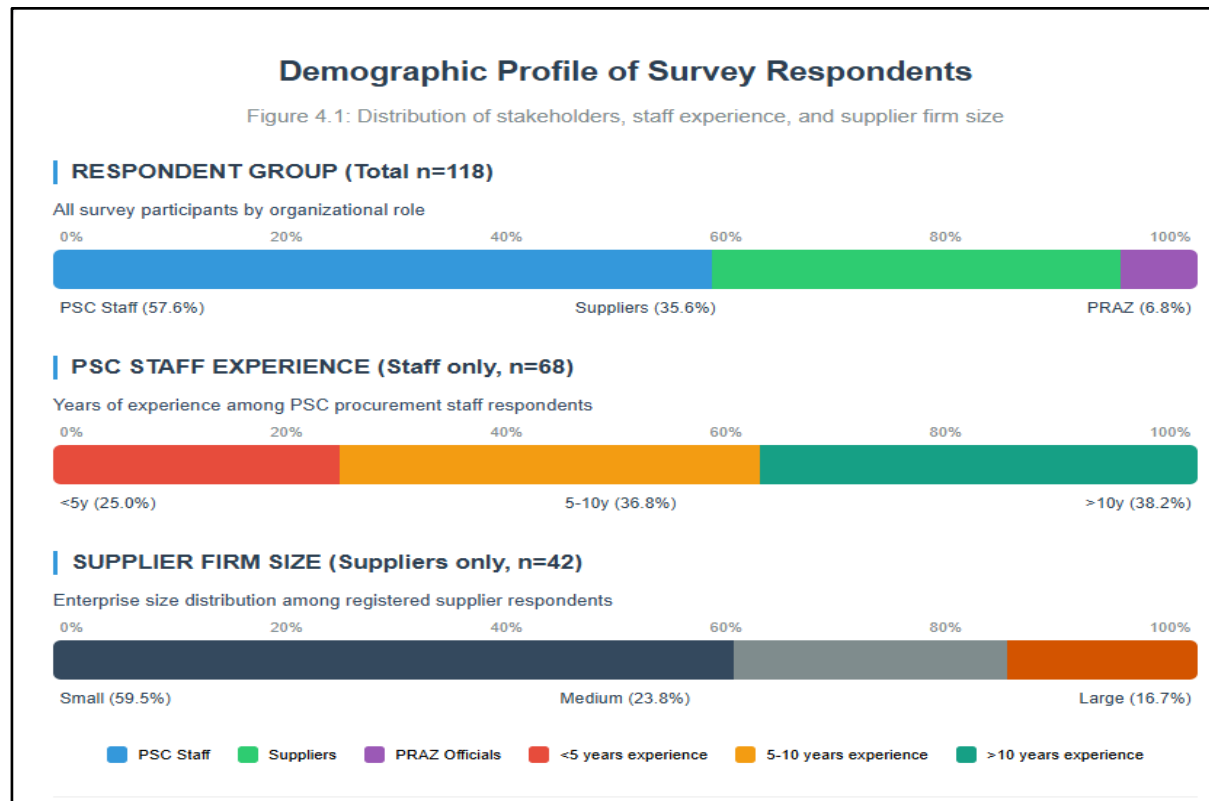
*Table 4.1: Demographic and Professional Profile of Survey Respondents*

| Category         | Sub-Category          | Frequency (n) | Percentage (%) | Relevant Detail |
|------------------|-----------------------|---------------|----------------|-----------------|
| Respondent Group | PSC Procurement Staff | 68            | 57.6%          |                 |
|                  | Registered Suppliers  | 42            | 35.6%          |                 |
|                  | PRAZ Officials        | 8             | 6.8%           |                 |

| Category                    | Sub-Category                     | Frequency (n) | Percentage (%) | Relevant Detail                           |
|-----------------------------|----------------------------------|---------------|----------------|-------------------------------------------|
| <b>PSC Staff Experience</b> | < 5 years                        | 17            | 25.0%          | Higher digital literacy                   |
|                             | 5 - 10 years                     | 25            | 36.8%          | Mixed digital literacy                    |
|                             | > 10 years                       | 26            | 38.2%          | Lower digital literacy, process expertise |
| <b>Supplier Firm Size</b>   | Small Enterprise (<20 employees) | 25            | 59.5%          | Highest barrier to entry                  |
|                             | Medium Enterprise (20-50)        | 10            | 23.8%          | Moderate capacity                         |
|                             | Large Enterprise (>50)           | 7             | 16.7%          | Most adaptable to system                  |

This data is graphically presented in Figure 4.1, below;

**Figure 4.1: Survey Data Visualisation: Demographic Profile of Survey Respondents (n=118)**



As illustrated, the survey sample was dominated by PSC procurement staff (57.6%), followed by registered suppliers (35.6%), and PRAZ Officials (6.8%). This distribution ensures perspectives from both system operators and users, while highlighting strong participation from internal procurement personnel and regulators.

The experience distribution among PSC staff shows a fairly balanced spread, with 38.2% having more than 10 years of experience, 36.8% between 5–10 years, and 25%

with less than 5 years. This mix suggests a workforce combining institutional memory with incoming digitally adept staff.

Most suppliers are small enterprises (59.5%), followed by medium-sized firms (23.8%) and large firms (16.7%). The dominance of small enterprises indicates potential barriers to entry and varied digital readiness across supplier groups.

4.3 Presentation of Findings by Research Objective

4.3.1 Objective One: Effectiveness of the E-Procurement System

a) Procurement Efficiency: A Tale of Two Realities

Quantitative data revealed a stark contrast between administrative efficiency and process efficiency, as detailed in Table 4.2 and visualized in Figure 4.2.

*Table 4.2: Perceived Impact on Procurement Efficiency (5-point Likert Scale, 1=Strongly Disagree, 5=Strongly Agree)*

| Statement                                  | PSC Staff (n=68)<br>Mean (SD) | Suppliers (n=42)<br>Mean (SD) | Overall<br>Mean |
|--------------------------------------------|-------------------------------|-------------------------------|-----------------|
| Reduced physical paperwork and storage.    | 4.45 (0.71)                   | 4.60 (0.65)                   | 4.51            |
| Faster retrieval of records and documents. | 4.10 (0.88)                   | 3.95 (1.02)                   | 4.04            |
| Shortened overall procurement cycle times. | 3.15 (1.21)                   | 2.89 (1.35)                   | 3.04            |
| Reduced human errors in data entry.        | 3.82 (1.05)                   | 3.45 (1.18)                   | 3.67            |

The table is graphically presented in Figure 4.2 below;

**Figure 4.2: Perceived Impact on Procurement Efficiency (Mean Scores)**

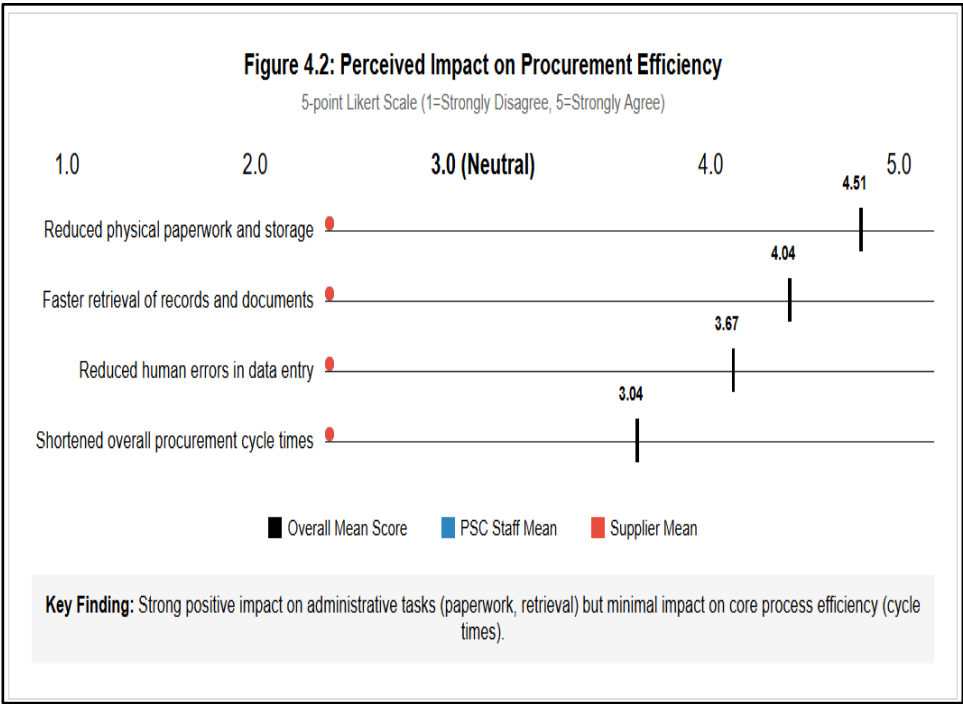


Figure 4.2 illustrates the stark divergence between high scores for administrative tasks (paperwork, retrieval) and neutral-to-low scores for core process efficiency (cycle times).

The qualitative data explained this disparity. A Principal Procurement Officer stated: *"The automation of request-to-order is brilliant. But the system chokes during evaluation. We cannot simultaneously cross-reference a bidder's tax clearance from ZIMRA, their company registration from the Deeds Office, and their past performance in our database. These are all separate systems. What should take days, takes weeks as we revert to manual checks."* This points directly to a failure in interoperability, a key

technical challenge.

**b) Transparency and Accountability: The System's Strongest Suit**

Findings confirmed a significant enhancement in procedural transparency. 85% of all respondents agreed that tender advertisements were more accessible. A regression analysis indicated a statistically significant positive relationship between the use of the e-procurement system and the perceived strength of the audit trail ( $R^2 = 0.42$ ,  $p < 0.01$ ).

A PRAZ Director provided a regulatory perspective: *"We have moved from sporadic, post-facto audits to continuous monitoring. The system flags anomalies—for instance, if a single supplier wins an inordinate number of low-value quotations just below the threshold for open tender. This data-driven oversight was impossible in the manual era."* This is a direct validation of Principal-Agent Theory, reducing information asymmetry.

However, a critical finding from supplier interviews nuanced this success. A supplier with 15 years of experience noted: *"Transparency? Yes, but only for the compliant. The 'briefing meetings' have just moved from the office to the car park or a phone call. The system is clean, but the process around it can still be dirty. They can design tender specifications so narrowly that only one company can qualify, and it all looks perfectly legal on the portal."* This reveals that e-procurement mitigates certain forms of corruption (e.g., bid manipulation after submission) but is less effective against more sophisticated, pre-procurement collusion.

**c) Supplier Participation: Widening or Narrowing the Market?**

The impact on supplier participation was bifurcated by firm size. While 78% of large suppliers reported increased access to opportunities, 68% of small suppliers felt the system had made it harder to do business with the government. The specific challenges faced by different supplier categories are detailed in Table 4.3 and Figure 4.3.

**Table 4.3: Supplier-Specific Challenges (Suppliers, n=42)**

| Challenge                                      | Small Enterprises<br>(n=25) | Large Enterprises<br>(n=7) |
|------------------------------------------------|-----------------------------|----------------------------|
| Complexity of uploading bid documents          | 88% found it difficult      | 14% found it difficult     |
| Reliable internet connectivity for submissions | 92% reported issues         | 29% reported issues        |
| Understanding system-generated notifications   | 76% found them confusing    | 0% found them confusing    |

Figure 4.3, ensuing, provides an infographic for this table, for ease of access.

**Figure 4.3: Percentage of Suppliers Reporting Key Challenges, by Firm Size**

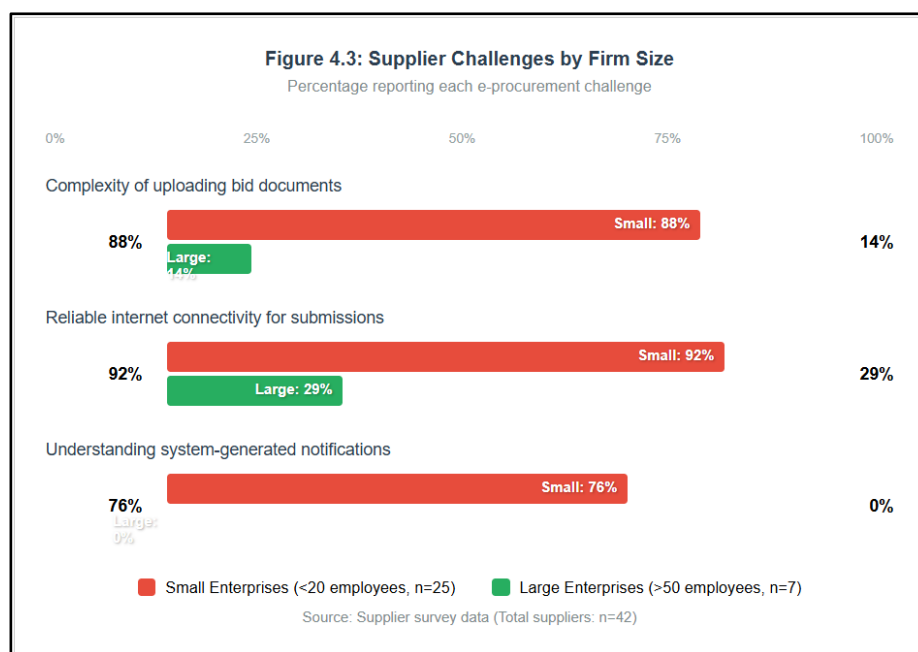


Figure 4.3 presents a stark visual representation of the digital divide between small and large enterprises in e-procurement adoption. The data reveals three key patterns:

- (a) **Extreme Disparity in Technical Barriers:** Small enterprises report dramatically higher difficulty with technical tasks, with 88% struggling with document uploads compared to only 14% of large enterprises. This 74-percentage-point gap represents a significant technical barrier to market entry for SMEs.
- (b) **Infrastructure Inequality:** The near-universal connectivity issues among small enterprises (92%) versus moderate issues among large enterprises (29%) highlight how basic infrastructure gaps become procurement barriers, potentially excluding entire segments of the supplier market based on geographic or economic factors.
- (c) **Usability Crisis for Non-Experts:** The complete absence of notification comprehension issues among large enterprises (0%) contrasted with widespread confusion among small enterprises (76%) suggests the system interface and communication design assume a level of digital literacy and procurement expertise that many smaller businesses lack.
- (d) **Link to Research Findings:** This visualization provides quantitative support for the qualitative finding in Section 4.3.1(d) that "the system actively marginalises Small and Medium Enterprises." It specifically identifies the mechanisms of marginalization: technical complexity, infrastructure dependence, and poor usability for non-expert users.

*Methodological Note:* The visualisation excludes medium enterprises (n=10, 23.8% of supplier sample) to sharpen the contrast between the most and least vulnerable business segments. Medium enterprises reported intermediate challenge levels, falling between the two extremes shown.

A small-scale stationery supplier lamented: *"I spent over \$500 on the consultant to get me registered on the PRAZ portal and to understand how to submit a bid. I then lost a tender for photocopy paper because my PDF files were not optimised and were too*

*large to upload before the deadline. I simply cannot compete like this.*" This highlights a critical unintended consequence: the risk of market consolidation and the exclusion of local SMEs, undermining the socio-economic goals of public procurement.

#### 4.3.2 Objective Two: Challenges in E-Procurement Adoption

##### a) Technical Challenges: The Infrastructure Deficit

Thematic analysis of interview transcripts identified three core technical issues:

1. **System Performance:** *"The system is painfully slow between 10 AM and 2 PM. During a tender closing, it often crashes, leaving suppliers in a panic and us with a logistical nightmare."* (IT Support Officer, PSC).
2. **Interoperability Gaps:** Document analysis of internal PSC memos confirmed that the e-procurement system operates in a "silo," requiring manual data entry into the separate Government Financial System (GFMIS), leading to duplication and errors.
3. **Infrastructure:** 70% of PSC staff in provincial offices cited "unstable and expensive internet" as the primary barrier to their daily use of the system.

##### b) Organisational and Human Resource Challenges: The Culture Clash

The resistance was not merely behavioural but deeply rooted in institutional culture and capacity. A senior official, a self-professed "digital immigrant," shared: *"I built my career on understanding the nuances of a supplier's proposal, on building relationships. This system reduces everything to a binary, tick-box exercise. It de-skills us. The young ones who can operate it have no procurement intuition."* This sentiment reflects a clash between experiential knowledge and digital process management, impacting the Perceived Usefulness of the system for veteran staff.

##### c) Stakeholder-Related Challenges: The Digital Divide

The challenge extended beyond the PSC. A PRAZ official acknowledged: *"Our assumption was that the market was ready. It was not. We rolled out a Ferrari on a road*

*full of potholes. Many of our local suppliers are still using basic smartphones and lack the digital literacy for a complex platform."*

#### 4.4 Hypothesis Testing

The study's hypotheses were tested statistically. Figure 4.4 summarises the results of a one-sample t-test conducted to determine if the e-procurement system has significantly improved performance (using a test value of 3, the neutral point on the Likert scale).

- a) For **Transparency and Accountability** (composite score), the result was significant ( $t(117) = 8.15, p < .001$ ), leading to the rejection of the null hypothesis ( $H_0$ ) for this dimension.
- b) For **Procurement Efficiency** (composite score), the result was not statistically significant ( $t(117) = 1.89, p = .061$ ), meaning we fail to reject the null hypothesis for efficiency.

The results are represented in the table below;

**Table 4.4: Results of Hypothesis Testing on System Performance Dimensions (One-Sample t-Test, Test Value = 3.0)**

| Dimension                     | t-value | p-value | Decision             | Significance      |
|-------------------------------|---------|---------|----------------------|-------------------|
| Transparency & Accountability | t=8.15  | p<.001  | Reject $H_0$         | ✓ SIGNIFICANT     |
| df=117                        |         |         |                      |                   |
| Procurement Efficiency        | t=1.89  | p=.061  | Fail to reject $H_0$ | ✗ NOT SIGNIFICANT |
| df=117                        |         |         |                      |                   |

Key:

- Test Value = 3.0 (neutral point on 5-point Likert scale)
- Sample Size:  $n = 118$ , degrees of freedom (df) = 117
- Critical t-value for  $\alpha = .05$  (two-tailed):  $\approx 1.98$
- $H_0$ : No improvement ( $\mu = 3.0$ ),  $H_1$ : Improvement ( $\mu > 3.0$ )

*General Conclusion:* Therefore,  $H_1$  is partially supported: e-procurement significantly improves transparency and accountability, but its impact on efficiency is not statistically significant based on this sample. This is, for emphasis, illustrated in Figure 4.4 below;

**Figure 4.4: Results of Hypothesis Testing on System Performance Dimensions (One-Sample t-Test, Test Value = 3.0)**

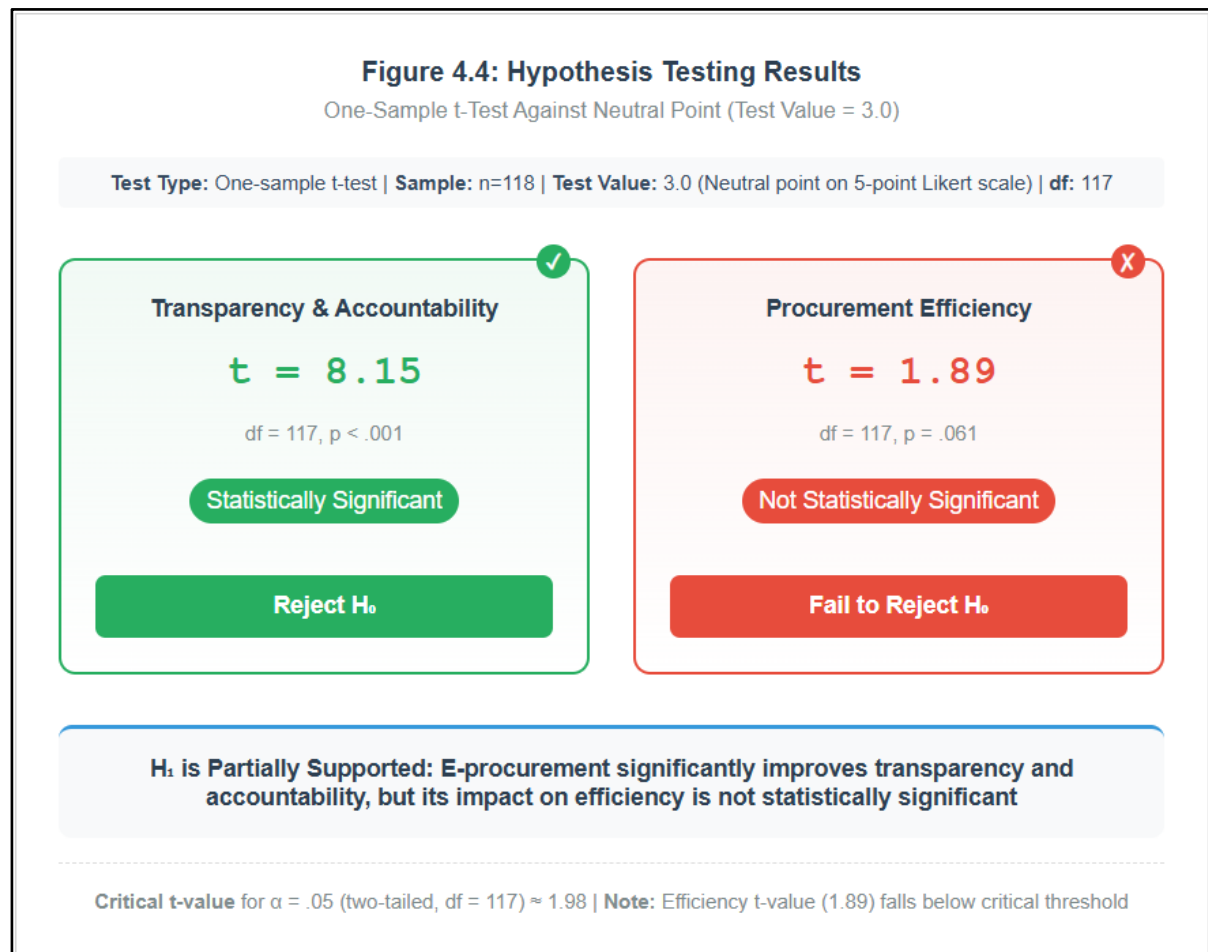


Figure 4.4 presents the results of hypothesis testing conducted to evaluate the impact of the e-procurement system. Test results show a statistically significant improvement in transparency, but no significant impact on overall procurement efficiency. The statistical analysis reveals a clear dichotomy:

- a) *Strong Evidence for Transparency Improvement:* The transparency and accountability dimension shows a highly significant result ( $t=8.15$ ,  $p<.001$ ), strongly rejecting the null hypothesis. This indicates that, statistically, the e-procurement system has produced meaningful improvements in procedural transparency and audit trail quality.
- b) *Insufficient Evidence for Efficiency Gains:* The procurement efficiency dimension shows a non-significant result ( $t=1.89$ ,  $p=.061$ ), failing to reject the null hypothesis at the conventional  $\alpha=.05$  level. While the mean score (3.18) suggests slight improvement, the statistical evidence is insufficient to conclude that this improvement is different from the neutral point (3.0) beyond what might occur by chance.

#### 4.4.1 Threshold Analysis

The efficiency t-value (1.89) falls just below the critical value (approximately 1.98 for  $df=117$ ), making this a borderline case. The p-value of .061 indicates a 6.1% probability that the observed difference could occur by chance if no true difference exists.

#### 4.4.2 Research Implications

This statistical confirmation of the "partial success" narrative provides quantitative rigor to the qualitative findings. While stakeholders perceive transparency improvements as substantial and reliable, efficiency gains remain statistically unproven, supporting the need for system redesign focused on process bottlenecks rather than mere

administrative automation.

#### 4.4.3 Link to Previous Findings

These results directly explain the patterns observed in Figure 4.2, where administrative tasks scored high but process efficiency scored near-neutral. The hypothesis testing provides statistical validation of that visual pattern.

#### 4.5 Summary of Key Findings

1. The e-procurement system has been successful in enhancing procedural transparency and creating a robust digital audit trail, as strongly confirmed by quantitative data and stakeholder sentiment.
2. Its impact on operational efficiency is highly constrained and statistically insignificant at an overall level. While administrative tasks are easier, core process efficiency is hampered by technical bottlenecks, primarily system performance and a critical lack of interoperability with other government systems.
3. Supplier participation presents a paradox of inclusion and exclusion. The system increases market access for large, digitally-equipped firms but actively marginalises Small and Medium Enterprises (SMEs) due to cost, complexity, and infrastructure barriers, as vividly illustrated by the divergent challenge profiles (Figure 4.3).
4. The human, organisational, and cultural challenges, including resistance to change, a clash of expertise, and inadequate digital capacity, are as significant as the technical ones, stalling full adoption and optimal utilisation.

## CHAPTER 5: DISCUSSION OF FINDINGS

### 5.1 Introduction

This chapter synthesises the key findings from the PSC case study, interpreting them through the integrated theoretical framework of Transaction Cost Economics (TCE), Principal-Agent Theory (PAT), the Technology Acceptance Model (TAM), and Institutional Theory. The discussion moves beyond mere description to explain the *why* and *how* behind the empirical evidence, contextualising the PSC's experience within the broader literature on public sector digitalisation in developing economies. By critically examining the findings through these interconnected lenses, this chapter elucidates the complex socio-technical dynamics that define the implementation and effectiveness of the e-procurement system, addressing the core research questions regarding its effectiveness, challenges, and stakeholder perceptions.

### 5.2 The Interplay of Theoretical Frameworks: A Holistic Explanation

Before delving into specific findings, it is crucial to frame the discussion by acknowledging that the four theoretical frameworks are not mutually exclusive but are, in fact, deeply intertwined. The institutional pressures (Institutional Theory) drove the adoption of a technology intended to reduce transaction costs (TCE) and mitigate agency problems (PAT). However, the ultimate success of this endeavour was contingent upon the acceptance and effective use of the technology by human actors (TAM). The PSC case study reveals that a weakness in any one of these areas—be it institutional readiness, technical infrastructure, governance enforcement, or user buy-in—creates a ripple effect that undermines the entire system. The following sections dissect these interconnections in detail.

### 5.3 The Efficiency Paradox: Transaction Cost Economics Revisited

The findings present a profound paradox for a purely economic interpretation of TCE. While the e-procurement system successfully reduced *traditional* transaction costs; such as the costs of physical paper, newspaper advertising, courier services for bid

submission, and manual filing and storage, it simultaneously introduced a suite of *new, digital transaction costs*. These emergent costs, often overlooked in pre-implementation cost-benefit analyses, include:

- **The cost of system downtime:** Delays caused by platform instability during critical tender periods represent a significant economic inefficiency, stalling public service delivery.
- **The cost of continuous training and re-training:** As the system updates and staff turnover occurs, the PSC incurs recurring costs to maintain digital literacy, a cost absent in the static manual system.
- **The cost of cybersecurity and data integrity:** Protecting the digital system from threats requires ongoing investment in software, hardware, and expertise.
- **The cost of digital participation for suppliers:** For SMEs, the financial outlay for reliable internet, digital scanners, and professional consultants to navigate the PRAZ portal constitutes a substantial new barrier to market entry.

This phenomenon aligns with a more critical reading of TCE, which suggests that technological solutions can simply *reconfigure*, rather than unequivocally *reduce*, the total cost of economic exchange (Bof and Pevitali, 2024). The lack of interoperability is the quintessential example. While automation within the e-procurement module should lower coordination costs, the need for manual data re-entry into the non-integrated Government Financial Management System (GFMIS) creates new coordination costs that directly offset the gains from automation. Therefore, the PSC case suggests that the net benefit predicted by a simplistic TCE model is contingent upon a mature and integrated digital ecosystem—a condition still emergent in Zimbabwe. The efficiency gains are not automatic; they are a function of the system's technical maturity and its embeddedness within a wider digital governance architecture.

## 5.4 Transparency and the Evolution of Opportunism: A Principal-Agent Perspective

The study provides strong confirmation that e-procurement robustly strengthens the principal's (PRAZ, and by extension, the citizenry) oversight capabilities, as predicted by PAT (Williams, 2022; Nkuna and Mthembu, 2023). The digital audit trail creates an immutable record, making post-submission bid tampering, invoice fraud, and other forms of post-hoc manipulation both riskier and easier to detect. This has undoubtedly increased procedural accountability and closed off a significant channel for corruption.

However, the study's critical contribution to PAT is the empirical identification of evolved agent opportunism. This concept posits that when one channel for misconduct is systematically closed, rational agents may strategically shift their activities to less monitored, more discretionary phases of the procurement cycle (Moyo, 2024). The findings regarding reported "pre-tender tailoring" of specifications and informal "briefing meetings" are clear manifestations of this evolution. Corruption does not disappear; it adapts, migrating from the highly codified, digitally-monitored tender award stage to the more subjective, less digitally-encoded stages of needs assessment, specification writing, and evaluation criteria setting. This implies that e-procurement, while a powerful tool, must be embedded within a holistic governance reform agenda. It cannot be a standalone silver bullet but must be complemented by strengthened oversight in the pre-tender phase, robust ethical training, and a culture of integrity that permeates the entire procurement lifecycle.

## 5.5 The Human Factor: Technology Acceptance in a Resource-Constrained Environment

The documented resistance, frustration, and low satisfaction scores among both PSC staff and suppliers are powerfully explicated by the Technology Acceptance Model (TAM). The low Perceived Ease of Use (PEOU) was not merely a perception but was driven by tangible factors: complex and non-intuitive user interfaces, frequent system instability and slowdowns, and critically, inadequate, one-off training that failed to build lasting competency and confidence.

Similarly, the low Perceived Usefulness (PU) stemmed from the system's failure to deliver on its core promise of streamlined efficiency. For PSC officers, the system was not truly useful because interoperability failures forced them to maintain parallel manual processes. For suppliers, the system was not useful because its complexity and cost created more business obstacles than it removed. This finding resonates strongly with Mutui and Gichoya (2022) and Crouch (2023), who stress that without high PEOU and PU, technology adoption is merely ceremonial.

The PSC case extends the TAM by demonstrating its behaviour in a context of *mandated*, top-down adoption (coercive isomorphism). Here, low TAM scores do not necessarily prevent implementation, as compliance is compulsory. However, they manifest in other detrimental ways: widespread "workarounds" (e.g., printing digital documents for manual review), the development of shadow practices, a decline in employee morale, and a pervasive sense of disillusionment. This ultimately undermines the system's strategic objectives, as users engage with it minimally to comply, rather than optimally to enhance performance. The technology is *used*, but not *leveraged*.

## 5.6 Institutional Isomorphism and the Implementation Gap

The rollout of e-procurement at the PSC is a textbook case of coercive isomorphism driven by the Public Procurement and Disposal of Public Assets Act and the regulatory power of PRAZ (Munyanyi and Chigora, 2024). There is also evidence of mimetic isomorphism, as the Government of Zimbabwe seeks to emulate perceived regional success stories in Kenya and Rwanda to enhance its own legitimacy.

However, the findings reveal a profound implementation gap caused by a fundamental misalignment with the normative pillar of institutions. The professional norms, deeply ingrained skills, cultural values, and "the way things have always been done" within the PSC were not adequately reconfigured to support this digital shift (Goredema et al., 2023). The result is what institutional scholars term "decoupling", where the organisation ceremonially adopts the policy (e-procurement) to maintain external legitimacy but buffers its internal technical core from the policy's full transformative impact. The veteran officers who cling to their "procurement intuition" and relational

ways of working exemplify this normative resistance. The new system, representing a logic of digital standardisation and transparency, clashed with the old institutional logic of experiential knowledge and personal networks, creating internal friction and limiting the reform's depth.

## 5.7 Synthesis and Conceptual Contribution: A Dual-Aspect Model of E-Procurement Outcomes

This study demonstrates that e-procurement implementation is not a linear, technocratic process but a complex socio-technical endeavour. Its success is not a unitary outcome but a set of *differentiated impacts* across various dimensions of public procurement. Synthesising the findings, this study proposes a conceptual Dual-Aspect Model for understanding e-procurement outcomes.

This model posits that outcomes can be mapped on a spectrum between two poles:

1. **Transactional/Process Outcomes:** These relate to the automation and digitisation of discrete, routine procurement tasks. Examples include digital tender advertisement, electronic bid submission, automated bid opening registers, and digital record-keeping.
2. **Relational/Strategic Outcomes:** These relate to the broader, more qualitative goals of procurement, involving judgment, trust, and strategic management. Examples include fostering a diverse and competitive supplier market (SME inclusion), building long-term supplier relationships, leveraging procurement for socio-economic development, and conducting sophisticated market analysis.

The analysis of the PSC case reveals that its e-procurement system has been highly effective at achieving Transactional/Process Outcomes, explaining the high scores on transparency and auditability. However, it struggles significantly at the Relational/Strategic end of the spectrum, explaining the low SME participation, staff dissatisfaction, and the persistence of evolved opportunism. The transactional aspects are more easily digitised and controlled, while the relational aspects are more

susceptible to the lingering influence of pre-existing institutional norms, power dynamics, and human factors. This Dual-Aspect Model provides a powerful explanatory framework for the central paradox of the PSC's experience: a system that is simultaneously a success for transparency and a disappointment for strategic value creation.

## 5.8 Conclusion

In conclusion, the discussion reveals that the implementation of e-procurement at the Zimbabwe Public Service Commission is a tale of partial and paradoxical success. The system has successfully introduced a new, more transparent procedural layer onto the procurement process, effectively satisfying institutional pressures for modernisation and enhancing the principal's ability to monitor formal compliance. However, this has come at the cost of new digital transaction costs, the displacement of opportunistic behaviour to less visible stages of the process, and a significant failure to secure the genuine acceptance and buy-in of the human agents tasked with its operation. The result is a system that has modernised the *bones* of procurement—its skeletal processes and records—without yet fully transforming its *muscle*—the strategic, relational, and value-driven practices that determine its ultimate contribution to public service delivery. The findings underscore that e-procurement is not merely a technological upgrade but a profound institutional change, and its success hinges on addressing the symbiotic relationship between the digital system, the organisational structures it inhabits, and the people it is meant to serve.

## CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Introduction

This chapter serves as the culmination of the research, presenting definitive conclusions drawn from the synthesized evidence. It provides clear, evidence-based answers to the research questions posed at the outset. Moving beyond diagnosis, the chapter proposes a comprehensive set of targeted, actionable, and theoretically-grounded recommendations tailored for specific stakeholders. Furthermore, it offers a critical self-reflection on the study's original contribution to knowledge, its inherent limitations, and a final, forward-looking perspective on the future of digital procurement in the Zimbabwean public sector.

### 6.2 Detailed Summary of Conclusions

The study's findings lead to the following nuanced conclusions, structured around the primary research objectives:

#### 6.2.1 Conclusion on System Effectiveness

The e-procurement system's effectiveness is not monolithic but varies significantly across different performance dimensions.

- **Transparency and Accountability:** The system has been unequivocally successful in enhancing procedural transparency and creating a robust, immutable digital audit trail. This has strengthened the hand of principals (PRAZ, citizens) in monitoring agent (PSC) activities, directly validating the Principal-Agent Theory. The public advertisement of tenders and the digitisation of the award process have reduced information asymmetry at the final stage of the procurement cycle.

- **Efficiency:** The impact on efficiency is paradoxical and best described as *hollow*. While it has reduced administrative burdens related to paperwork and filing, these gains are critically offset by new digital transaction costs. Persistent technical issues—specifically system downtime, low speed, and, most detrimentally, a lack of interoperability with the GFMS and other government databases—create new bottlenecks. This forces manual workarounds and duplicates effort, resulting in a net effect where the procurement cycle has not seen the significant shortening promised by Transaction Cost Economics.
- **Supplier Participation:** The system's impact is profoundly dualistic, effectively creating a digital divide within the supplier market. It has enhanced market access and convenience for large, digitally-mature enterprises that possess the necessary resources and technical capacity. Conversely, it has erected significant new barriers for Small and Medium Enterprises (SMEs), who struggle with the cost of compliance, complex digital processes, and unreliable internet connectivity. This threatens the socio-economic objective of fostering a competitive and inclusive supplier base.

## 6.2.2 Conclusion on Implementation Challenges

The challenges encountered are not isolated but form an interconnected web of technical, organisational, and human factors that reinforce one another.

- **Technical Challenges:** These are foundational and include unreliable ICT infrastructure, especially in provincial offices; poor system design leading to low usability; and a critical lack of interoperability that prevents the system from becoming a true "digital backbone."
- **Organisational Challenges:** These are rooted in the institution's culture and capacity. They include deep-seated resistance to change among staff accustomed to manual processes; a change management strategy that was inadequate and

failed to build buy-in; and significant skills gaps that were not addressed through sustained, effective training.

- **Stakeholder Challenges:** These external challenges are pivotal to the system's ecosystem-wide success. They encompass low digital literacy among a significant portion of the existing supplier base, and the high direct and indirect costs of digital participation, which disproportionately affect SMEs.

### 6.2.3 Conclusion on Stakeholder Perceptions

A clear and consequential stratification of perceptions exists, indicating a significant *implementation-performance gap*.

- **Policymakers and Regulators (PRAZ)** largely view the system as a success, focusing on the macro-level gains in oversight, transparency, and regulatory compliance.
- **End-Users (PSC Procurement Staff and SME Suppliers)**, however, often perceive the system as a source of daily frustration and inefficiency. They experience the technical glitches, interoperability failures, and complexity firsthand, leading to a belief that the system has complicated their work rather than simplifying it. This gap between policy intent and user experience risks fostering cynicism and passive compliance, undermining the system's long-term strategic potential.

## 6.3 Comprehensive, Actionable Recommendations

### 6.3.1 Policy Recommendations (For the Government of Zimbabwe and PRAZ)

1. **Develop and Fund a National Public Procurement Digitalisation Strategy (NPPDS):** Move beyond a narrow focus on platform rollout to a holistic ecosystem

development approach. The NPPDS should be a 5-year roadmap with dedicated funding and must include:

- **Mandatory Interoperability Framework:** Legislate the use of open APIs and common data standards to seamlessly integrate the e-procurement system with the GFMIS, ZIMRA, the Deeds Office, and other critical databases, creating a true "digital government backbone."
  - **Proactive SME Inclusion Framework:** Introduce a tiered supplier registration system with simplified documentation and lower fees for SMEs. Establish and fund regional "Supplier Digital Hubs" where SMEs can access reliable internet, scanners, and receive free technical assistance for bid preparation and submission.
  - **Dedicated Digital Infrastructure Fund:** Earmark funds within the national budget specifically for upgrading ICT infrastructure (hardware, software, and connectivity) in all provincial and district government offices to ensure equitable digital service delivery.
2. **Enhance the Regulatory Framework for Holistic Governance:** Acknowledge and address the phenomenon of "evolved opportunism."
- **Pre-Tender Oversight:** PRAZ should develop and mandate standardized, objective-based tender specification templates and strengthen its capacity to review high-value tender documents *before* they are published, to prevent the tailoring of specifications for favoured bidders.
  - **Promote Data-Driven Regulation:** Mandate that the e-procurement system's analytics be used to generate red-flag reports on suspicious patterns (e.g., single-sourcing just below thresholds, repeated wins by a consortium of bidders) for proactive investigation.

### 6.3.2 Operational Recommendations (For the Public Service Commission)

1. **Execute a Strategic Human Capital Development Plan:** Shift from ad-hoc training to a continuous, strategic investment in people.
  - o **Phase 1: Leadership-Led Change Communication (Months 1-3):** The PSC Secretary and senior management must personally champion the change, communicating a compelling "why" that goes beyond compliance to focus on national development and professional empowerment.
  - o **Phase 2: Differentiated Digital Literacy (Months 4-9):** Implement mandatory training tailored to different cohorts: "Digital Immigrants" (veteran staff) need foundational, patient instruction; "Digital Natives" (newer staff) require advanced training on system analytics and strategic modules.
  - o **Phase 3: Advanced Application and Incentivisation (Ongoing):** Provide role-specific training on using system data for supplier performance management, spend analysis, and market intelligence. Introduce recognition and reward schemes for staff who demonstrate innovative use of the system to achieve value-for-money.
2. **Establish a Supplier Relationship Management (SRM) Unit:** This unit should move beyond a helpdesk function to actively manage the supplier ecosystem.
  - o **Onboarding:** Develop and disseminate simplified, multi-lingual guidebooks and video tutorials for the e-procurement process.
  - o **Engagement:** Host bi-annual supplier forums to gather feedback, demystify processes, and build trust.
  - o **Development:** Partner with business associations to offer workshops on tender writing, cost-calculation, and basic digital skills for SMEs.
3. **Institute a Governance Structure for Continuous System Improvement:**

- o Form a **Cross-Functional E-Procurement Steering Committee** comprising senior representatives from Procurement, IT, Finance, and internal audit.
- o This committee should be responsible for: (i) maintaining a public log of system issues and resolution status; (ii) liaising with the software vendor for upgrades and patches; (iii) piloting new features with a user group before full rollout; and (iv) reporting quarterly to PSC leadership on system performance and user satisfaction.

### 6.3.3 Recommendations for Future Research

1. **A Longitudinal Study:** To track the trajectory of the e-procurement system at the PSC over 5-7 years, examining how the challenges and perceptions evolve as the technology and its users mature.
2. **A Quantitative, Nationwide Study:** Employing structural equation modelling (SEM) to statistically validate the relationships between key constructs identified in this study (e.g., Perceived Ease of Use, Leadership Support, Interoperability, Transparency) and the overall success of e-procurement across all government ministries.
3. **An In-depth Ethnographic Study:** To explore the "lived experience" and informal organisational culture within a procurement unit, focusing on the tacit "workarounds," coping mechanisms, and social dynamics that emerge in response to the mandatory digital system, providing a micro-level understanding of institutional decoupling.
4. **A Comparative Study on SME Resilience:** Investigating the strategies employed by SMEs that have successfully adapted to e-procurement systems in Zimbabwe versus those that have failed, to identify key factors of resilience and inform more effective supplier development programs.

## 6.4 Contribution to Knowledge

This study makes several significant and original contributions to the field of public procurement and digital governance:

- **Contextual Empathy:** It provides one of the first, deeply contextualised, empirical assessments of e-procurement within Zimbabwe's Public Service Commission, moving beyond policy rhetoric to ground-truth the implementation reality in a resource-constrained environment.
- **Theoretical Synthesis and a New Conceptual Model:** It demonstrates the explanatory power of integrating four complementary theoretical frameworks (TCE, PAT, TAM, Institutional Theory) to provide a holistic understanding of a complex socio-technical reform. Furthermore, it proposes an original Dual-Aspect Model that differentiates between *transactional* and *strategic* outcomes, thereby explaining the paradox of a system that succeeds in transparency yet fails in efficiency and inclusivity. This model provides a valuable analytical tool for future research.
- **Identification of "Evolved Opportunism":** The study offers a critical extension to Principal-Agent Theory by empirically documenting how agent opportunism adapts and migrates to less digitally-monitored phases of the procurement cycle in response to the introduction of e-procurement, a nuance with critical implications for anti-corruption strategy.

## 6.5 Limitations of the Study

While rigorous methods were employed, this study is not without limitations. Its focus on a single, albeit critical, case study (the PSC) means that findings, while rich in depth, cannot be statistically generalised to all public entities in Zimbabwe. The sensitivity of the topic may have introduced some social desirability bias, where participants provided answers they deemed professionally safe rather than their wholly candid opinions, though triangulation mitigated this. Finally, the study provides a snapshot in time (2021-

2025), capturing the early, turbulent phase of implementation; the long-term trajectory may differ.

## 6.6 Conclusion

The journey towards digital procurement maturity in Zimbabwe is undeniably underway. The Public Service Commission has crossed the critical first hurdle of technical implementation, establishing a system that has irrevocably improved the transparency of its procurement activities. However, this study reveals that this is merely the end of the beginning. The greater challenge now is to navigate the more complex transition from a focus on *technical compliance* to a culture of *strategic capability*. This necessitates a concerted, multi-stakeholder effort to fix the foundational technical plumbing, make a strategic and sustained investment in human capital, and consciously foster an inclusive and developed supplier ecosystem. Following this holistic trajectory, the PSC, together with PRAZ and the Government of Zimbabwe, can transform its e-procurement system from a tool of passive transparency; a digital ledger recording transactions, into a dynamic engine for active, strategic, and value-driven public service delivery that truly serves the citizens of Zimbabwe and accelerates progress towards national development goals.

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## APPENDIX 1: RESEARCH INSTRUMENTS

### INSTRUMENT A: QUESTIONNAIRE FOR PSC PROCUREMENT STAFF and END-USERS

Greetings. My name is Abigail Rufaro Ndaona. I am conducting a research entitled "An Assessment of E-Procurement Systems in Public Sector Procurement: A Case study of the Zimbabwe Public Service Commission". I seek your permission to ask you some questions in line with the objectives of the research, and also record the conversation so that we maintain integrity of the responses. The information shall remain confidential and be used solely for academic purposes.

#### Section A: Demographic Information

Department/Unit: \_\_\_\_\_

Job Title/Rank: \_\_\_\_\_

Years of experience in public procurement:

< 2 years

2 - 5 years

5 - 10 years

10 years

Level of familiarity with the e-procurement system:

Beginner

Intermediate

Advanced

**Section B: System Effectiveness (Please tick: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)**

| # | Statement | 1 | 2 | 3 | 4 | 5 |
|---|-----------|---|---|---|---|---|
|---|-----------|---|---|---|---|---|

| #                                          | Statement                                                                             | 1 | 2 | 3 | 4 | 5 |
|--------------------------------------------|---------------------------------------------------------------------------------------|---|---|---|---|---|
| <b>B1. Efficiency</b>                      |                                                                                       |   |   |   |   |   |
| 1                                          | The e-procurement system has reduced the overall procurement cycle time.              |   |   |   |   |   |
| 2                                          | The system has significantly reduced paperwork in my department.                      |   |   |   |   |   |
| 3                                          | Retrieval of procurement records and reports is faster with the e-procurement system. |   |   |   |   |   |
| 4                                          | The system is well integrated with other government financial systems (e.g., GFMS).   |   |   |   |   |   |
| <b>B2. Transparency and Accountability</b> |                                                                                       |   |   |   |   |   |
| 5                                          | The system has made the tender advertisement process more accessible to               |   |   |   |   |   |

| #                          | Statement                                                                          | 1 | 2 | 3 | 4 | 5 |
|----------------------------|------------------------------------------------------------------------------------|---|---|---|---|---|
|                            | the public.                                                                        |   |   |   |   |   |
| 6                          | The e-procurement system ensures a clear and tamper-proof audit trail.             |   |   |   |   |   |
| 7                          | I feel a greater sense of accountability for my decisions made within the system.  |   |   |   |   |   |
| 8                          | The system has reduced opportunities for manipulation in the tender award process. |   |   |   |   |   |
| <b>B3. Usability (TAM)</b> |                                                                                    |   |   |   |   |   |
| 9                          | The e-procurement system is easy to use.                                           |   |   |   |   |   |
| 10                         | I received adequate training to use the system effectively.                        |   |   |   |   |   |
| 11                         | Using the e-procurement                                                            |   |   |   |   |   |

| #  | Statement                                                        | 1 | 2 | 3 | 4 | 5 |
|----|------------------------------------------------------------------|---|---|---|---|---|
|    | system improves my job performance.                              |   |   |   |   |   |
| 12 | I find the system's interface to be intuitive and user-friendly. |   |   |   |   |   |

### Section C: Open-Ended Questions

What, in your view, is the single biggest benefit of the e-procurement system?

What are the most significant challenges you face when using the system? (e.g., technical, procedural, personal)

Do you have any suggestions for improving the e-procurement system at the PSC?

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## INSTRUMENT B: SUPPLIER QUESTIONNAIRE

Greetings. My name is Abigail Rufaro Ndaona. I am conducting a research entitled "An Assessment of E-Procurement Systems in Public Sector Procurement: A Case study of the Zimbabwe Public Service Commission". I seek your permission to ask you some questions in line with the objectives of the research, and also record the conversation so that we maintain integrity of the responses. The information shall remain confidential and be used solely for academic purposes.

### Section A: Company Profile

Company Name (Optional): \_\_\_\_\_

Business Sector: \_\_\_\_\_

Company Size:

Small Enterprise (<20 employees)

Medium Enterprise (20-50 employees)

Large Enterprise (>50 employees)

How long have you been registered as a supplier with the PSC?

< 1 year

1 - 3 years

3 years

**Section B: Supplier Experience (Please tick: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)**

| #                                        | Statement | 1 | 2 | 3 | 4 | 5 |
|------------------------------------------|-----------|---|---|---|---|---|
| <b>B1. Market Access and Competition</b> |           |   |   |   |   |   |

| #                                   | Statement                                                                     | 1 | 2 | 3 | 4 | 5 |
|-------------------------------------|-------------------------------------------------------------------------------|---|---|---|---|---|
| 1                                   | The e-procurement portal has increased my access to PSC tender opportunities. |   |   |   |   |   |
| 2                                   | The system has made the public procurement process more competitive.          |   |   |   |   |   |
| 3                                   | The system makes it easier to find and respond to relevant tenders.           |   |   |   |   |   |
| <b>B2. Process and Transparency</b> |                                                                               |   |   |   |   |   |
| 4                                   | The e-procurement system is more transparent than the previous manual system. |   |   |   |   |   |
| 5                                   | I receive timely notifications and feedback through the portal.               |   |   |   |   |   |
| 6                                   | The process for submitting a bid electronically is clear and straightforward. |   |   |   |   |   |

| #                                  | Statement                                                                                         | 1 | 2 | 3 | 4 | 5 |
|------------------------------------|---------------------------------------------------------------------------------------------------|---|---|---|---|---|
| <b>B3. Challenges and Barriers</b> |                                                                                                   |   |   |   |   |   |
| 7                                  | The cost of registering and maintaining a profile on the PRAZ/PSC portal is a significant burden. |   |   |   |   |   |
| 8                                  | I have the necessary digital tools and reliable internet to use the system effectively.           |   |   |   |   |   |
| 9                                  | The technical process of uploading bid documents is challenging.                                  |   |   |   |   |   |

### Section C: Open-Ended Questions

1. How has the shift to e-procurement affected your company's ability to do business with the PSC?
2. What specific support would help your company use the e-procurement system more effectively?

Thank you for your time and involvement in this research

### INSTRUMENT C: SEMI-STRUCTURED INTERVIEW GUIDE (For PSC Managers, PRAZ Officials, Key Suppliers)

Greetings. My name is Abigail Rufaro Ndaona. I am conducting a research entitled "An

Assessment of E-Procurement Systems in Public Sector Procurement: A Case study of the Zimbabwe Public Service Commission". I seek your permission to ask you some questions in line with the objectives of the research, and also record the conversation so that we maintain integrity of the responses. The information shall remain confidential and be used solely for academic purposes.

### **Theme 1: Implementation and Institutional Change**

1. Can you describe the process of implementing the e-procurement system from your perspective?
2. What were the primary drivers for this digital transition? (Probe: Regulatory pressure (Coercive), (Mimetic), internal initiative?)
3. How would you describe the institutional readiness and culture for this change within the PSC?

### **Theme 2: Perceived Effectiveness and Challenges**

1. In your view, in which areas has the e-procurement system been most successful? (Probe: efficiency, transparency, cost-saving)?
2. What have been the most significant unintended consequences, both positive and negative?
3. From a technical standpoint, what are the system's biggest strengths and weaknesses? (Probe: interoperability, reliability, usability)

### **Theme 3: Stakeholder Dynamics and The Human Factor**

1. How have procurement officers and suppliers adapted to the new system? What has been the nature of resistance, if any?
2. The study suggests a concept we call "evolved opportunism," where malpractices might shift to pre-tender stages. What are your thoughts on this?
3. How adequate has the training and capacity building been for both PSC staff and suppliers?

#### **Theme 4: The Future and Strategic Recommendations**

1. Looking forward, what are the most critical improvements needed for the e-procurement system to deliver its full potential?
2. What policy changes would you recommend to PRAZ or the Ministry of Finance to strengthen e-procurement nationally?
3. Is there anything else you believe is crucial for understanding the reality of e-procurement at the PSC that we haven't discussed?

Thank you for participating in this research



## APPENDIX 2: LETTER OF AUTHORITY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>P. Bag 1020<br/>Bindura Zimbabwe</p> <p>Tel: 0712 7620 Ext 6011<br/>Mobile: 0775 659 859, 0772 700 870<br/>Email: <a href="mailto:bdube@buse.ac.zw">bdube@buse.ac.zw</a><br/>0778173947</p> <p><a href="http://www.buse.ac.zw">www.buse.ac.zw</a></p> |
| <hr/> <b>BINDURA UNIVERSITY OF SCIENCE EDUCATION</b> <hr/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                          |
| <p>TO WHOM IT MAY CONCERN</p> <p><b><u>AUTHORITY TO CARRY OUT RESEARCH PROJECT - RUFARO ABIGAIL NDAONA</u></b></p> <p><b><u>B241673B</u></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                          |
| <p>This letter serves to inform you that the above mentioned is a student in the Department of Economics, Faculty of Commerce at Bindura University of Science Education.</p> <p>It is a requirement that students should carry out research projects (dissertations) during the final semester of the programme and they should conduct the research within an organization. It is against this background that we seek your authority to allow the student to carry out a research project within your organization.</p> <p>Your usual cooperation will be greatly appreciated.</p> <p>Yours faithfully</p> |                                                                                                                                                                                                                                                          |
| <br><b>Mrs B.DUBE</b><br><b>CHAIRPERSON</b><br><b>DEPARTMENT OF ECONOMICS</b><br><b>FACULTY OF COMMERCE</b>                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                      |

## APPENDIX 3- PLAGIARISM REPORT

|                    |                                                                                                                                                                                                                                        |              |                |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------|
| Ndaona plagiarism  |                                                                                                                                                                                                                                        |              |                |
| ORIGINALITY REPORT |                                                                                                                                                                                                                                        |              |                |
| 14%                | 12%                                                                                                                                                                                                                                    | 9%           | 8%             |
| SIMILARITY INDEX   | INTERNET SOURCES                                                                                                                                                                                                                       | PUBLICATIONS | STUDENT PAPERS |
| PRIMARY SOURCES    |                                                                                                                                                                                                                                        |              |                |
| 1                  | Submitted to Bindura University of Science Education<br>Student Paper                                                                                                                                                                  |              | 1 %            |
| 2                  | Submitted to Robert Kennedy College<br>Student Paper                                                                                                                                                                                   |              | 1 %            |
| 3                  | Mdletshe, Phindile Simphiwe Jennet. "Barriers to the Implementation of E-procurement in the Public Sector: Focusing on the Government Pensions Administrations Agency(GPAA)", University of South Africa (South Africa)<br>Publication |              | 1 %            |
| 4                  | Submitted to Universiti Tunku Abdul Rahman<br>Student Paper                                                                                                                                                                            |              | 1 %            |
| 5                  | Submitted to Strathmore University (Main Account)<br>Student Paper                                                                                                                                                                     |              | 1 %            |
| 6                  | liboasis.buse.ac.zw:8080<br>Internet Source                                                                                                                                                                                            |              | <1 %           |
| 7                  | www.mdpi.com<br>Internet Source                                                                                                                                                                                                        |              | <1 %           |
| 8                  | Vuai, Adila Hilal. "Gender Inequality on Decision Making in Tanzania: Challenges and Prospects: A Case Study of Zanzibar Urban District", University of Dodoma (Tanzania)<br>Publication                                               |              | <1 %           |
| 9                  | journalofroadsafety.org<br>Internet Source                                                                                                                                                                                             |              | <1 %           |
| 10                 | Submitted to University of Essex<br>Student Paper                                                                                                                                                                                      |              | <1 %           |
| 11                 | Simwaba, George. "Perceptions of Radiographers on Reporting Chest Images at Public Hospitals in Malawi.", University of Johannesburg (South Africa)<br>Publication                                                                     |              | <1 %           |