

Towards Addressing Challenges of Achieving Force Account Targets in Tanzania: The Case of Construction Projects Supervised by the Mbeya University of Science and Technology Consultancy Bureau

Justus Massawe

Mbeya University of Science and Technology

P.O. Box 131 Mbeya, Tanzania

ARTICLE INFORMATION

Article History

Received: 22nd May 2023

Revised: 07th September 2023

Accepted: 17th October 2023

Published: 02nd December 2023

Keywords

Force account
Quality improvement
Time management
Cost reduction

ABSTRACT

With three main objectives in mind: cost reduction, a shortened timeline, and higher quality, Political influence has used the force account technique extensively in Tanzania since 2016. This led to a range of procurement-related force account difficulties for the public in construction projects. By identifying the obstacles to force account targets and offering solutions that could help to enhance all construction projects in Tanzania that would utilise the force account mechanism, this study sought to strengthen the implementation of construction projects utilising the force account mechanism. The study used a cross-sectional survey research design and a sample of 98 respondents from the Mbeya, Songwe, and Njombe regions of the southern highlands. Construction projects were carried out in these areas using the force account system run by MUST or in coordination with its co-company, MCB. The study's data was gathered through surveys, an interviewing guide, and observations. The validity and reliability of each variable construct in the questionnaires were assessed, and the Pearson product-moment correlation coefficient was employed to gauge the strength of the linear relationship between the study variables (r). The study also acknowledges that if the highlighted concerns are remedied, the method can contribute to the improvement of construction projects. The difficulties that prevent the implementation of force account mechanisms in construction projects include time-consuming hidden costs, the requirement for strict oversight of local funds, a lack of commitment among committee members, political influence, a lack of allowance for committee members, and poor estimation of committee members. The force account system inside the government public procurement legal framework has been found to have a positive and substantial influence on cost reduction, quality enhancement, and adherence to time management. This, in turn, will yield advantageous outcomes for building projects. It is advisable to allocate more resources towards enhancing the execution of building projects in the public sector by employing force account procedures. This approach aims to enhance the performance of public procurement and bolster institutional effectiveness.

Corresponding author's e-mail address: justusmassawe@gmail.com/justus.mas@must.ac.tz

1.0 Introduction

The Tanzanian government works to enhance its operations for infrastructure, building modelling, the health and education sectors, and other areas through the procurement of works by reducing cost and time without compromising project quality and achieving value for money. (URT 2017) Since 2016, the government has employed several techniques as outlined in the Public Procurement Act to procure work when the procuring organisations are required to recruit outside contractors to carry out the work. (PPA, 2011 and its regulation of 2013). The government has stressed cost-effectiveness and the best value for money in construction projects. As a result, the force account system was thought to be the most effective strategy for achieving this goal (PPRA, 2019). The force account method is referred to as an emergent procurement model, even though it is not a novel strategy in the academic literature (Mbabazi and Mugurusi, 2019). The organisations choose between "make versus buy," "in-sourcing vs. out-sourcing," and "contracting-in versus contracting-out" from the perspective of procurement. The terms "making," "in-sourcing," "in-house," and "contracting-in" are therefore connected to the force account method.

The Public Procurement Amendments Act of 2016 and Regulation 167(2) of the Public Procurement Regulations of 2013 G.N. No. 446 as amended by G.N. No. 333 of 2016 also define force account as "a process where work is done by a public or semi-public department or agency using its own staff and equipment or in collaboration with any other public or private entity." Another name for the force account system is direct labour (URT, 2013). Through the PPA 2011, its regulations from 2013, and its amendments from 2016, the government of Tanzania invested in the adoption of the Force Account Mechanism as a means of accelerating projects through the use of organisational internal staff to accommodate the procurement of supplies and equipment in accordance with customary procurement procedures and inviting local funds from the community to participate in the project execution as opposed to contractors (URT, 2017).

Tanzanian government leaders have given the force account approach a lot of attention and praise for its execution mode. For instance, the Tanzanian government budgeted TZS 33 billion (US\$ 14.2 mill)

and TZS 184.6 billion (US\$ 79.9 mill) for health and education programmes, respectively, during the 2017–2018 fiscal year (NAOT, 2021). These projects were supposed to be implemented via a forced account mechanism. Also, utilising a force account mechanism, the Ministry of Education Science, Technology, and Vocational Training (MoEST) reported spending TZS 800 million (US\$ 0.346 mill) to 1 billion (US\$ 0.433 mill) on the building of classrooms, dormitories, labs, offices, and staff quarters (MoEST, 2017). The ministry estimated that outsourcing projects might cost between TZS 2 billion and 3 billion (US\$ 0.866 million to US\$ 1.299 million). In other words, by using a force account strategy rather than outsourcing, a ministry was able to save anywhere between TZS 1.2 billion (US\$ 0.519 mill) and 2 billion (US\$ 0.866 mill).

Under the force account method, a procuring entity must have its own competent employees with expertise managing construction projects in order to provide advice, or it must hire staff from another public body with the necessary skills for building work. (PPA 2011). As a result, from a political perspective, Tanzania is praised for its force account strategy's cost-effectiveness and best value for money. According to some researchers, the effective use of the force account procurement approach can increase efficiency, speed up project completion, boost internal capacity, and provide value for money (Shengeza, 2017; Mbabazi and Mugurusi, 2019).

Other researchers, on the other hand, have stressed that force accounts can be used as long as the organisations doing the buying meet certain requirements, such as having qualified staff carry out and oversee the activities (Mbabazi and Mugurusi, 2019; Mchopa, 2020).

This paper's remainder is structured as follows: The literature review, which includes an empirical analysis and a theoretical framework, is presented in the next part. The methodology used to carry out the study is then discussed. The results are described in depth in the section that follows the methodology, and the results are then discussed. The paper is then finished with a conclusion, a set of recommendations, and ideas for further research.

2.0 Literature Review

2.1 Theoretical Framework

A force account is a procurement strategy where a government organisation uses internal resources to carry out rehabilitation or development work instead of hiring an outside company. In such cases, it may be necessary for the government entity to procure raw materials and/or hire temporary labour to complete the task. (Kingston Jamaica Policy, 2007). construction methods used by the procuring entity itself or by the relevant public or semi-public agencies or departments, where PEs or the public or semi-public organisation use their own staff, tools, or hired labour (Tekka, 2018). If any of the following requirements are met, using direct labour or force may be justified: The required work must be completed without interfering with ongoing operations; risks of unavoidable work interruption are better borne by a procuring entity or public authority than by a contractor; there are emergencies that need prompt attention; and the procuring entity has qualified personnel to carry out and supervise the required work (PPA 2011, Reg 2013 and its amendments of 2016).

2.2 Empirical Literature

Mbabazi and Mugurusi documented a study on the force account procedures used in road repair operations in Uganda in 2019. The study's primary goal was to investigate how stakeholders perceived the force account mechanism's principal advantages and difficulties. The findings show that 75% of the respondents claimed that their organisations lacked the necessary tools to carry out the activity. The study also shows that procuring organisations that carried out force account programmes lacked technical staff to oversee and monitor the activity. As a result, the project's quality was compromised. Furthermore, the study demonstrates that just 32% of respondents' entities received training in the execution of the force account initiatives, while the remainder did not. Interestingly, the findings indicate that the majority of respondents did not recognise that the force account method's deployment lowers expenses. Lastly, the study argues that, because practitioners view the force account model differently, it needs to be critically assessed in terms of value for money.

The application of the force account system for the rehabilitation and remodelling of government building projects in Tanzania ran into difficulties,

according to research by Shengeza (2017). Five secondary schools and three teaching colleges provided the information. The study found a number of potential difficulties, including a lack of uniform regulations, issues with technical specifications, differences brought on by poor planning, labour expenses, and a lack of technical expertise. The report goes on to suggest that the supervising consultant must work with the implementation teams and the procurement entity in order for force account initiatives to be used more effectively. This study suggests that the supervising consultant should create technical reports detailing the renovation's before-and-after results as well as drawings, technical material requirements, an estimated amount of materials, and the materials' cost and labour rates.

Mafuruki (2016) made the case that most PEs employ local fundi's for the construction of works under force account mechanisms without adhering to the standard processes of public procurement, where force account must adapt other ways on its execution. Additionally, Mafuruki insists that each committee do its duties in accordance with its responsibilities.

According to Mlinga (2018), who argued in *Usage of Force Accounts in Construction and Its Challenges*, the majority of PE's employ force accounts, but their primary goal of serving money is not met, resulting in subpar work that takes a lot of time. This is a result of most PEs having insufficient manpower to oversee projects on their own.

Mchopa (2020) conducted research on the use of the force account approach in Tanzanian work procurement. The goal of the study is to evaluate current recommendations for force account mechanisms, practices, and obstacles to force account implementation. The study collects data using a cross-sectional survey design. Also, the primary data collection techniques included focus group talks, interviews, and document examination. The analysis finds two directives given by MoEST and PO-RALRG as well as the legal basis for force accounts. The study shows that the force account strategy is applied through committees, in contrast to other approaches. Project committees, procurement committees, and inspection committees were the main committees that were monitored. Yet, the study found a number of problems with the execution of force account

programs. A cost-benefit analysis was not performed prior to the project's start; there was insufficient quality control; there were no inspection reports or quality assurance plans; and there was a lack of understanding regarding the execution and supervision of force accounts. The study found that each of these flaws increases the likelihood that value for money will not be obtained.

3.0 Methodology

3.1 Research Approach and Design

The three Tanzanian mainland areas of Mbeya, Njombe, and Songwe were the sites of the study. The sampled regions represent various projects carried out by applying force account procedures, as documented in the Auditing Report of 2017 (URT, 2017). The selection of regions was preceded by the stratification of the regions depending on the number of projects reported. Because the study's goal was to explain the causal relationship between adopting the force account and its three objectives, which are cost reduction, quality preservation, and time management, it used an explanatory cross-sectional design with a mixed methodology. Two independent periods of data collection were conducted in sequence throughout the fieldwork. The quantitative data collection and analysis pertinent to the study topics marked the beginning of the first phase. Qualitative data was gathered at the second stage. Through the distribution of a standardised questionnaire to participants in force account programmes, quantitative data were gathered. The committees were chosen due to their expertise and knowledge of the government's use of the force account mechanism, which is frequently used for construction projects, as well as their expertise in applying and using it effectively. The 150 members of the committee in the chosen projects made up the sampling frame for the study as a result. According to Robert and Morgan's (1970) calculation, 98 participants made up the sample size. The researcher was able to reach 98 out of 150 respondents, obtaining a sufficient sample size for the current study (see Elamir and Sadeq, 2010; Mohammadi et al., 2015). Yet, adopting case design necessitates that a researcher select either one instance or a number of cases (Saunders et al., 2016). Several cases were helpful because the evidence was gathered from three (3) regions, Mbeya, Songwe, and Njombe, in construction projects that used the force account mechanism.

3.2 Unit of Analysis

The projects carried out in the fields of education, health, and local government from which the committee member selected the projects that used a force account approach and in some way or another were under the supervision of MCB served as the unit of analysis for this study. The target population of the study in this instance consisted of all projects that the Controller and Auditor General (CAG) of Tanzania reported. The Tanzanian government provided funding for the building, renovation, and refurbishment of primary schools, secondary schools, and teacher training institutions during the fiscal years 2016 to 2018 (NAOT, 2021). Increased directions for the implementation of the force account technique, a lack of capacity on the part of implementing entities (LGA lower level), poor work quality, and insufficient contract management served as the impetus for the audit. The main goal, however, was to assess the degree to which labour, materials, and project management were properly managed.

3.3 Data Collection

In each region, all the projects implemented and supervised by MCB were selected for data collection for the study. Proportional sampling was used to obtain the number of participants for the questionnaire survey per project. In each project, the committee's members were selected randomly for the questionnaire survey. Responses were recorded on the questionnaires against the question asked. The researchers were assisted by research assistants in order to expedite and facilitate the data collection process. They were subjected to data collection training that focused on force account practices, enumerators' roles, questionnaire administration, data recording, data collection methods, and adherence to research codes of conduct and ethics. The respondents' preliminary information was analysed using descriptive statistics, frequency, and cross-tabulation. to examine the force account effectiveness.

3.4 Validity and Reliability

The use of several data sources and the Cronbach's alpha test to evaluate the internal consistency of surveys and questionnaires improved the study's validity and reliability. With a Cronbach's Alpha's key value of 0.68, Likert-type

scales and questions were used to examine the reliability of the questionnaire.

Table 1
Reliability Assessment

Cronbach's Alpha	N of Items
0.68	34

Source: Field Data (2022)

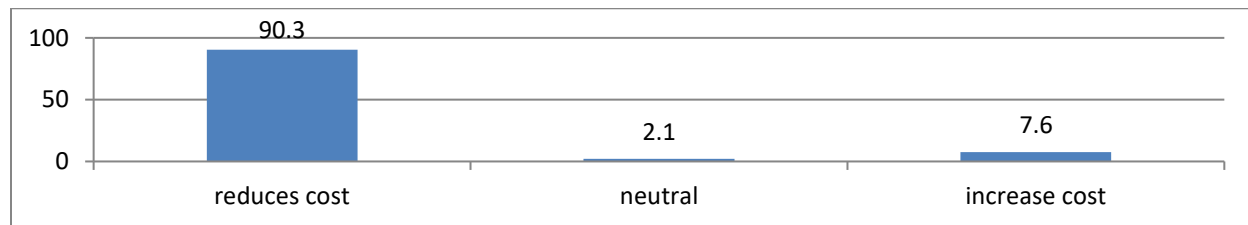
4.0 Findings and Discussion

4.1 Target 1 Cost

The study sought to determine whether the projects visited met that goal because the Tanzanian government preferred to use the force account as a method of procurement to achieve cost-effectiveness and the best value for money. The

results show that the majority of respondents, 90.3%, agreed that the method is cost-effective, so the method was complemented by study participants, while 7.6% of respondents disagreed that the method is cost-effective.

Fig 1
 Cost



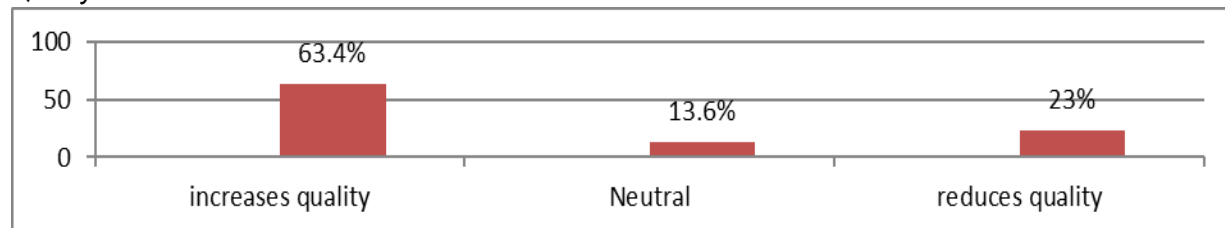
Source: Field data (2022)

4.2 Target 2 Quality

Results show that the majority of respondents (63.4%) agreed that the force account mechanism increased the quality of the projects, as the goal of the study was to determine whether quality was reached in the projects that were visited. One of the main goals of building projects that use the force account method is quality. There are frequently a lot of things to take into account when assessing the quality of a construction project. Among them are

whether you met the owners' needs while staying within the predetermined budget and whether the project was finished on schedule. How well you adhere to the rules outlined in the job contract and avoid conflicts along the way has a big impact on quality as well. However, as seen in figure 2 below, 23% of respondents dispute the idea that forcing account mechanisms will improve quality, while 13.6% were undecided.

Fig 2
 Quality



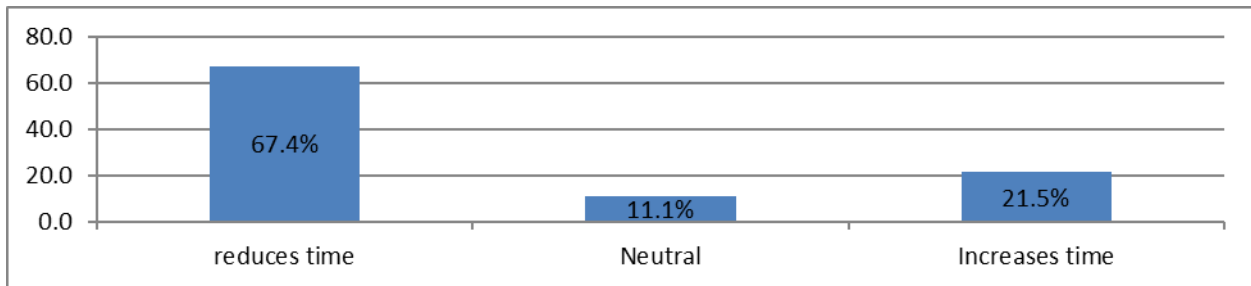
Source Field Data (2022)

4.3 Target 3 Time

The organisation and implementation of a plan for the amount of time needed for work activities on a project is the process of time management. Successful and efficient budget and programme target achievement, as well as profitability, depend on effective time management. Due to poor time management, projects run the danger of incurring excessive costs and delays. This can happen either because the full complexity of a project is not taken into account or because scheduled work or

unforeseen events are not well managed. Strategically, the study is intended to investigate whether projects that utilise force account mechanisms are accomplished on time compared to those that employ other methods, like contracting the contractor. Figure 3 of the data shows that the majority of respondents, or 67.4%, agreed that the force account approach is timely and effective, while 21.5% disagreed and 11.1% were neutral.

Fig 3
Time



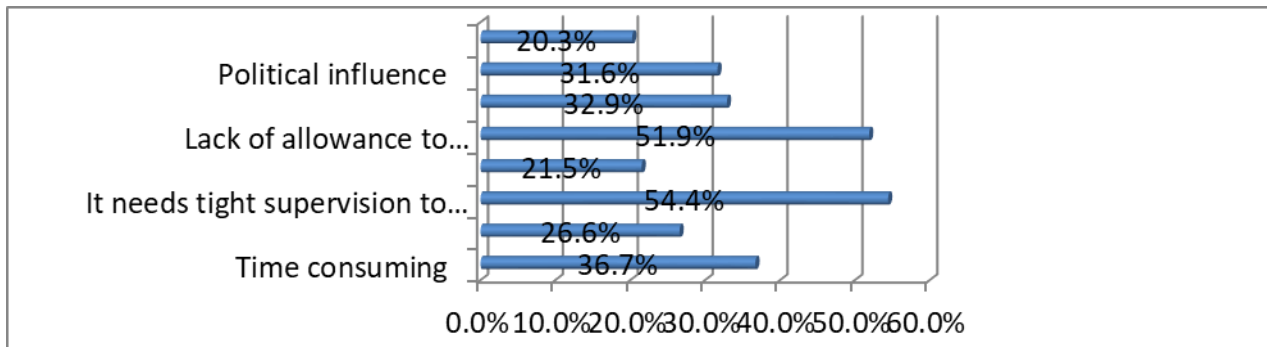
Source: Field data (2022)

4.4 Challenges Found in Force Account Projects Implementation

While the majority of respondents concurred that employing the force account technique would effectively fulfil the objectives of cost, quality, and time, the committee members consistently

encounter recurring issues in the projects they assess. The study identified eight pervasive issues that were consistently seen across all visited sites, impeding the effective use of the force account technique.

Fig 4
Challenges



Source: Field Data (2022)

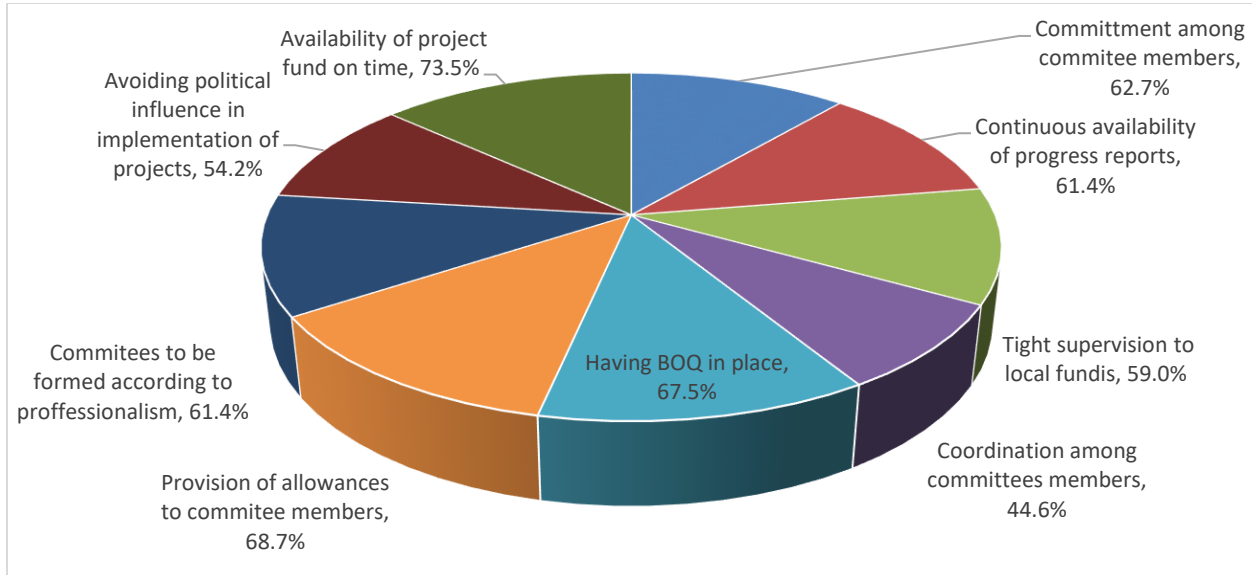
4.5 Suggested Solutions

The survey also wanted to know the respondents' perspectives on the issues that had been raised. With a high score of 73.5% and the lowest score of

44.6% being committee member coordination, the responses provided by respondents illustrate the prompt availability of project funds.

Fig 5

Suggested Solutions



Source: Field Data (2022)

5.0 Discussion

The three most important factors in project management for construction projects are time, cost, and quality. Obtaining these components in harmony will reduce the project's overall cost and construction time and increase the overall quality of the development process. However, is it feasible to obtain all three at once during a construction project that uses force account mechanisms?

5.1 Time

The time that passes from the start of the construction project until it is turned over to the client is manageable for the committees and local funders that carry out the projects. In the development of the project, the completion date is a crucial notion. Failing to stick to the deadline stipulated in the signed project may result in a breach of contract, and if the technique is appropriate, the contractor may incur some damages, particularly to the client's faith and confidence. It is crucial to make sure that the schedule is precisely specified to ensure that all of the tasks are not impacted by one another, despite the committee members' concerns that the approach causes them to occupy their time while other routine operations delay significantly.

5.2 Cost

Purpose, necessities, and the focus on whole-life costs, legal restrictions, and socioeconomic considerations all have a significant role in determining how much a building project will cost. According to the market conditions for both skilled labour and materials, it is also being decided. Higher profit comes from lower costs, yet these factors might degrade the quality of a project, particularly if subpar materials are employed. The analysis found that, despite the force account system having a lower cost, there were additional costs that were not taken into consideration throughout the design and execution of the projects. If there are any hidden expenses, the method may be disqualified if you believe it to be too inexpensive to utilise in place of other procurement techniques. The study advises that in order to be assured of the technique, there should be a clearly defined BOQ, and all hidden expenses spent by the procurement entity should be included when concluding the project.

5.3 Quality

Recent construction projects take into account quality performance in addition to time and cost considerations. Based on the expectations and preferences of the client, this quality provides a

level of security for the specific project. It explains how the project was built in accordance with the right standard of work scope. Also, it assesses the danger of accidents occurring while construction is being done. By placing more emphasis on these aspects of quality, the project's safety will increase. The quality of a construction project may suffer as project time or cost are cut. The deterioration and ageing of pertinent force-accounting construction projects as a result. These flaws cause certain components of the structure being built to fail. Building flaws put people or property in danger and jeopardise the building's safety. And thus causes a project's use of force accounts to be unclearly understood, which hurts the project's ability to be completed successfully.

6.0 Conclusion and Recommendation

In conclusion, three variables were examined in relation to the efficiency of the force account system, and they are Three key considerations in project planning and management, particularly for force-account-based construction projects, are timing, cost, and quality. A construction project that uses this approach may be successful if these parameters are balanced in a way that reduces project length, total project cost, and maximises overall project quality. To draw a more realistic conclusion about the time, cost, and quality trade-off challenges in construction projects, it is necessary to take uncertainty into account in addition to adequately planning and estimating the project.

In an effort to lower the prices of various projects and make it easier to achieve the best value for money, as the government stresses the use of force accounts as the most suitable technique of contracting, the client and appointed committee member must consider that time, money, and quality are crucial components that must be balanced in order to effectively plan and manage a project. The project's duration, total costs, and overall quality must all be maximised for sustainability and worker safety. But, as much as we would like to achieve these qualities, doing so would be practically impossible for contractors and clients, especially when each element is so important.

The study emphasises the need for policymakers and experts to analyse the force account mechanism's scope and application closely. The

type, scope, scale, and thresholds of the project should be taken into consideration when developing the force account methods. Before starting the force account projects, the procuring organisations should ensure that a cost-benefit analysis is conducted. The results of this study can also be incorporated into current laws, rules, and policies pertaining to force account projects.

Finally, this study opens the door for further research to be done because there is little existing literature that is solely focused on force account initiatives. The study added to the body of knowledge and encouraged more debate. Nonetheless, some restrictions require more study. Construction work done by the university, hospitals, and local government in three chosen regions was utilized as proof for the study's several initiatives, all of which were in some manner overseen by MCB. Future research can be done in several fields and settings. The force account approach is used in the private sector as well, but the current study was limited to the public sector. It will be fascinating to focus future research on the force account initiatives.

7.0 Funding Statement

The study was financially supported by the Mbeya University of Science and Technology (MUST) Research Project Award under the MUST Internal Call Research Grant Competitive Research Grants for MUST Staff.

8.0 Acknowledgement

I would like to express my profound gratitude to Mbeya University of Science and Technology for their generous grant supporting my research project titled "Strengthening the Implementation of Force Accounts Towards Successful Project Performance." This grant not only represents financial assistance but also signifies their confidence in the importance of my research. It has provided me with the resources and encouragement needed to conduct thorough research.

9.0 References

Dyhrfeld-Johnsen, J., Santhakumar, V., Morgan, R. J., Huerta, R., Tsimring, L., & Soltész, I. (2007). Topological determinants of

- epileptogenes are in large-scale structural and functional models of the dentate gyrus derived from experimental data. *Journal of neurophysiology*, 97(2), 1566-1587.
- Mbabazi, F. and Mugurusi, G. (2019), "Adoption of force account mechanism in road maintenance works' procurements: stakeholders' opinions in Uganda", in Thai, K.V., Salia, P. and Mwakibinga, F. (Eds), *Advancing Public Procurement: Theories and Practices*, pp. 167-180.
- Mchopa, A.D. (2020), "Applicability of force account approach in procurement of works in Tanzania", *Journal of International Trade, Logistics and Law*, Vol. 6 No. 2, pp. 137-143.
- Mlinga R. (2018). *The uses of Force account in Works and its Challenges: Tanzania Procurement Journal*
- MoEST (2017), *Utaratibu wa ununuzikwa kutumia force account katika ujenzi wa ukarabati washu lenavyuo*, Ministry of Education Science, Technology and Vocational Training (MoEST), Dar es salaam.
- Mufuruki. E. (2016). *Effective uses of Force account in public procurement: Tanzania Procurement Journal*
- NAOT (2021), *Performance Audit Report on Monitoring and Supervision of Projects Implemented Through Force Account Method in Education Sector*, National Audit Office of Tanzania (NAOT), Dodoma.
- PPRA (2019), "Government pleased with the use of force account in works",
- Public procurement act of 2011 and its Regulations of 2013, with its amendments of 2016
- Saunders, C. T., Wong, W. S., Swamy, S., Becq, J., Murray, L. J., & Cheetham, R. K. (2016). Strelka: accurate somatic small-variant calling from sequenced tumor-normal sample pairs. *Bioinformatics*, 28(14), 1811-1817.
- Shengeza, J.J. (2017), "Procedure on effective application of force account as a method of procurement for renovation and remodeling of government building projects", *Journal of Civil, Construction and Environmental Engineering*, Vol. 2 No. 6, pp. 153-158,
- Tekka, R.S. (2018), "Performance determinants of force account method of contracting (The case of public infrastructure rehabilitation and remodeling)", *International Journal of Advanced Research in Science, Engineering and Technology*