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TABORA CAMPUS

RESEARCH REPORT ON

ADOPTION OF E-PROCUREMENTAND APPLICABILITY OF FORCE ACCOUNT MECHANISM IN THE TANZANIAN CONSTRUCTION PROJECTS

RESEARCH TEAM:

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Richard Manase, Athanas Garaba, Fadhili Mtinda, Emmanuel Mung'onya, Michael Mgongo and Brevius Rudovick

Prepared by:
Tanzania Public Service College,
P.O. Box 2574,
Dar es Salaam.

Researchers: Richard Manase, Athanas Garaba, Fadhili Mtinda, Emmanuel Mung'onya, Michael Mgongo and Brevius Rudovick.

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ABSTRACT

This study investigated the adoption of e-procurement and the applicability of the Force Account mechanism in Tanzanian construction projects on the NeST platform. It focused on assessing the current status of e-procurement adoption in Tanzania, examining the applicability of the Force Account mechanism to e-procurement, identifying the prospects e-procurement offers for enhancing the Force Account approach, and exploring the challenges posed by e-procurement in applying the Force Account mechanism. A semi-mixed methodology was employed, incorporating both qualitative and semi-quantitative approaches. Data were collected from key stakeholders, including Procurement Officers, Engineers, Force Account Committees (notably in schools), health officials, school heads, and Transportation Officers.

The findings revealed that e-procurement through the NeST platform is widely adopted in Tanzania and has significantly enhanced transparency, reduced corruption, and fostered competitive bidding. However, implementation at the local level faces several barriers, including limited professional capacity, reliance on mobile phones rather than computers, poor internet connectivity in rural areas, complex procurement language in the system, limited integration with platforms like MUSE, and the absence of a dedicated desktop application.

The study has further revealed that the Force Account mechanism remains a practical and beneficial approach, especially in local infrastructure projects. It simplifies project implementation, supports local employment, and encourages community participation. Nonetheless, it continues to be challenged by unpaid committee members, overlooked hidden costs (e.g., utilities, transport, storage), and existing gaps in quality control and accountability that are further exposed by the e-procurement environment.

It has also been found that integrating e-procurement offers valuable opportunities to enhance the Force Account mechanism. These include improved expenditure tracking, better documentation, greater transparency, and strengthened accountability. While the NeST platform does not undermine the Force Account, it highlights areas where modernisation can amplify its effectiveness.

However, several challenges hinder the effective use of e-procurement within the Force Account framework. These include technical system complexity, procurement jargon that limits access for untrained users, exclusion of small-scale contractors due to Value Added Tax (VAT) policies and online bidding difficulties, inadequate internet infrastructure, limited system integration with payment platforms, and unclear policy guidance.

The study concludes that while both the NeST platform and the Force Account mechanism have substantial potential to enhance construction project delivery in Tanzania, their integration requires targeted interventions. It is thus recommended in this study to address issues such as capacity-building for local users, user-friendly system improvements, improved digital infrastructure, and revised policies to address operational and financial limitations. Strengthening these areas will optimise procurement outcomes and reinforce transparency and accountability in public construction projects.

The study has fully engaged in the adoption of e-procurement (NeST) and the applicability of the Force Account Mechanism in selected local government authorities in Tanzania alone; further studies must be conducted in other local government authorities in regions around Tanzania to compare results with these findings and achieve generalisation.

LIST OF ABBREVIATIONS

DC : District Council

FAG : Force Account Guide

FAM : Force Account Method/Mechanism

ICT : Information and Communication Technology

IDA : The International Development Association

ILO : International Labour Organisation

IRN : Interview of the Research Number

IT : Information Technology

LGAs : Local Government Authorities

LLCF : Local Less Construction Firm

MC : Municipal Council

MDAs : Ministries, Departments, and Agencies

MoEST : Ministry of Education, Science and Technology

MUSE : Mfumo wa Ulipaji Serikalini

NeST : National e-Procurement System of Tanzania

PE : Procuring Entities

PMI : Project Management Institute

PMU : Procurement Management Unit

PPDA : Public Procurement and Disposal of Public Assets Authority

PPRA : Public Procurement Regulatory Authority

RDT : Resource Dependency Theory

REA : Rural Electricity Authority

TPSC : Tanzania Public Service College

UNDP : United Nations Development Programme

URT : The United Republic of Tanzania

USAID : The U.S. Agency for International Development

VAT : Value Added Tax

WB : World Bank

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CHAPTER ONE: INTRODUCTION

1.1. Chapter Overview

This chapter presents background information about the study, a statement of the problem, research objectives, research questions, justifications for the study, and a definition of key terms

1.2. Background to the Study

Integrating information technology (IT) into business operations is not just a luxury limited to large corporations; small and medium-sized enterprises are also striving to implement IT to reap its advantages (Musawa & Wahab, 2012). The significant expansion of IT offers substantial potential for enhancing organisational performance. However, considerable investment in IT places growing pressure on management to validate expenditures by quantifying the business value of IT. Additionally, IT has had a profound impact on procurement services (Janssens, 2011).

The global emergence of e-procurement, involving the acquisition of goods, services, and works through internet-based technologies, holds promise for overhauling procedures, fostering competition, upholding integrity in public purchasing, and improving transparency and accountability (Janssens & Cuyvers, 1991). As such, it was also considered a catalyst for procurement reform, recognised by the European Commission as a significant result of electronic service (Commission, 2024). Electronic procurement refers to purchasing goods and services using electronic means (Chan & Swatman, 2000), such as the Internet or other electronic systems. It has its roots in the broader concept of e-commerce, which gained prominence with the rise of the Internet in the late 20th century (Corsi, 2006; Janssens, 2011; Musawa & Wahab, 2012; Williams & Hardy, 2007). The history of e-procurement dates back to the early stages of the Internet's development. Still, its widespread adoption in the Government and private sectors occurred more prominently in the late 20th and early 21st centuries. (Musawa & Wahab, 2012).

The e-procurement systems, which eliminate non-value-added operations from the procurement process, significantly increase national and international productivity growth. For example, the adoption of e-procurement in Australia has been sluggish, and research evaluating its effects remains limited to date (Kurnia & Md Rahim, 2007). The study's findings revealed that only 10% of major Australian companies utilise e-procurement systems in their daily operations. This is due to challenges in measuring the influence of multiple parties or stakeholders in e-procurement systems and the current lack of evidence supporting the benefits of e-procurement. However, numerous studies have previously demonstrated the potential of e-procurement (Puschmann & Alt, 2005). With increased procurement

transparency, e-procurement platforms allow businesses to centralise strategic procurement operations while decentralising operational procurement processes (Musawa & Wahab, 2012). Additionally, studies in North American and European countries demonstrated that gaining insight into how businesses in these regions implemented e-Procurement solutions and how these platforms enhanced the procurement function (Puschmann & Alt, 2005). In that sense, Most African countries have started using e-procurement to benefit their countries, with Tanzania being one of them.

The use of e-procurement in Tanzania has been incorporated into broader initiatives to improve governance and modernise public-sector procurement procedures. The nation has been carrying out several programmes to use technology and automate procurement procedures to increase public procurement efficiency, accountability, and transparency (Mushi & Nsimbila, 2022).

Like other developing countries, Tanzania's public sector procurement has seen a significant revolution with the introduction of the force account procurement method. Historically, the implementation of the force account mechanism in Tanzania dates back to 1992, when road rehabilitation and maintenance works were executed under the Labour-based Road Contractor Training Project (ILO, 1992). The project was financed by the UNDP, IDA, USAID, and the Government of Tanzania to establish a labour-based contracting capacity in two (2) regions for the execution of road rehabilitation and maintenance works in rural areas. The force account mechanism was found to be poor due to a lack of expertise; most of the roads were not maintainable; the contractors used hired equipment for their contracts, which led to a high cost of running; the Government of Tanzania had a policy of privatisation with donor support for labour-based road works (WB, 2006).

Since 2015, the Government has emphasised cost-effectiveness and the best value for money in construction projects (Matto, 2021). The force account mechanism was considered the best approach to achieve this objective (PPRA, 2019). Since then, project implementation in Tanzania using the force account approach has gained traction from 2016 to date, and many construction projects have been conducted under this approach (Mchopa, 2020; Mwishwa, 2022). For instance, during the financial year 2017/2018, the Government of Tanzania allocated TZS 33 billion (US$14.2 million) and TZS 184.6 billion (US$79.9 million) to education and health projects, respectively (NAOT, 2021). Implementation of these projects was planned to be executed through a force account mechanism. Furthermore, the Ministry of Education, Science, Technology, and Vocational Training (MoEST) reported spending TZS 800 million (US$0.346 mil) to 1 billion (US$0.433 mil) in the construction of teaching classrooms, dormitories, laboratories, offices, and staff quarters using a force account mechanism (MoEST, 2017).

Force account procurement in Tanzania is defined in section 64(6) of the Public Procurement Amendments Act of 2016 and Regulation 167(2) of public procurement regulations of 2013 G.N. No. 446 as amended by G.N. No. 333 of 2016, as a "process where public or semi-public departments or agencies carry out works by using its personnel and equipment or in collaboration with any other public or private entity". An emerging public procurement model for the force account mechanism has provided public procurement entities with a significant opportunity to reduce the cost of project implementation (Mbabazi & Mugurusi, 2018; Tekka, 2018; Shengeza, 2017). Mbabazi and Mugurusi noted that, among other things, the force account model empowers procurement entities to own and manage end-to-end processes internally, thereby ensuring locally tailored service delivery and, in turn, cost reduction. From the review of the present literature, the effective implementation of the force account mechanism has a significant impact on value-for-money outcomes (Semfukwe, 2023).

As Tanzania has adopted an e-procurement approach, the challenges associated with the previous procurement method, known as the force account mechanism, remain a significant concern for stakeholders. This issue was highlighted by Ryoba et al. (2017), who questioned why Tanzania has been slow to fully embrace e-procurement. Since the introduction of e-procurement in Tanzania, the focus has shifted to integrating the force account mechanism into the e-procurement framework.

The goal of achieving value for money in procurement, which encompasses delivery time, transaction costs, and the quality of goods or services, has not been fully realised when e-procurement is not utilised in public procurement processes (Banzi, 2020; Mohamed, 2011). Without full implementation of e-procurement, public bodies will continue to spend substantial amounts on procurement activities. Additionally, adopting e-procurement enhances competitive tendering, which is essential for achieving value for money in public procurement (Ryoba et al., 2017).

A related but distinct subject is whether Tanzanian construction projects can benefit from applying the force account mechanism. By employing their resources (labour, machinery, and materials), public institutions can complete building or maintenance projects without resorting to more conventional procurement methods such as competitive bidding or hiring private companies. This is made possible by the force account mechanism. When it is more economical or efficient for the public entity to handle the work directly, that approach is usually employed (Banzi, 2020; Corsi, 2006; Janssens, 2011; Kurnia & Md Rahim, 2007; Mushi & Nsimbila, 2022; Williams & Hardy, 2007). The applicability of the force account mechanism to construction projects in Tanzania may depend on several factors, including project size and nature, the public entity's capacity to provide resources and expertise, and the current legal and regulatory environment surrounding public procurement.

In addition to increasing the openness, effectiveness, and accountability of public procurement procedures, e-procurement systems can help the force account mechanism be implemented more successfully by offering the digital infrastructure required for public entities to plan, monitor, and report on their construction projects (Macharia et al., 2023; Massawe, 2023; Mushi & Nsimbila, 2022).

Generally, the study highlights the gap and calls for immediate attention to integrate force account mechanisms into e-procurement, which is progressing rapidly. As identified, the value for money and staff involvement need to be addressed as their current status is not realised, the advantages and challenges encountered during the implementations of forced accounts, how they can be incorporated into the e-procurement, and explore the possible ways of using the two mechanisms for better procurement performances in public sectors. However, e-procurement should still be considered when implementing government projects. This study aims to unravel the existing myths surrounding government procurement processes.

1.3. Statement of the Problem

The Government of Tanzania emphasises the use of the Force Account approach as the most appropriate method of contracting, seeking to reduce project costs and facilitate the attainment of best value for money (PPRA, 2019). Since 2016, the Force Account approach has received significant attention and recognition from the Tanzanian Government and political leaders (Matto, 2021). To ensure the effective application of the Force Account approach, the Government of Tanzania, through the Parliament, amended the Public Procurement Act of 2011 and its regulations in 2013 to include a section requiring the use of the force account approach in the execution of construction projects (URT, 2016). Also, the Public Procurement Regulatory Authority (PPRA) issued guidelines for implementing the Force Account Approach (PPRA, 2016).

However, some scholars have raised many questions about the execution and implementation of projects under a force account due to its theoretical and empirical limitations. To mention a few, Mbabazi and Mugurusi (2019) argued that the force account model exposes the Government to the greatest risk, as procurement entities cannot pass the risk on to any other entity. As observed by Matto (2021), it is difficult to ensure effective implementation of the force account approach due to inadequate planning and designing of the project; inappropriate adherence to the procurement procedures for materials; inadequate contract supervision; lack of qualified personnel to execute and supervise the works; lack of appropriate equipment and tools; and improper recording of cost of materials, labour and overheads in the books of accounts.

However, the advent of the new e-procurement system, NeST, has mandated the abandonment of paper-based procedures entirely, requiring all procurement processes, including engaging local contractors ('fundi'), to be conducted through

NeST. In light of these developments, it was pertinent to explore how the Force Account Mechanism is currently applied and to assess the prospects and challenges presented by NeST in the context of construction projects.

1.4. Research Objectives

1.4.1. General objective

Generally, this study sought to explore the adoption of E-Procurement and the applicability of the force account mechanism in Tanzanian construction projects.

1.4.2. Specific objectives

Specifically, the study intended to:

i. Assess the status of e-procurement adoption in Tanzania.

ii. Examine the applicability of the force account mechanism in the context of e-procurement in Tanzanian construction projects.

iii. Identify the benefits and advantages offered by e-procurement in applying the force account mechanism in Tanzanian construction projects.

iv. Examine the challenges of applying the force account mechanism in Tanzanian construction projects through the lens of e-procurement.

1.5. Research Questions

i. What is the status of e-procurement adoption in Tanzania?

ii. How applicable is the Force Account mechanism within the context of e-procurement in Tanzanian construction projects?

iii. What prospects does e-procurement offer for enhancing the application of the Force Account mechanism in Tanzanian construction projects?

iv. What challenges does e-procurement pose in the application of the Force Account mechanism in Tanzanian construction projects?

1.6. Justification of Study

The study yielded fruitful results, enabling the identification of prospects and challenges in applying the force account approach through e-procurement in procurement projects. Moreover, the findings have the potential to generate new knowledge and understanding of the challenges stakeholders face in implementing the force account mechanism through e-procurement. The study was timely, as its findings can inform and guide the Government and policymakers in formulating and monitoring policies that ensure value for money through the application of a force-account procurement approach via an e-procurement system. The findings will help both stakeholders and shareholders to improve the effectiveness of using the force account mechanism through e-procurement.

1.7. Definitions of Key Terms

1.7.1. Force Account

The term force account refers to a method of project implementation where works are carried out by public or semi-public entities using their personnel and equipment, or in collaboration with others, with payments covering labour, materials, equipment, taxes, and a profit markup. Compensation rates for specific costs may be outlined in the contract (PPRA, 2020).

1.7.2. Force Account Mechanism

The force account mechanism is a method of executing works using the personnel and equipment of a procuring entity or another public agency, rather than through external contractors (PPDA, 2017). It is not a procurement method but aims to build internal capacity and improve efficiency, as in-house staff can often complete tasks more quickly (Mbabazi & Mugurusi, 2018). In this study, the term refers to the construction or reconstruction of roads, buildings, and bridges using public resources, without the use of competitive bidding or negotiated contracts.

1.7.3. Stakeholders

Stakeholders are individuals or groups involved in a project or affected by its execution or outcome, either positively or negatively (PMI, 1996; Freeman, 1984). They may include individuals, teams, organisations, government officials, NGOs, academics, and others with an interest in or influence over the project (Juliano, 1995; Smith et al., 2001; Awakul & Ogunlana, 2002; Smith & Love, 2004). In construction projects, stakeholders play a crucial role as they can significantly impact decision-making and project success.

1.7.4. Government Projects

In Tanzania's public procurement systems, government projects entail works that fall under the following categories, but are not limited to, engineering works, rehabilitation, construction, quantity surveying, shutting down building machinery or equipment, and repair and maintenance (URT, 2013). According to the Public Procurement Act of 2011, government projects are defined as works including;

i. The erection, establishment, or construction of a building; or

ii. Any maintenance of a building assessed as high risk/significant or

iii. The repair, renovation, refurbishment, alteration, extension, or improvement of a building or maintenance of a building, combined with any of these works or

iv. The demolition or removal of a building;

This study operationalised government projects as construction and reconstruction work in scattered or remote locations for which qualified construction firms are unlikely to tender at reasonable prices.

CHAPTER TWO: LITERATURE REVIEW

2.1. Chapter Overview

This chapter presents a literature review on the e-procurement system and the applicability of the force account mechanism. The chapter provides the importance and justification for selecting the theories, reviews empirical studies relevant to the research problem, identifies gaps in the knowledge base, and outlines the conceptual foundation of the study.

2.2. Prospects of Force Account Mechanism and E-procurement Adoption

2.2.1. Benefits of the force account mechanism

According to the Public Procurement and Disposal of Public Assets Authority (PPDA) (2020), the Force account mechanism facilitates efficiency gains. According to PPDA (ibid.), through a force account, the procuring entity(s) can execute minor/ small works much faster. Also, Mbabazi and Mugurusi (2019) documented that implementing the force account mechanism led to efficiency gains, as the procuring organisations executed work much faster than when contractors were procured.

Additionally, the enhancement of the Procuring Entity's internal capacity was noted as another benefit of the force account mechanism. This is because the work is executed and supervised by the Procuring Entity staff. Therefore, the involvement of the procuring entity's staff enables them to practice and perform their duties effectively.

Cost savings. The force account mechanism utilises internal resources and employs local labour at the lowest cost, located nearest to the procuring entity's premises. To use a force account, it must be determined that executing the works in-house is cheaper than contracting out. Therefore, the procuring and Disposing Entity can deliver services at a cheaper cost.

Another advantage of the force account mechanism is that it allows work to be executed even when no contractor is willing to undertake the assignment (PPDA, 2020).

2.2.2. Prospects of e-procurement adoption

In recent years, the landscape of procurement has undergone a profound transformation, driven by the rapid advancements in digital technology. E-procurement, the use of electronic systems to manage and streamline procurement processes, has emerged as a key innovation in this shift. As organisations seek to enhance operational efficiency, reduce costs, and improve transparency, the

adoption of e-procurement systems has become increasingly prominent. The literature highlights a growing recognition of the benefits and prospects associated with this technological advancement, revealing its potential to revolutionise traditional procurement practices. Here are key benefits and prospects of adopting e-procurement (Mohamed, 2017).

Efficiency and Transparency:

E-procurement can streamline procurement processes, reducing paperwork and manual intervention. This can lead to increased efficiency, transparency, and accountability in construction projects (Hamsyah, 2023).

Cost Savings:

Automation of procurement processes through e-procurement can lead to cost savings by reducing administrative expenses, minimising errors, and improving contract management (Hamsyah, 2023).

Accessibility:

E-procurement platforms can be accessed remotely, enabling broader participation by vendors and contractors, including those from rural areas. This can promote competition and result in better value for money (Mohamed, 2017).

Real-Time Monitoring and Reporting:

E-procurement systems can provide real-time monitoring and reporting, enabling stakeholders to track procurement activities, project progress, and expenditures more effectively (Mohamed, 2017).

2.3. Challenges of Applying the Force Account Mechanism through E-procurement

The integration of e-procurement systems into public sector and organisational procurement processes represents a significant leap towards modernising and optimising procurement practices. Among the various procurement methods, the force account mechanism, in which an organisation directly manages and executes construction or maintenance projects using its own resources, presents unique challenges when applied to e-procurement frameworks. The literature highlights challenges arising from this integration, revealing the complexities and limitations of managing force account projects in an electronic procurement environment.

Lack of Digital Infrastructure: Tanzania may face challenges with inadequate digital infrastructure, including internet connectivity and access to electronic devices, particularly in rural areas. This could hinder the effective implementation of e-procurement systems, making it difficult to apply force account mechanisms seamlessly (Mohamed, 2017).

Capacity Building: To effectively use e-procurement platforms, professionals in the construction industry and government officials involved in procurement processes may need to undergo training. To apply force account mechanisms within these systems, specific skills and knowledge are required, which may need to be developed through capacity-building initiatives (Mohamed, 2017).

Legal and Regulatory Framework: The legal and regulatory framework governing e-procurement and force account mechanisms may not be well-established or require updating to accommodate the digitalisation of procurement processes. Ensuring compliance with existing laws and regulations while implementing force account mechanisms electronically is essential but can be challenging (Mohamed, 2017).

Data Security and Privacy Concerns: E-procurement systems handle sensitive information related to contracts, budgets, and project details. Ensuring the security and privacy of this data is crucial to prevent breaches and unauthorised access. Tanzanian construction projects may face challenges in implementing robust data security measures within e-procurement systems (Mohamed, 2017).

Integration with Existing Systems: Integrating e-procurement platforms with existing project management systems and accounting software can be complex. Force-account mechanisms require coordination among various stakeholders and systems, and ensuring seamless integration is essential for effective implementation (Mohamed, 2017).

Vendor and Contractor Readiness: Vendors and contractors involved in Tanzanian construction projects may not be fully prepared to adopt e-procurement practices, including force account mechanisms. Providing support and guidance to these stakeholders to onboard them onto digital platforms is crucial for the success of e-procurement initiatives (Mohamed, 2017).

Change Management: Transitioning from traditional procurement methods to e-procurement systems requires significant effort. Resistance to change, both within government agencies and among external stakeholders, may pose challenges to the adoption of e-procurement practices, including force account mechanisms (Mohamed, 2017).

2.4. General Principles for Application of Force Account

2.4.1. General Conditions for Using Force Account

The conditions that may justify the use of force are those listed under Section 64(5) of the PPA (2011) and Regulation 167(1) of the Public Procurement Regulations (2013), as amended. These shall include any of the following:

i. The works are small, scattered, and in remote locations for which qualified construction firms are unlikely to tender at a reasonable price

ii. Work must be carried out without disrupting ongoing operations.

iii. There is an emergency that needs immediate attention.

iv. A PE or public authority bears a greater risk of unavoidable work interruption than a contractor.

v. The PE has qualified personnel recognised by relevant professional bodies to carry out and supervise the required work; or

vi. The maintenance or construction is part of the routine activity of the PE.

The guideline for procurement under the force account mechanism requires the Tender Board of the procuring entity to approve the use of the force account mechanism. Also, a request for approval to use the force account mechanism must be accompanied by sufficient justification (PPRA, 2020). This approach is applicable during the construction of new projects or during maintenance work.

2.4.2. The requirements for implementation of projects under the force account mechanism

To effectively apply the force account mechanism in the execution of procurement projects, the guideline requires the appointment of a Project Manager or Supervisor for each project. The Project Manager shall be proposed by the technical department and appointed by the Accounting Officer (PPRA, 2020). The appointed project manager is supposed to be an expert with sufficient experience in a particular type of project.

The appointment of an implementation team is another requirement for the effective implementation of projects under the force account mechanism. According to the guideline, the procuring entity must appoint a project implementation team before implementing a project under a force account. This team should be comprised of members appointed based on Professional/Technical expertise and or experience (PPRA, 2020). The number of members on the supervision or execution team shall depend on the project's complexity, to achieve value for money. The duties of the implementation team include preparing specific tasks for personnel and/or piecework contracts for labourers. The Project Manager may determine other duties and responsibilities.

Another requirement is determining the scope of work. According to the guideline, the user/technical department shall describe the construction or maintenance work required to be executed. The guideline requires that, prior to the execution of works, the user department shall, in consultation with the technical personnel, submit the prepared scope of work and schedule of materials to the procurement management unit (PMU) for procurement of such materials (PPRA, 2020).

For the effective implementation of a force account, the project to be executed should be allocated a budget and included in the Annual Procurement Plan. The procuring entity is required to observe the annual procurement plan, and any unplanned works to be executed shall receive prior written approval from the Accounting Officer, who shall update the annual procurement plan accordingly (PPRA, 2020).

During the procurement of materials, the procuring entity is required to procure directly from Manufacturers or their authorised dealers. Where there is more than one manufacturer or dealer of the materials to be procured, the procurement shall be through competition, as provided for in the public procurement laws. Also, in the circumstances where the manufacturer or dealer of the materials to be procured is justifiably impossible, standard procurement procedure through competition shall be applied (PPRA, 2020).

2.4.3. Management of works under the force account mechanism

To achieve value for money, it is paramount to supervise the execution of the project under the force account mechanism. The procuring entity management should ensure proper project recordkeeping. All records, including the list of materials procured, labour, working drawings, as-built drawings, project progress reports, and weekly/monthly reports with pictures, as well as all payments made, shall be kept appropriately and retrievable on demand (PPRA, 2020). Additionally, the guideline requires that all payments to labourers be made promptly and adequately, and that they be supported by the required documents.

There should be close project monitoring, evaluation and quality control during the execution of the project under the force account mechanism. During the project's execution, close monitoring, assessment, and evaluation will be conducted through planned site inspections and meetings between the project implementation team and the user department (PPRA, 2020). The project manager should ensure that the project's monitoring and evaluation are carried out effectively. Also, the implementation team should closely monitor all risks associated with cost, time, and quality, and take corrective actions as appropriate. Any variations arising during the execution of works shall be obtained prior to the execution of the work from the tender board.

2.5. Theoretical Framework

The Resource Dependency Theory guided the study. The need for the theory in the study stemmed from its ability to explain the benefits of various organisational resources. Resource Dependency Theory (RDT) states that all organisations depend on resources for their sustainability. These are available from both their natural environment (within the organisation) and external environment (that is, from other organisations) in the business industry (Pfeffer & Salancik, 1978; Fındıklı, 2019). A primary assumption of Resource Dependency Theory is that dependence on "critical" and important resources influences the actions of organisations, and those organisational decisions and actions can be explained depending on the particular dependency situation (Werner, 2008). The theory explains how an organisation can achieve a competitive advantage through its resources (Jia *et al*., 2017). The main argument of the theory is that organisations should manage their tangible and intangible resources to achieve sustainable competitiveness. Also, the organisation's strategies should be aligned with available resources. (Rhodes et al., 2016) supplier-customer relationship and perceived customer value in non-core services outsourcing. 1,757 companies were randomly selected. 234 valid questionnaires were returned (13.4 % response rate. This theory is relevant because it explains how resources contribute to the organisation's goal achievement.

However, the theory failed to recognise that resources can be borrowed or outsourced from another organisation (Loice, 2015). Through arrangements such as a strategic alliance or partnership, one organisation can utilise another organisation's resources to its benefit. (Federico et al., 2014). This theory applies to the study because the use of the force account approach necessitates the utilisation of human resources, skills, and equipment within a single public entity or procuring entity for the procurement of works. If procuring entities utilise their resources effectively, they will be able to achieve their procurement goals.

In this study, financial and human resources are two key elements that facilitate the efficient and effective application of the force account procurement approach. The force account mechanism can be effectively applied when specific considerations are met, as outlined in Section 64(5) of the PPA, 2011, and Regulation 167(1) of the Public Procurement Regulations, 2013, as amended in 2016. The consideration includes the availability of equipment, materials, and the procuring entity's work supervision. The force account method makes the Government assume all risks. This is because the work may involve two or more government entities or a single government entity itself after obtaining funds from the central Government (Mbabazi & Mugurusi, 2016).

2.6. Empirical Literature Review

Shengeza (2017) conducted a study focusing on the procedure for applying the force account on government building projects. The study utilised procurement for works (renovation and remodelling) at three teachers' colleges and five secondary schools located in various areas of Tanzania. The key participants of this method were grouped into three: supervising consultancy, procuring entity, and executing team (local skilled labour). The study findings indicate that for the force account to be applied effectively, the supervising consultancy plays a crucial role in collaboration with the procuring entity and executing team, utilising well-detailed documents prepared both before and after renovation. The study has failed to explain whether the guidelines for the carrying force account approach were observed. The study focuses solely on collaboration between PE and the executing team, highlighting the force account as the primary factor. Moreover, it overlooks other crucial factors necessary for the successful application of PE, including effective project management and adherence to the general principles governing the force account.

Tekka (2018) researched the economic empowerment of local skilled labour through a force account. The study was conducted on selected secondary schools and teacher training colleges in Tanzania. The study indicates the participants in the renovation work as clients, consultants, and local skilled labour (as the executing team). The study reveals that local skilled labourers have gained extensive knowledge in financial management, procurement procedures, health and safety, contract management, and human resource management, as they have used these skills to manage their work gang. This study produced inconclusive results as it does not show whether the PE staff gained knowledge when applying the force account approach. It focused on skills gained by local/casual labourers.

The study by Tekka (2018) takes another initiative by investigating the determinants of the effectiveness of the force account method. The study explains that the Force Account Method (FAM) is among the motives that help procure entities to achieve value for money in the procurement of works. Through a questionnaire survey and factor analysis, this study identifies the determinants of the Force Account Method (FAM) effectiveness, including training, a committed project committee, supply chain management, and government support. The study has identified FAM as having a significant positive effect on increasing the project competitiveness of Local Less Construction Firm (LLCF) by reducing domestic market working opportunities. The study by Tekka (2018) discussed the determinants necessary for the effective implementation of force accounts; however, it lacked evidence of their application to procuring entities. Also, the study by Tekka (2018) produces an application gap. It does not show how the determinants were to be applied. This study bridges the gap by incorporating all four independent variables: finance, execution, personnel skills, and purchasing, into the effectiveness of work procurement.

Mchopa (2020) conducted a study on the applicability of the force account approach in Tanzania in the procurement of works. Findings indicated that the poor effectiveness was attributed to the absence of a standardised force account guideline applicable throughout the country by the respective procuring entities. Additionally, the legal provisions on force accounts are insufficient for enforcing best practices. Therefore, regulatory authorities should ensure that the newly introduced force account guidelines are enforced accordingly to improve effectiveness and efficiency. The study by Mchopa produces a knowledge gap. Each procuring entity applies the force account method in a manner deemed suitable to them. However, in 2020, the Public Procurement Regulatory Authority (PPRA) issued the standardised guideline. The remaining issue is the extent to which the issued guideline is effective for implementing the project under the force account mechanism. This study bridged this gap by examining the effectiveness of established guidelines and procedures through responses from stakeholders' experiences.

2.7. Conceptual Framework

Based on the above-mentioned previous literature, the authors proposed the conceptual e-procurement adoption in force account mechanisms (see Figure 2.1**),** yielding high accountability, transparency, and cost management. In comparison, the organisation positions all outcomes within its sustainable procurement practices.

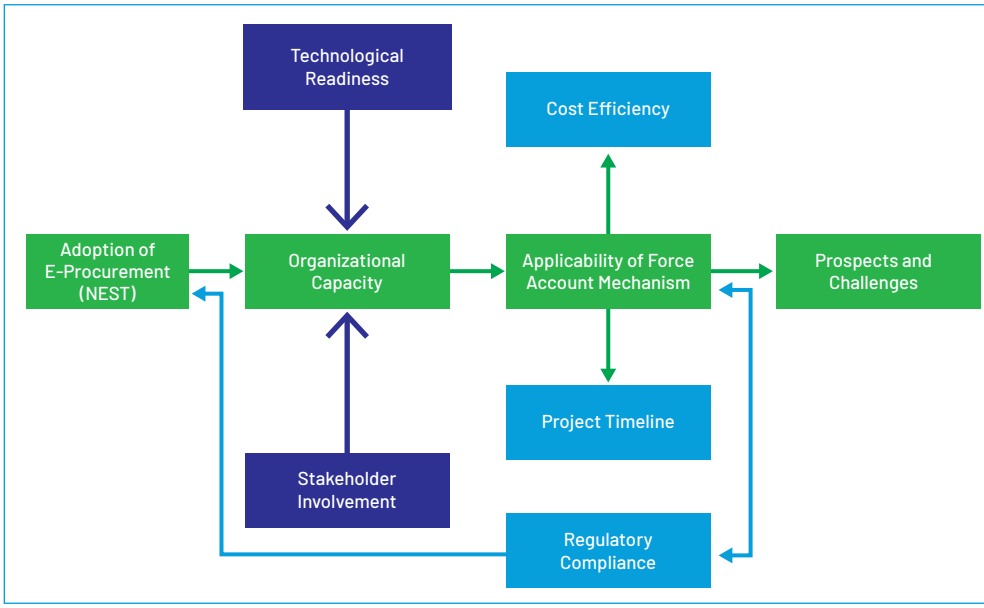

Figure 2.1: Conceptual Framework for E-Procurement's Adoption and Force Account Mechanism's Applicability.

Source: Researchers (2024)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Chapter Overview

The chapter outlines the methodological processes employed in this study. The chapter starts with a description of the research design used by the study. Then it describes the area in which this research was conducted. The chapter describes the study's targeted population, sampling procedures, data collection methods, and ethical considerations, and concludes with the methods of data analysis.

3.2. Research Design

This study employed a case study design using selected Local Government Authorities (LGAs) in Tanzania. The case study design was deemed suitable for this study, as it provided an opportunity to develop an in-depth understanding of social behaviour (Latham, 2013; Cooper & Schindler, 2003; Aaker et al., 2012). The force account mechanism is employed in a limited number of projects. The design also enabled researchers to understand how participants subjectively experience the implementation of the force account mechanism through the e-procurement system. Also, the design allowed the researchers to closely examine the data within the specific context. In this way, the extent to which participants in selected LGAs think and how they subjectively experience various aspects of the force account mechanism in their respective institutions. The case study has also been seen to help study topics of this nature (Tekka, 2018; Shengeza, 2017).

3.3. Description of the Research Area

This study was conducted in eighteen (18) LGAs found in six (6) regions that implemented procurement of work projects under a force account mechanism through an e-procurement system, as indicated in Table 3.1. The justification for selecting LGAs was based on the number of procurement projects carried out using the force account mechanism via e-procurement. Those with a large number of projects implemented through the force account mechanism were selected first. Also, the study considered the LGAs found in remote areas, believing that they might have a good number of experiences and challenges in implementing projects under force account through an e-procurement system.

Table 3.1: Showing Distribution of Geographical Study Areas

S/N	Name of Region	Name of Local Government Authorities
1.	Kigoma Region	1. Uvinza DC
		2. Kasulu DC
		3. Buhigwe DC
2.	Tabora Region	4. Tabora MC
		5. Urambo DC
		6. Kaliua DC
3.	Shinyanga Region	7. Kahama MC
		8. Shinyanga MC
		9. Kishapu DC
4.	Geita Region	10. Chato DC
		11. Geita TC
		12. Bukombe DC
5.	Morogoro Region	13. Morogoro MC
		14. Gairo DC
		15. Mvomero DC
6.	Singida Region	16. Singida MC
		17. Manyoni DC
		18. Itigi DC

Source: Researchers (2025)

3.4. Target Population, Sample Size, and Sampling Strategies

3.4.1. Target population

The target population of the study was all employees of the selected LGAs engaged in construction projects that use force account mechanisms. The study selected only employees involved in implementing projects under the force account mechanism, including the heads of the Procurement Management Unit, engineers, Accounting Officers, and other members of the force account committees. Researchers gained a clear understanding of the stakeholders' experiences with implementing projects under the force account mechanism in their respective organisations through e-procurement.

3.4.2. Sample Size and Sample Distribution

A total of 147 respondents participated in the study, with at least 8 from each selected Local Government Authority. Engineers constituted this sample: Heads of Procurement Units, Heads of Secondary Schools, and members of Force Account Committees.

Table 3.2: Distribution of Sample size by geographical location

S/N	Region	Districts/ Municipalities	Participants Profile	Number of Participants (Frequency)
1.	Kigoma	Uvinza DC	Procurement Officers (District level), Engineers, School Heads, Force Account Committee Members (School) and Health Officers.	09
		Kasulu DC	Procurement Officers (District level) and School Heads.	08
		Buhigwe DC	Procurement Officers (District level), Engineers, School Heads, and Transport Officers.	06
2.	Tabora	Tabora MC	Procurement Officers, School Heads, Municipality Education Officer (Secondary), Municipality Real Estate Officer, Engineers, and Force Account Committee Members (School).	10
		Urambo DC	Procurement Officers, School Heads, District Education Officer (secondary), Engineers, and Force Account Committee Members (School).	10
		Kaliua DC	Procurement Officers (District level), District Education Officer (Secondary), School Heads, District Real Estate Officer, Engineer, and Force Account Committee Members (School).	10
3.	Shinyanga	Shinyanga MC	Procurement Officers (District level), School Heads, and Force Account Committee Members (School).	10
		Kahama MC	Procurement Officers (District level), Engineers, Force Account Committee Members (School).	06
		Kishapu DC	Procurement Officers (District level), School Heads, Force Account Committee Members (School).	05
4.	Singida	Singida MC	Procurement Officers (District level), Engineers, School Heads, Force Account Committee Members, and Transport Officers.	12
		Itigi DC	Procurement Officers (District level), School Heads, and Force Account Committee Members.	08
		Manyoni DC	Procurement Officers (District level), Engineers, School Heads, and Force Account Committee Members.	05

S/N	Region	Districts/ Municipalities	Participants Profile	Number of Participants (Frequency)
5.	Morogoro	Morogoro MC	Procurement Officers, Engineers, Municipality Education Officer (Secondary), School Heads, and Force Account Committee Members (School).	10
		Mvomero DC	Procurement Officers, Engineers, District Education Officer (Secondary), School Heads, and Force Account Committee Members (School).	10
		Gairo DC	Procurement Officers, Engineers, District Education Officer (Secondary), School Heads, and Force Account Committee Members (School).	10
6.	Geita	Geita MC	Procurement Officers (District level), School Heads, and Force Account Committee Members.	07
		Bukombe DC	Procurement Officers (District level), School Heads, and Force Account Committee Members.	06
		Chato DC	Procurement Officers (District level), School Heads, and Force Account Committee Members.	05
Total				**147**

Source: Field data (2025)

3.4.3. Sampling Techniques

In this study, the researchers employed nonprobability sampling techniques, specifically judgmental and convenience sampling. The Heads of Procurement Units, Engineers, and Heads of Secondary Schools were purposefully selected in the case study areas, while members of the force account committees were obtained through convenience techniques

3.5. Data Source and Collection Techniques

In this study, only primary data collection techniques were used. The following are data collection techniques that were employed in the study:

3.5.1. Interview

The face-to-face interview was conducted with engineers, heads of procurement units, and heads of secondary schools who were directly involved in implementing projects under the force account mechanism via the e-procurement system. An interview was used because the study required a detailed explanation of issues

related to the research problem. The study sought to illuminate how participants subjectively experience the implementation of government projects under a force-account mechanism. Some standardised questions served as prompts on various themes of interest, which were followed up with additional questions after the interviewees' responses. The questions were structured to ensure that interviewees could express themselves freely within the themes of interest related to their experience with the implementation of government projects under the force account mechanism. Each interview session lasted 15-20 minutes per respondent.

3.5.2. Questionnaire

The study administered the questionnaire to 147 respondents. The questionnaire contained both open-ended and closed-ended questions. Open-ended questions were used to elicit respondents' experiences and feelings regarding the implementation of government projects using the force account approach. Additionally, open-ended questions were developed to collect more detailed insights into the prospects and challenges employees encounter during the NeST practice in procuring materials necessary for project execution. Close-ended questions were used to gather information on the number of tenderers participating in the tendering process, the level of participation, and respondents' perceptions of the difficulties of using NeST in the process. This tool was chosen for its reliability, ease of use, extensive data, low cost, and ability to collect data with minimal error.

3.6. Data Validity and Reliability

3.6.1. Data validity

Content validity was used in the study to ensure that the full range of dimensions relevant to the study was well covered. The researchers consulted various experts in procurement and those practising NeST on the designed instruments for data collection. Thereafter, some questions were modified, and other themes were added before they were administered. Also, the instruments for the study (questionnaire and interview) were pre-tested through a pilot study in which 12 respondents (not part of the target population) from each special group were given the questionnaire to assess the instruments' accuracy. Then, the questions were checked and edited before actual data collection to ensure data validity.

3.6.2. Data reliability

In making sure that the data collected are reliable, the following strategies were applied: a triangulation strategy, well-defined research objectives, conducting a pilot study, following an appropriate way of finding themes from all scholars (using inter-rater approach), proper sampling techniques were applied, biases on the responses were omitted, cross-checking, and validating the data was done through follow-up interviews to the selected respondents.

3.7. Data Processing and Analysis

Data entry and verification were essential to ensure that only relevant information was included and unnecessary details were excluded. This included checking the data for internal consistency and completeness. Qualitative data from interviews and open-ended questions were summarised and categorised to create themes, and the researchers then showed the relationships among the identified themes. Implications for policy or practice were derived from interpreting puzzling findings from previous studies. To capture participants' actual experiences and illustrate the originality of qualitative data, thematic comments were transcribed verbatim. Basic statistical techniques, including percentages and frequencies, were employed to analyse quantitative data gathered through closed-ended questions.

3.8. Ethical Consideration

Ethical issues were carefully considered at different levels of authority before the actual fieldwork. Researchers first sought and secured research clearance from the rector and chief executive officer of Tanzania Public Service College, to which researchers are affiliated. The Rector and Chief Executive Officer sought the data collection permit from the respective authorities before introducing researchers to the heads of the respective districts. All informants were asked first about their willingness to participate in the study. All data gathered were exclusively used for this study. Furthermore, participants were not identified by either their names or their titles. Finally, researchers adhered to the general research ethics standards set by their associations globally.

CHAPTER FOUR: PRESENTATION OF THE FINDINGS

4.1. Overview

This chapter presents the study's findings on the adoption of e-Procurement (NeST) and the applicability of the Force Account Mechanism in Tanzanian construction projects, as outlined in the specific research objectives. In this chapter, the researchers present insights into the status of e-procurement adoption in Tanzania. In addition, the study examined the applicability of the Force Account Mechanism in e-procurement for Tanzanian construction projects. Through this examination, several opportunities for applying the Force Account Mechanism via e-procurement were identified. Finally, the chapter explores the challenges posed by e-procurement in this application. The analysis reflects respondents' opinions, views, and suggestions on opportunities to improve e-procurement in the implementation of the Force Account Mechanism.

4.2. The Status of E-procurement Adoption in Tanzania

The primary objective of this section was to evaluate and comprehend the current state of implementing the National e-Procurement System of Tanzania (NeST) in Tanzania. NeST has been described as an e-procurement system implemented by Tanzania across all MDAs and LGAs through the Public Procurement Regulatory Authority (PPRA) since 2017. The system aims to reduce corruption, enhance transparency and efficiency in public procurement, and promote greater efficiency, accountability, and openness. To what extent has this adoption been effective? The following participants' testimonials reveal the situation (Interviewees have been represented by "Interview of the Research Number…" as IRN…).

When participants were asked about the current status of e-procurement applications, their views varied. Some respondents indicated that the current status of e-procurement in Tanzania is good, as many procurement processes for items are now conducted through the system. Some of the interviewees said,

> *"The system sounds good and has improved transparency and sufficient competition among bidders compared to previous ways of procurement"* (IRN 01).

Another participant highlighted the way NeST is user-friendly to the stakeholders, as he said,

> *"The system is friendly and easy to use" (IRN 02), and "it has reduced many bureaucracies and biases"* (IRN 12).

As mentioned above, NeST is good; the following participant added that,

> *"The system is good, and users at the lower levels continue to learn how to use it. As such, the improvement in using the system at a lower level is promising"* (IRN 19).

One of the rare challenges raised by a participant was that users were receiving unnecessary products when using the system, and the main issues stemmed from the tender initiator.

> *"There exists the challenge that if you do not write your requirements (products) specifically well, they will be delivered entirely differently from what you wanted and asked for"* (IRN 20).

As such, other participants indicated the improvements to be made to the system, especially at the lower levels, as they said,

> *"I see improvements to be made, as at the lower levels, smartphones are the only devices allowed to interact with the application (NeST)"* (IRN 18).

> *"With my low levels of understanding, I suggest that the developers allow users at the lower levels to use both computers and smartphones when interacting with NeST"* (IRN 10).

Some of the participants portrayed a few incidents that need immediate attention, such as rescuing the current situation, like network upgrading in some of the remote areas, getting bidders with no capacity (little capital) to deliver the products on time, and some of the giant suppliers do not bid for the tenders with little budget and remote sites. A few of the respondents proved it by saying that,

> *"Suppliers with big capital do not bid for tenders with a small amount"* (IRN 11).

> *"In case bidders win the tender and are not financially good, it causes a delay of the projects and sometimes fails to deliver the product"* (IRN 40).

Again, the participants were asked if any of their projects at their workplaces made use of e-procurement platforms. Most respondents strongly agreed that nearly all procurement activities were conducted through NeST. As many of them witnessed by saying,

> *"Yes, almost every procurement (99%) is done through NeST"* (IRN 01-140).

In continuation of exploring the usefulness of e-procurement (NeST) in institutions, the participants from the visited local government authorities were asked about the primary obstacles Tanzanian project managers and construction companies experience when implementing e-procurement tools. In responding to the demand of the question, most of them highlighted the following obstacles,

"Some suppliers from distant regions fail to supply the products on time due to factors like remoteness of the project" (IRN 40).

"Some bidders bid unrealistic budgets to win the tender, and when they go to the market, they refuse to supply the materials" (IRN 30).

"Increase the cost of some construction materials like breaks and tree breaks? I do not understand. Through the system, some of the materials found near the project (local materials) are bought at the highest cost. Instead of using the existing local materials, they can be taken from far from the project (site)." (IRN 50).

Networks, payments, language, and technology in some areas have been reported to pose significant obstacles to project execution. Most of the respondents said;

"The network is a big challenge at our workplace, and if you want to use the internet well, there are a few areas to stand and use the internet. Still, you can find many people at that place and fail your mission" (IRN 44, 50, 100, 147).

"In some unknown situations, suppliers do not get their project payments on time, which makes them hesitate to bid for the next project tender" (IRN 47).

"Incompatibility of systems, especially with MUSE, creates problems; the use of paperwork is a lot" (IRN 90).

"Some names of the materials are written in a language that is not familiar to us, and sometimes, materials are missing from the system" (IRN 25).

"Some of the stakeholders do not know how to use these new technologies, like NeST" (IRN 28).

Additionally, participants were asked to share their opinions on how e-procurement has enhanced accountability and transparency in public sector building projects. Most respondents indicated the existence of blinded competition in bidding on tenders, which, in turn, provides high transparency by showing the process step-by-step, and the winner is displayed to everyone. To ensure high accountability, every stakeholder uses his/her credentials when logging in to the system and executing his/her duties. Some of the respondents had this to say,

"The system has reduced directives from top to bottom on who is to supply and why not another one" (IRN 38).

"The system has dramatically simplified the work and brought professionalism by reducing human interactions in tendering processes" (IRN 48).

Then, participants suggested ways to advance the system to lower levels, eliminating the need for internet access. One of the respondents said,

"The system developers can help the users at the lower levels by developing a system that does not require any Internet when operating the project businesses" (IRN 88).

4.3. Applicability of the Force Account Mechanism in the Context of E-Procurement in Tanzanian Construction Projects.

When asked about the application of the Force Account mechanism in projects, most respondents noted that it becomes easier to manage projects under these mechanisms. Some of the respondents said,

> *"Running projects under Force Account mechanisms has made it easy to access many building materials at the lowest price"* (IRN 130).

In the same vein, the Force Account mechanism has facilitated a seamless construction process across various sectors. It has built organisational workers' awareness of what is happening at their workplaces. One of the respondents said,

> *"Many workers (government employees) are aware of the projects running in our area; this is a great achievement."* (IRN 77-99).

Community involvement through Force Account has created job opportunities for them. One of the respondents' testimonies indicated the availability of employment to the people in their localities, as she said,

> *"Force Account has helped people to get employment at the places where the projects are running"* (IRN 77).

In the context of the Force Account mechanism applicability in the e-procurement system in the Tanzanian construction projects, one of the respondents said,

> *"The Force Account mechanism is good, and the adoption of e-procurement has not affected anything in the construction processes through Force Account"* (IRN 105).

> *"The Force Account mechanism has gained popularity in Tanzania's construction sector as a practical and economical way to carry out public sector projects"* (IRN 83)

Also, one of the respondents indicated how the system is sound; however, the challenge was raised, as he said,

> *"Everything is fine; the challenge is that some good local technicians are not registered in the system (NeST)"* (IRN 101).

In addition, a few respondents expressed a need for running Force Account mechanisms outside the e-procurement system to reduce costs and conflicts that stakeholders dislike, which the community and the government can encounter. One of the respondents said,

"If some of the projects miss bidders and the surrounding community has already been informed about the project, it can raise conflict between the community and the management" (IRN 120).

"Many governmental officials from the Districts or Municipalities visit the projects (site visits) conducted under Force Account. They are paid for every project visit; since they use cars and fuel, shouldn't they hire experts to act on their behalf? At the same time, committee members have not paid anything since the projects started; what do you expect? (IRN 146).

The respondents were asked to describe how Force Accounts operate at their local government authorities. Many of them elaborated on how committees are formed, especially at lower levels and at the local government authorities' levels. They also provided further details on their involvement in project supervision. A few of the respondents had this to say,

"We use the Force Account Guide (FAG), and three committees are formed: the reception committee does everything, the other committees are given feedback, and the work is done with great care" (IRN 122).

"At lower levels, the head of the organisation becomes an accounting officer and officer in charge of the projects; he/she collaborates with his/her teammates to decide how to run the project through Force Account mechanisms. In this situation, committees such as construction, procurement, and inspection committees are selected. Through this, everything goes directly, and every committee will be assigned duties" (IRN 120).

"At the local government authorities' levels, commonly known as the 'headquarters,' procurement officers, engineers, planning officers, and others in charge of the projects become supervisors" (IRN 111).

Again, the respondents were asked to highlight the project categories that best suited the Force Account method. One of the respondents said;

"I think it is all about the projects below 100 million Tanzanian shillings, but I am not sure" (IRN 101).

A few of the respondents from the local government authorities involved said,

"All projects starting with 500 million Tanzanian shillings and below are eligible for the Force Account mechanisms; the challenge is defining the project. Do we mean the whole project or an item?" (IRN 69).

"There is an unawareness of which project will be performed under Force Account mechanisms; sometimes, you are needed to build a school hostel, and school toilets for the whole school. The entire school comprises several segments, including toilets, classes, and teachers' houses, and the project costs more than

500 million Tanzanian shillings. Still, the project is performed under Force Account; this still confuses many and is not well known" (IRN 66).

Respondents were asked to provide an estimate of the number of technicians interested and to submit bids for the completion of the advertised tenders for the maintenance of buildings or roads through NeST; the responses are presented in Table 4.1 below for clarity.

Table 4.1: The number of construction technicians who submit their tenders through NeST

	Responses	Frequency	Percent	Cumulative Percent
Valid	Usually less than 3	59	40.1	40.1
	Between 3-5	73	49.7	89.8
	Above 5	15	10.2	100.0
	Total	**147**	**100.0**	

Source: Field Data (2025)

Table 4.1 indicated that 73 (49.7%) of the respondents estimated that 3-5 technicians (local Fundi) submitted their bids for the tender competition. Also, 59 (40.1%) of the respondents indicated that technicians under the age of three usually show interest and submit. This data has been supported by one of the respondents, who said,

"As the place is remote, we get approximately below 3bidders, and sometimes we get technicians ranging from 3-5 who submit their bids" (IRN 76).

Table 4.2: The responses of construction technicians in using NeST

	Responses	Frequency	Percent	Cumulative Percent
Valid	High responses	29	19.7	19.7
	Moderate responses	76	51.7	71.4
	Low responses	42	28.6	100.0
	Total	**147**	**100.0**	

Source: Field Data (2025)

Table 4.2 indicates that 76 respondents (51.7%) had a moderate response to the NeST. 42 (28.6%) of the respondents were not interested in using NeST. Only 29 respondents (19.7%) indicated that technicians are highly interested in using NeST. These statistics were supported by one of the respondents, who said,

"Construction technicians are still in a dilemma; some think about the VAT, and others do not know how to use the system" (IRN 86).

Table 4.3: Difficulties in using the Force Account Mechanism through NeST

	Responses	Frequency	Percent	Cumulative Percent
Valid	Yes	53	36.1	36.1
	No	92	62.6	98.6
	I do not know	2	1.4	100.0
	Total	**147**	**100.0**	

Source: Field Data (2025)

When respondents were asked how they experienced using the Force Account mechanism in NeST, 92 (62.6%) reported no problems with the system. However, 53 (36.1%) of the respondents reported challenges in using the Force Account mechanism through NeST, as shown in Table 4.3. The statistics above have been supported by two of the respondents, as they said,

> *"The system is good at all levels, and there are no difficulties using the Force Account mechanisms"* (IRN 90).

However,

> *"Some of the accounting officers who are not innocent have created their rooms for negotiation with suppliers and contractors to get something before they pay the required amount"* (IRN 96).

Table 4.4 Frequency of whether the e-procurement system delays the timely supply of materials

	Responses	Frequency	Percent	Cumulative Percent
Valid	Yes	67	45.6	45.6
	No	78	53.1	98.6
	I do not know	2	1.4	100.0
	Total	**147**	**100.0**	

Source: Field Data (2025)

Responses to whether the e-procurement system delays the timely supply of building materials are shown in Table 4.4. 67 (45.6%) respondents think the e-procurement system causes delays. However, 78 (53.1%) respondents stated that the system does not impede the timely availability of building materials. 2 (1.4%) respondents were unsure. Most respondents do not see e-procurement as a hindrance to the timely delivery of construction materials. The statement above was supported by one of the respondents, as she said,

> *"There is no delay in supplying building materials if the procurement process starts on time and mistakes are made in the system"* (IRN 50).

Table 4.5: Does the e-procurement system affect the application of the force account mechanism?

	Responses	Frequency	Percent	Cumulative Percent
Valid	Yes	43	29.3	29.3
	No	103	70.1	99.3
	I do not know	1	.7	100.0
	Total	**147**	**100.0**	

Source: Field Data (2025)

Responses on whether the e-procurement system impacts the use of the force account method are included in Table 4.5 (43, 29.3%). Respondents believe the force account process is affected by e-procurement. However, the majority (70.1%) of the 103 respondents argued that it had no negative impact. 1 (0.7%) respondent said they were uncertain. Most respondents then believe that the e-procurement system does not hinder the use of the force account mechanism.

As noticed in the statistical data of Table 4.5, one of the respondents during the interview added that,

> *"NeST does not affect the application of the Force Account mechanism in constructing the projects"* (IRN 35).

As such, the respondents were asked about the benefits of the Force Account mechanism compared to conventional procurement techniques. Most respondents noted that the mechanism offers several advantages, including low costs, employment opportunities for the majority who cannot establish and register companies, and timely program execution. One of them gave the following testimonial,

> *"The force account mechanism has reduced the cost of project construction"* (IRN 34).

> *"It has also supported the internal project contractors and local Fundi as they get these projects and money"* (IRN 37).

However, the main drawbacks of utilising the Force Account system, especially when working on major infrastructure projects, have been identified as a lack of professionalism in supervising projects, particularly at lower levels such as schools and hospitals. Materials are being lost due to poor management at lower levels. Additionally, at lower levels, committee members often lack the motivation to oversee the projects assigned to them. One of the respondents had this to say,

> *"At lower levels, there is no professionalism in supervising the projects; as you know, sometimes people are not as professionally good in the construction field as in teaching and health matters" (IRN 47).*

"Some of the committee members are not committed and not serious about projects at the lower levels, as they are not motivated" (IRN 61).

"The presence of poor collaboration between the committee members can cause the delay of the projects" (IRN 72).

4.4. Prospects Offered By E-Procurement in Applying Force Account Mechanism in Tanzanian Construction Projects.

The study also sought to understand the prospects of e-procurement for applying the Force Account mechanism in project construction in Tanzania. Most respondents acknowledged that NeST presented numerous opportunities stemming from everyday experiences of delay, external supervision, and, occasionally, poor decision-making by independent public bodies.

The construction industry significantly contributes to infrastructure development in Tanzania, although procurement inefficiencies hinder timely project completion. By managing projects with internal resources, public bodies can reduce their dependency on external contractors. The Force Account system has played a significant role in empowering internal human resources and reducing the use of external contractors for small projects. Transparency, better decision-making, and more efficient resource allocation are all enabled by integrating e-procurement. Some of the respondents had the following to say in support of the above statement,

"The construction industry in Tanzania may become more transparent and efficient if e-procurement is incorporated into Force Account projects" (IRN 83).

In addition to that, other respondents added that,

"Tracking project expenses, supplier performance, and procurement policy compliance is made simpler with e-systems" (IRN 86).

"The administrative expenses related to paperwork, laborious record-keeping, and protracted procurement cycles are reduced via e-procurement" (IRN 47).

"Improved price comparisons and competitive bidding ensure cost-effective building supplies and services acquisition" (IRN 78).

"Automated alerts and tracking systems improve contract enforcement and risk management" (IRN 95).

4.5. Challenges Posed By E-Procurement in Applying the Force Account Mechanism in Tanzanian Construction Projects.

This part presents e-procurement challenges when applying the Force Account mechanism in Tanzanian construction projects. From the interview, all 147 participants acknowledged the availability of some challenges associated with

e-procurement. They addressed issues like inadequate ICT infrastructure, resistance to changes, cybersecurity threats, lack of awareness, the privacy of data of individuals, technical skills issues, and limited connectivity with other governmental sectors' systems like MUSE, limited rooms for negotiations, limited attachments, electricity issues in some localities, and the requirement for capacity-building initiatives must be resolved. One of the participants said,

> *"The network infrastructure issue is still challenging and problematic for us in rural areas"* (IRN 112).

The second participant addressed cybersecurity, lack of awareness, and technological issues. As identified in 4.3 on the current status, the same scenarios remain in the hearts of the participants, as they said,

> *"Imagine a head of school who is unaware of how to interact with the current technologies of smartphones; those heads who have resisted change due to technological advancement, what do you expect from such an accounting officer? What are the outcomes? Loss of data, delays, and sometimes requests for unwanted materials can happen"* (IRN 02).

For the same scenario, the third participant mentioned poor interconnectivity between the systems. As they mentioned, many things are done through the system, but when it comes to the issue of payments, sometimes you find no money in the account. It was clearly stated that the NeST system has no means to prevent the transfer of funds allocated for a particular project. He said with heartfelt sincerity in Kiswahili,

> *"Why shouldn't there be a possibility of linking the NeST, Bank, and MUSE systems? What I mean is that if a certain amount of money is allocated to a particular project, the funds must be used for that project only and not for other purposes. There have been delays in payments to contractors who complete their work on time, and I think this is intentional, too"* (IRN 03).

A fourth and fifth participant identified electricity and capacity building as significant challenges for this e-procurement. They discussed the availability of electricity, noting that some areas still lack power and instead use solar energy to charge their smartphones and computers. They also noted that during the tender's preparation and uploading, the device shuts off due to an energy shortage, causing the tender to fail. You then need to wait until the next day to charge your device. With this, knowledge of how to use these devices and the NeST system must not be forgotten, as it is essential to using the system. Few users now understand the system, specifically at the lower levels. This participant recommended that,

> *"The government has to increase the speed of supplying the REA electricity in all rural areas"* (IRN 04).

"Procurement officers, in collaboration with PPRA, must continue educating people (NeST users) on how to use the NeST system" (IRN 05).

The government must update procurement laws, invest in ICT infrastructure, train staff, and strengthen cybersecurity to ensure a smooth transition, even though e-procurement can potentially improve the Force Account mechanism in Tanzanian construction projects. Additionally, the government should appoint procurement officers in every ward and, where feasible, engineers or technicians to streamline procurement and project management for government initiatives within each ward.

CHAPTER FIVE: DISCUSSION OF FINDINGS

5.1. Overview

This chapter provides an interpretive account of the findings, highlighting their significance in the study's objectives and consistency with existing research. The findings discussed are based on the analysis and interpretation of data gathered from 147 participants.

5.2. Discussion of the Research Findings: Addressing Major Issues

The first objective aims to assess the current status of e-procurement adoption in Tanzania. The current status was addressed by all participants, who stated that e-procurement is fully adopted and practised across almost all MDAs and LGAs in Tanzania. All participants agreed that e-procurement improved transparency, increased competition among bidders, and reduced the risk of corruption and bias compared to previous procurement methods. Respondents' reactions to the status of e-procurement highlighted primary obstacles Tanzanian project managers and construction companies face when implementing e-procurement tools.

The current status of e-procurement adoption is influenced by the scarcity of professional human capital at lower levels who can assist in procurement processes and project supervision. As such, the participants recognised the need to increase human resources, particularly at lower levels, such as the ward level, where procurement officers are often scarce. Meanwhile, the findings indicate that the workforce at lower levels needs capacity-building. Most participants noted that many end users are still struggling to learn to use the system effectively. These findings relate directly to Ngowi and Mlinga (2020), who noticed that Tanzania is still in the early stages of implementing e-procurement; therefore, capacity-building initiatives and structural adjustments are required (Ngowi & Mlinga, 2020). Due to the demand for capacity-building programs, the government should prioritise this area to address technological challenges.

Similarly, participants in the study identified a limitation of the NeST system as its availability exclusively on smartphones and not on computers. The findings indicate that lower-level users are restricted to accessing the system via smartphones. Participants expressed a need for greater flexibility, allowing them to use either computers or smartphones based on their circumstances.

These findings align closely with the 2025 PPRA publication on the Windows app titled "NeST Tenderer," which describes the mobile application as the "NeST Tenderer mobile application" and is available on the Google Play Store to enhance accessibility. Smartphone users can interact with the e-procurement system

through this application. However, little is known about a desktop version explicitly developed for NeST. Some users reported a lack of native desktop support, noting they had to use Android emulators to run the mobile app on their Windows PCs.

In light of this, PPRA, in collaboration with other stakeholders, should explore ways to enable lower-level users to access the system more flexibly, whether via smartphones or computers.

Again, participants were informed of the existence of issues related to the NeST system. They noted that poorly specified procurement requests within e-procurement often result in incorrect products that may not meet the institution's consumption needs. These findings concur with those of Zulkarnain and Latif (2021), who explained that any procurement requests or processes that are not sufficiently specified may lead to the purchase of inappropriate goods. The incorporation of unnecessary specifications, such as iron sheets and nails, into construction projects makes them unsustainable.

Networks and infrastructures were also reported to impact smooth system operation, particularly in cases of inadequate network access in remote locations. Unreliable internet in remote areas hinders the use of the e-procurement system. These findings align with those of Pitso et al. (2018) and Mrope et al. (2019), who identified infrastructure and technical difficulties as common obstacles in the construction industry. They highlighted these issues, noting that insufficient infrastructure hinders the proper functioning of e-procurement systems.

Another system and operational issue, as the participants noticed, was a language issue: some of the system's materials use professional names that are unfamiliar to most users at lower levels who do not have a procurement education background. Similarly, some of the necessary items/materials for the projects are missing from the system, likely due to the language used. The findings regarding the language barrier are similar to those of Maamoun and Hashem (2018), who found that using professional jargon and other language barriers can make it challenging to use e-procurement systems effectively. Systems that use complicated jargon may be complex for users without specialist procurement training to understand.

Participants also reported that technological barriers make it difficult to use the e-procurement system. Many scientific advancements are underway in this world of globalisation, science, and technology. In many remote areas, participants reported that some e-procurement system users faced technological barriers. It has been reported that some older individuals may struggle to interact effectively with these systems, whether as bidders or tenderers. These findings convey a message similar to that of Maamoun and Hashem (2018) and Mrope et al. (2019), highlighting technological barriers in public institutions when implementing e-procurement. This results in the loss of user confidence and the tender being abandoned.

The second objective was to apply the force-account mechanism via NeST. In this objective, the respondents emphasised how the mechanism guarantees seamless project implementation, makes project execution easier, and offers affordable access to materials. These findings align with Lwiza and Mwakalinga's (2021) and Malinga's (2018) findings, demonstrating how the Force Account mechanism ensures seamless project implementation, streamlines execution, and provides cost-effective access to materials.

Also, all participants agreed on the importance of community involvement in projects in their localities. The mechanism has raised awareness of community initiatives and created employment opportunities for local workers. These findings concur with those of Lwiza et al. (2021) and Jato et al. (2020), who demonstrated that the Force Account mechanism raised community awareness of initiatives and created employment opportunities for the community surrounding the project. Emphasis must be placed on ensuring that all community members with the required characteristics for specific jobs are given priority.

Again, almost all participants acknowledged that the Force Account mechanism helped all suppliers and local Fundi. The mechanism intends to benefit local suppliers and contractors in any way. These findings align with the studies by Mlinga (2018) and Jato et al. (2020), indicating the benefit of supporting local contractors who may struggle to register formal companies. As such, regional contractors who struggle to register as official organisations benefit from the Force Account, which reduces project expenses. Nonetheless, issues with establishing project budget constraints and procurement disputes have been addressed.

In addition, some participants suggested that local Fundi might be hesitant to bid on tenders. There are issues with online bidding, concerns about Value Added Tax (VAT), and a lack of awareness; some construction technicians show moderate interest in adopting the NeST e-procurement system. These findings align with those of Jato et al. (2020) and Malekela et al. (2019), indicating that many construction technicians expressed moderate interest in using the NeST e-procurement system. Issues, including ignorance, VAT issues, and online bidding issues, persist.

The third objective of this study was to examine the prospects of e-procurement for applying the Force Account Mechanism in project construction in Tanzania. Most respondents concurred that the implementation of e-procurement has not adversely impacted the Force Account procedure. The Force Account mechanism is still a popular and reasonably priced strategy in Tanzania's building sector. One issue was highlighted: some knowledgeable local technicians are not listed in the NeST system. The finding of this item is in line with the study by Matto. Matto's (2023) findings demonstrate the cost-effectiveness and value of money for each item in the project. Again, the study tells that, with the integration of e-procurement, the Force Account mechanism remains in use and effective.

The last objective was to address e-procurement's challenges in applying the Force Account Mechanism in Tanzanian Construction Projects. Respondents reported several issues related to e-procurement in applying the Force Account Mechanism, some of which occurred at different times with suppliers and contractors. Some of the problems being addressed collectively include low-budget tenders never being attracted by suppliers with significant capital, delays in supplying materials by un-capitalised bidders (bidders with small capital), some of the materials that could be bought at a very low price at the locality, are then purchased at a higher price when bought through the system (price fluctuation), and sometimes delays in payments to the suppliers discourage future participation in tender-bidding. These findings align with the study by Malekela et al. (2019), which identified problems with suppliers, including their inability to produce goods on schedule due to budgetary constraints or unrealistic bidding expectations.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1. Overview

This chapter offers a comprehensive conclusion with recommendations. The study's findings also provide suggestions for increasing procurement efficiency. The report also identifies topics that could be investigated further in this regard.

6.2 Major Findings in Summary

Data collected from various local government authorities in selected regions of Tanzania were analysed and interpreted, and the following are the key significant findings from the study.

- ✓ The current status of e-procurement adoption in Tanzania is widespread, improving transparency, reducing corruption, and enhancing competitive bidding. However, the adoption of NeST is challenged at the local level by several factors, including limited professional capacity, reliance on mobile phones rather than computers, poor internet connectivity in remote areas, the use of technical procurement language, and the lack of integration with payment systems (e.g., MUSE).

- ✓ The applicability of the Force Account Mechanism within the e-procurement system remains relevant and beneficial, as it simplifies project execution by promoting local employment and enhancing community participation. Secondly, e-procurement reveals gaps in quality control and accountability. Within the Force Account Mechanism, there are challenges such as unpaid committee members and unaddressed hidden costs (utilities, storage, and transport).

- ✓ Prospects that e-procurement offers for enhancing Force Account Mechanism include strengthening transparency, oversight and improving efficiency in the procurement process. As such, e-procurement integration does not undermine Force Account but highlights areas for improvement, and the potential benefits include tracking, documentation, and accountability.

- ✓ Challenges posed by e-procurement in applying the Force Account Mechanism include technical complexity and procurement jargon, exclusion of small contractors (VAT, online bidding hurdles), weak digital infrastructure and user support, lack of integration with financial systems, and the need for clearer policies and guidelines. Supplier payment delays discourage future participation in tender bidding. Low-budget tenders rarely attract suppliers with significant capital.

6.3. Conclusion

Tanzania has transformed procurement processes through e-procurement, enabling institutions to implement all procurement procedures through NeST. A significant change in public procurement and project management has increased accountability, efficiency, and transparency. At the same time, the Force Account system enables government organisations to manage construction projects using their own internal resources. However, technical infrastructure, change management, and human capacity are needed for deployment to be successful.

Although adopting e-procurement and the Force Account mechanism aims to enhance procurement efficiency, several issues need to be addressed and communicated to all stakeholders. Barriers such as a lack of technological expertise, inadequate digital infrastructure, bureaucratic resistance, and supplier payment delays discourage future participation in tender bidding and may limit their effectiveness. Therefore, a strategic balance between these procedures is needed to ensure the optimal project delivery, cost-effectiveness, and quality assurance in Tanzania's construction industry.

6.4. Recommendation

The study provides recommendations based on two key aspects, offering immediate actions to the Government and further studies for the remaining recommendations.

6.4.1. Recommendation to the Government

To ensure efficient and effective e-procurement through NeST and the application of the Force Account mechanism to supervise construction projects in Tanzania, the following suggestions should be considered.

To strengthen procurement efficiency and ensure transparency, the Government should ensure that all procurement activities are fully integrated into Tanzania's National e-Procurement System (NeST). No item of procurement should be conducted outside this system, except for those explicitly permitted by existing procurement laws. This measure would help promote accountability, prevent misuse of funds, and standardize procurement procedures across all public institutions.

In addition, the Government should consider employing lower-level technical experts to assist with procurement processes and project supervision, particularly at the ward level. These experts would provide much-needed technical support and oversight, thereby enhancing compliance with procurement guidelines and improving the quality of project implementation.

Furthermore, it is recommended that the Government allocate a dedicated budget for educating stakeholders on the use of the NeST system and the Force Account mechanism. Capacity-building programs and continuous training would help ensure that all users understand the system's requirements, thereby minimising errors, delays, and misuse.

The Government should also promote digital inclusion by allowing lower-level users access to computers and smartphones needed to conduct procurement-related activities. Empowering these users with appropriate tools and permissions would enhance efficiency and foster a sense of ownership and accountability at the grassroots level.

Ensuring reliable network and Internet connectivity across both remote and urban areas is another critical step. Where connectivity challenges persist, the Government should implement a backup or contingency plan to ensure that lower-level entities can continue to operate effectively without interruption.

Moreover, barriers such as limited technological skills, language challenges, and accessibility issues in remote areas must be addressed. Removing these obstacles would help promote equal participation in procurement and project management processes across all regions.

The Government should also take deliberate measures to eliminate payment delays by project supervisors, particularly within the Force Account mechanism. Timely payments not only motivate contractors and suppliers but also ensure the smooth implementation of projects.

It is further recommended that the NeST system be configured to automatically reject bids that are unrealistically low and below market realities. Such functionality would help prevent underquoting, which often leads to poor-quality work or incomplete projects.

Finally, the Government should refrain from transferring funds allocated for budgeted projects to unbudgeted ones. Maintaining strict adherence to budget allocations ensures that planned projects are completed on time and within scope, thereby enhancing accountability and effective public service delivery.

6.4.2. Recommendation for Further Research

The study has fully engaged in the adoption of e-procurement (NeST) and the applicability of the Force Account Mechanism in selected local government authorities of Tanzania alone; further studies must be done in other local government authorities in the regions around Tanzania to compare the results with these findings to bring generalisation.

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APPENDICES

APPENDIX 1: Interview Guides with Heads of the Procurement Management Unit, Engineers, Accounting Officers, and other members involved in Force Account Committees.

Dear respondents, the following are the interview questions the researchers constructed based on ***"Adoption of E-Procurement and Applicability of Force Account Mechanism in Tanzania Construction Projects".*** The research interview guides aim to explore both the technological and procedural aspects of e-procurement, as well as the effectiveness and challenges of using the force account mechanism in construction projects. The objective is to gather insights into current practices, the applicability of the force Account mechanism, the prospects for applying this mechanism through e-procurement, barriers to adoption, and the impact of these mechanisms on project outcomes. Welcome to a short interview with me, \ [Name], from Tanzania Public Service College, Tabora.

Section One: Background information and work history

1. Could you explain your position in Tanzania's building industry?
2. How long have you worked in procurement or project management for construction?
3. Which kinds of construction projects, public, private, large-scale infrastructure, etc., have you worked on?

Section Two: The Adoption of E-Procurement at the Institution

4. In your opinion, what is the current status of applications of e-procurement?
5. Have any of your projects made use of e-procurement platforms?
6. What are the primary obstacles Tanzanian project managers and construction companies experience when implementing e-procurement tools?
7. In your opinion, what part does e-procurement play in enhancing accountability and transparency in public sector building projects?
8. What organisational or technological obstacles have prevented Tanzanian building projects (Based at your institution) from fully implementing e-procurement?

9. Does Tanzania use e-procurement in construction projects? Do they face legal or regulatory obstacles?

10. In your experience, how has the speed and effectiveness of procurement procedures changed due to e-procurement?

11. What kind of assistance or training is required to improve the construction industry in Tanzania's adoption and efficient use of e-procurement systems?

Section Three: Force Account Mechanism in the organisation

12. How do you see the application of the Force Accounts mechanism in relation to e-procurement?

13. Could you describe how Force Accounts operates for Tanzanian construction projects?

14. Which project categories best suit the Force Account method, and why?

15. When you advertise the tender for maintenance of buildings or roads through NeST, how many construction technicians submit their tenders?

    a) Usually less than 3

    b) Between 3-5

    c) Above 5

16. How do you envision construction technicians responding to the use of NeST?

    a) High responses

    b) Moderate responses

    c) Low responses

17. Are there any difficulties in using the force account mechanism through NeST?

    a) Yes

    b) No

    c) I do not know

18. In your opinion, does the e-procurement system hinder the availability of building materials on time?

    a) Yes

    b) No

    c) I do not know

19. Does the e-procurement system affect the application of the force account mechanism?
    a) Yes
    b) No
    c) I do not know
20. In the context of Tanzanian building projects, what benefits does the Force Account system provide over conventional procurement techniques?
21. What difficulties have you faced or seen when applying Force Account to Tanzanian construction projects under NeST?
22. Based on your experience, how do you believe the Force Account method positively affects the project budgets, schedules, and overall quality?
23. In what ways does the Force Account mechanism, particularly in the public sector, enhance the adaptability and responsiveness of building projects?
24. What are the main drawbacks or dangers of utilising the Force Account system, especially when working on major infrastructure projects?

Section Four: Connecting E-Procurement and Force Account in Organisations

25. Can Tanzania's Force Account system be enhanced or supplemented by e-procurement? How, if at all?
26. Could introducing e-procurement improve or expedite the Force Account mechanism in building projects? If yes, why? And if not, why not?
27. Are there any initiatives that demonstrate the combined usage of Force Account with e-procurement? How did it turn out?
28. In what ways might e-procurement aid in resolving some of the issues with accountability, transparency, and cost management that the Force Account mechanism faces?
29. What adjustments or enhancements would you suggest to maximise the application of Force Account and e-procurement in building projects?
30. What prospects do you see for e-procurement in Tanzania's building sector? In a few years, will it be the norm for procurement?
31. What part, in your opinion, should the government or oversight organisations play in encouraging e-procurement and enhancing the Force Account system in building projects?

32. Do you have any specific ideas about improving the use of Force Accounts in Tanzania's construction industry and encouraging the adoption of e-procurement? Do you know any policy concerning this?

33. Could structural issues facing Tanzania's construction sector, such as delays, cost overruns, and corruption, be resolved by combining Force Accounts with e-procurement?

34. What other general comments would you like to highlight that might have been forgotten in the interview above?

35. Which area of research could be integrated to facilitate the connection between e-procurement and force accounts?

For further details please contact:

Rector and Chief Executive Officer,
Tanzania Public Service College
P.O. Box 2574, Dar es Salaam
Tel: +255 22 2152982,
Fax: +255 22 2152933
Email: info@tpsc.go.tz

TABORA CAMPUS
Campus Director,
Tanzania Public Service College,
P.O. Box 329, Tabora
Email: tabora@tpsc.go.tz
+255 26 2604537/2604278