

Evaluating the Impact of the Force Account Method on Value for Money in Public Construction Projects in Tanzania

Neville Daud

Department of Economics, P.O. Box 2798, Institute of Accountancy Arusha

Email: nevtz@yahoo.com

CPA (T) Daniel Slawe

Department of Accounting, P.O. Box 2798, Institute of Accountancy Arusha

Email: danielslawe@gmail.com

Abstract

This study examines the impact of the force account method on achieving value for money in public construction projects in Tanzania. The force account method, which allows public authorities to manage construction projects using internal personnel and resources, was introduced to reduce costs, enhance project quality, and promote transparency. A mixed-methods approach was employed, with data collected from Local Government Authorities (LGAs) through questionnaires, interviews, and document analysis. The findings reveal that personnel qualities, particularly experience and technical skills, are critical to the success of force account projects. Additionally, organizational capital, such as financial and human resources, significantly contributes to the timely completion and quality of projects. However, challenges related to outdated or inadequate equipment often lead to delays. Transparency in project implementation is improved through stakeholder engagement, including site visits and regular progress meetings, which enhance accountability. The study recommends upgrading equipment, increasing gender inclusivity, and providing continuous training to personnel to further optimize the effectiveness of the force account method in delivering value for money in public projects.

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1. Introduction

Public construction projects are essential for driving economic development and improving social welfare, especially in developing countries like Tanzania (World Bank, 2018). These projects provide critical infrastructure and services such as clean water, healthcare, education, and transportation networks, which are vital for community well-being and sustainable growth (Matto, 2021). Governments often invest heavily in public construction projects with the expectation that they will deliver significant socio-economic benefits. However, despite these investments, many of these projects face considerable challenges that hinder their successful completion (Mwalukasa & Sallwa, 2022; Kaula, 2021). Problems such as poor technical capacity, financial mismanagement, corruption, inadequate planning, and insufficient oversight are common. These issues often result in delays, cost overruns, and the delivery of substandard services, limiting the projects' overall effectiveness and their ability to achieve their intended outcomes (Toungwa, 2015; Mbawala, 2014).

In response to these persistent challenges, the Tanzanian government has undertaken various reforms aimed at improving the management and execution of public construction projects. One of the significant steps taken was the empowerment of Local Government Authorities (LGAs) through the Local Government Act of 1982. This act emphasized the importance of local participation and resource utilization in the implementation of public infrastructure projects. The objective was to decentralize project management and empower local communities to take ownership of the development process. Through this approach, it was hoped that issues such as corruption, delays, and cost inefficiencies could be mitigated, leading to more successful project outcomes (Ministry of State – Presidential Office - Regional Administration and Local Government, 2023).

Building on this framework, the Tanzanian government introduced the force account method in 2016 as a key procurement strategy for public construction projects (Macharia et al., 2023). This method involves the direct management of projects by government agencies, utilizing local resources and government-employed workers instead of outsourcing construction to private contractors. The force account method aims to improve value for money by reducing costs, enhancing quality control, and increasing transparency in the execution of public projects (Matto, 2021). Advocates of this approach argue that it provides better oversight and more efficient use of resources, while also fostering local employment and skill development (Gabriel et al., 2024).

The Tanzanian government has reported several notable successes since adopting the force account method. For example, the construction of over 12,000 classrooms and numerous health facilities has been attributed to this procurement strategy (Ministry of Finance and Planning, 2023). These accomplishments highlight the potential of the force account method to deliver essential infrastructure and services in a cost-effective and timely manner (Stephen, 2021). Proponents argue that this approach not only reduces the need for expensive external contractors but also empowers local communities by involving them directly in the construction process. In theory, this should lead to projects that are better tailored to the needs of the population, with a stronger focus on quality and sustainability (Wolman, 1928).

However, despite these achievements, there are growing concerns about the force account method's ability to consistently deliver value for money. Recent audits conducted by the Controller

and Auditor General (2021/2022) have revealed several issues that raise questions about the method's overall effectiveness. Audits have found cases of procurement irregularities, including the use of substandard materials, delays in project completion, and cost overruns in various regions. These issues suggest that while the force account method may work well in certain contexts, it is not immune to the broader challenges that have historically plagued public construction projects in Tanzania (Mwalukasa & Sallwa, 2022; Kaula, 2021).

One critical issue that has received little attention in the existing literature is the role of the personnel responsible for managing force account projects (Massawe, 2023). The success of any construction project depends heavily on the technical skills, experience, and capacity of the individuals overseeing its execution. Yet, there is limited empirical evidence examining how these personal qualities impact the effectiveness of the force account method. Additionally, the organizational capital available to local government authorities, including financial and human resources, also plays a crucial role in determining the success of these projects. The lack of focus on these factors represents a significant gap in the current understanding of the force account method's performance (Mwalukasa & Sallwa, 2023).

Moreover, while the force account method is intended to promote transparency and accountability in public construction projects, evidence suggests that these goals are not always achieved in practice (Mwalukasa & Sallwa, 2023). Issues such as procurement irregularities and the use of substandard materials indicate that there may be weaknesses in the oversight and accountability mechanisms associated with this approach (Kaula, 2021). These findings underscore the need for a more comprehensive examination of how well the force account method aligns with its stated objectives, particularly in terms of promoting cost-efficiency, quality, and transparency across all projects.

This research aims to address these gaps by providing a more nuanced understanding of the factors that influence the success of the force account method. Specifically, it will investigate the role of personnel qualities, such as experience and technical skills, in the management of force account projects, as well as the impact of organizational capital on project outcomes. By exploring these often-overlooked aspects, the study seeks to provide valuable insights into the effectiveness of the force account method as a procurement strategy for public construction projects in Tanzania.

The findings of this study will be particularly relevant for policymakers, project managers, and local government authorities involved in the planning and execution of public construction projects. By identifying the strengths and weaknesses of the force account method, this research will offer practical recommendations on how to improve the efficiency and effectiveness of this procurement strategy. These recommendations will be essential for ensuring that public construction projects deliver value for money and contribute to the long-term development of Tanzania's infrastructure.

Thus, while the force account method has shown promise as a means of improving public construction project outcomes in Tanzania, significant challenges remain. The existing literature has yet to fully explore the role of personnel and organizational factors in determining the success of these projects, and there is a need for more empirical research on the method's overall effectiveness. This study aims to fill these gaps by providing a detailed assessment of how the

force account method impacts value for money in public construction projects, offering insights that can help improve the management and execution of future projects in Tanzania.

2. Review of Related Literature and Theoretical Framework

This study draws upon two prominent theories—Resource-Based Theory (RBT) and Institutional Theory—to provide a robust analytical foundation for assessing the effectiveness of the force account method in achieving value for money in Tanzanian public construction projects. Each theory offers unique insights into the factors that drive the success of projects, particularly within the context of public sector procurement and project management.

The Resource-Based Theory (RBT), as articulated by Barney (1991), posits that an organization's performance and competitive advantage are largely determined by the resources it controls. These resources can be classified into tangible assets, such as physical equipment and financial capital, and intangible assets, such as expertise, technical skills, and knowledge. RBT emphasizes that it is not just the possession of these resources but the effective management and deployment of them that drives an organization's success. In the context of public construction projects managed through the force account method, this theory is highly relevant, as it allows for an analysis of how Local Government Authorities (LGAs) leverage internal resources—such as skilled personnel, machinery, and financial capital—to execute projects.

According to RBT, the ability of LGAs to achieve cost-efficiency and high-quality outcomes in public projects depends on how well they manage their available resources. For example, in force account projects, the government directly utilizes its own workforce and locally sourced materials, making the expertise of personnel and the condition of equipment critical to the project's success. This study explores how the experience, technical skills, and capacity of government employees influence project outcomes, including cost control, timely delivery, and construction quality (Ng'eni & Joseph, 2023). Moreover, the availability of financial resources and proper management of equipment and materials are central to achieving value for money, as these resources enable LGAs to avoid reliance on external contractors and to maintain better control over project processes. By applying RBT, the study seeks to identify the internal strengths and weaknesses of LGAs that contribute to or hinder the successful implementation of force account projects in Tanzania.

However, while RBT focuses on internal organizational resources, it does not fully account for the influence of external factors that shape project outcomes, particularly in the public sector, where broader institutional environments play a significant role. To address this limitation, the study also incorporates Institutional Theory, developed by DiMaggio and Powell (1983), which emphasizes the impact of external pressures on organizational behavior. Institutional Theory argues that organizations are not only shaped by their internal resources but also by the political, regulatory, and societal environments in which they operate. In the context of this study, Institutional Theory is crucial for understanding how external factors—such as government policies, procurement regulations, and societal expectations—affect the performance of the force account method (Mwalukasa & Sallwa, 2022).

Institutional Theory helps explain how LGAs in Tanzania are subject to various formal and informal rules that influence their ability to execute public construction projects efficiently. For

instance, government regulations that mandate the use of the force account method are intended to promote transparency, accountability, and cost-efficiency. However, the success of these regulations depends on how well they are enforced and how LGAs respond to them. Procurement rules, oversight mechanisms, and accountability structures can either facilitate or hinder project outcomes, depending on the level of compliance and the quality of governance. Additionally, societal expectations regarding the timely delivery and quality of public infrastructure can exert pressure on LGAs to perform better, shaping their approach to resource management and project execution.

By integrating RBT and Institutional Theory, this study provides a comprehensive framework for analyzing the effectiveness of the force account method. RBT allows for a detailed examination of how internal resources, such as personnel skills and organizational capital, influence project outcomes, while Institutional Theory highlights the importance of external regulatory and social factors that shape the operational environment. Together, these theories offer a holistic view of the complex interactions between internal capabilities and external constraints that determine the success of public construction projects.

This dual-theoretical approach is particularly relevant for understanding the dynamics of force account projects in Tanzania. On the one hand, the force account method relies heavily on the availability and management of internal resources, as RBT suggests. On the other hand, the method operates within a broader institutional framework shaped by procurement regulations, government oversight, and public expectations, as emphasized by Institutional Theory (Mwalukasa & Sallwa, 2023). By examining both internal and external factors, the study can provide deeper insights into how these two dimensions interact to influence the value for money achieved in public construction projects.

The theoretical framework of this study is built on the complementary perspectives of RBT and Institutional Theory. While RBT focuses on the internal resources that LGAs control, Institutional Theory highlights the external pressures and regulatory frameworks that impact project execution. Together, these theories provide a nuanced understanding of the factors that drive or hinder the success of the force account method in Tanzania, offering a more comprehensive analysis of how value for money is achieved in public construction projects.

3. Empirical review

The implementation of the force account method in public construction projects has garnered considerable attention from researchers, particularly regarding its effectiveness in delivering value for money. The role of personnel competencies and organizational capacity has emerged as a critical factor in determining the success of projects managed through this method. Several studies have examined these aspects, providing insights into the strengths and challenges of using the force account method in different contexts.

One of the key areas of focus has been the influence of personnel qualities on project outcomes. For instance, a study by Mgimba (2022) emphasized the significance of staff qualifications and competencies in achieving value for money in public procurement projects managed through the force account method. Through a mixed-methods approach involving questionnaires and interviews with 55 respondents, the research highlighted that the technical expertise and

experience of the personnel directly impact the efficiency, cost-effectiveness, and quality of project execution. This finding aligns with broader discussions in the literature that suggest the internal capabilities of an organization, particularly in terms of human resources, are essential for the successful implementation of public sector projects (Barney, 1991).

Similarly, Mwandikile (2020) explored the effectiveness of the force account method within Local Government Authorities (LGAs) in the Njombe region. Using a case study design with 138 participants, the study found that the method had several positive impacts on project implementation, particularly in terms of cost savings and community involvement. These findings are significant because they indicate that, in addition to internal organizational resources, external factors such as community participation can play a critical role in enhancing project outcomes. The involvement of local communities not only helps in mobilizing resources but also ensures that projects are more aligned with the specific needs and expectations of the beneficiaries, thereby improving the overall effectiveness of the force account method.

Further support for the importance of personnel competence comes from Macharia et al. (2023), who employed a quantitative approach to assess the effectiveness of the force account method. Their findings corroborated earlier research by concluding that staff competence is a key determinant of successful project implementation. The study underscored that when LGAs possess technically skilled personnel, projects are more likely to meet quality standards, stay within budget, and be completed on time. These conclusions are consistent with the Resource-Based Theory (RBT), which posits that the internal resources and capabilities of an organization are crucial in achieving competitive advantage and performance (Barney, 1991). In the context of public procurement, this translates to the ability of LGAs to execute projects efficiently using the resources at their disposal, including skilled human capital.

The effectiveness of the force account method in improving project outcomes has also been explored in terms of cost-effectiveness and time management. Yohana (2020) found that the method significantly enhanced the quality of construction projects, reduced costs, and improved time management. The study noted that, in comparison to traditional outsourcing methods, the force account approach allowed for better control over the construction process, leading to more predictable outcomes. This finding is particularly relevant in the Tanzanian context, where public construction projects often face challenges related to delays, cost overruns, and poor quality due to inadequate oversight and resource management.

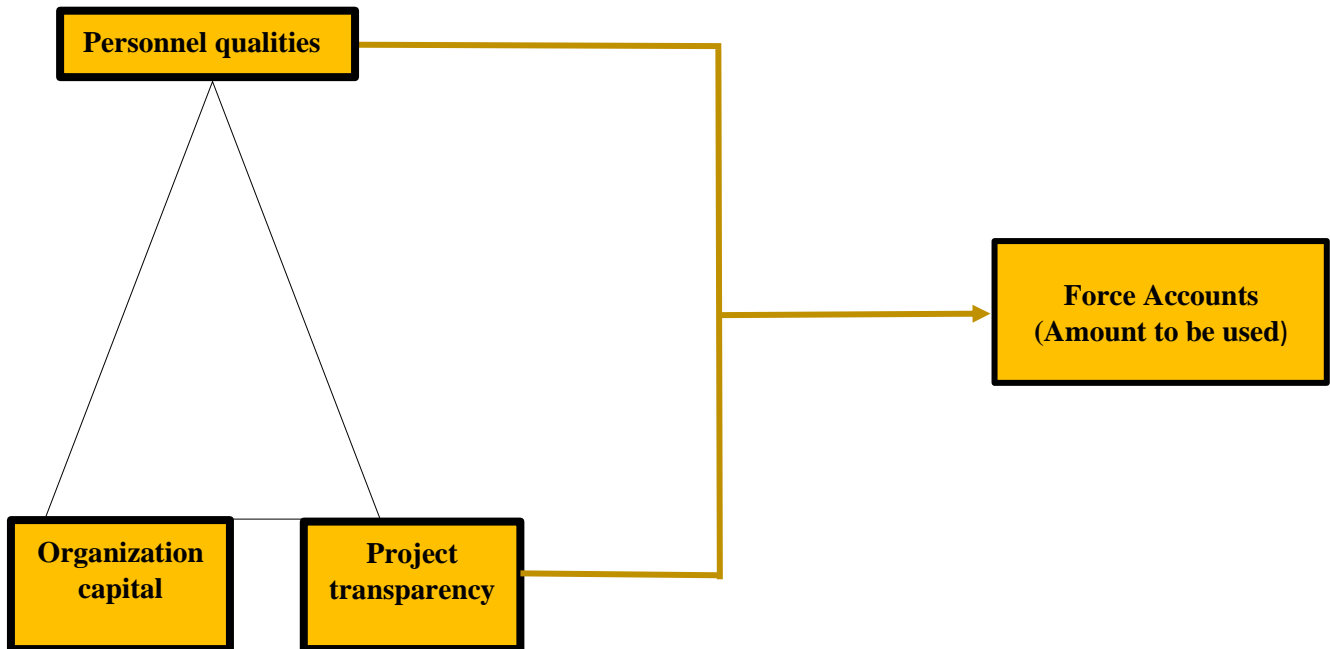
However, not all studies present a uniformly positive view of the force account method. Sayi and Monko (2022) raised concerns about the management of value for money in projects using this approach. Their research suggested that in many cases, an overemphasis on cost savings leads to compromises in quality and extended project timelines. This issue was also noted by Mayani (2019), who found that while the force account method can be cost-efficient, it often struggles to balance cost, quality, and time. Both studies point to the need for more comprehensive project management practices that consider all dimensions of value for money, rather than focusing solely on cost.

The findings from these studies collectively indicate that while the force account method has the potential to deliver positive outcomes, its success is heavily dependent on the capabilities of the

personnel involved and the broader management practices adopted by LGAs. The research highlights the importance of technical expertise, effective resource management, and community involvement in ensuring that public construction projects are completed on time, within budget, and to a high standard. Additionally, the external regulatory and institutional frameworks, as emphasized by Institutional Theory (DiMaggio & Powell, 1983; Ng’eni & Joseph, 2023), also play a critical role in shaping the performance of the force account method, particularly in terms of ensuring transparency and accountability.

Generally, the empirical literature on the force account method provides a mixed but informative picture. On the one hand, studies such as those by Mgimba (2022), Mwandikile (2020), and Macharia et al. (2023) highlight the method’s potential to improve cost-effectiveness and project outcomes through better management of internal resources. On the other hand, researchers like Sayi and Monko (2022) and Mayani (2019) caution that a narrow focus on cost savings can lead to suboptimal project performance in terms of quality and timelines. These insights suggest that for the force account method to achieve its full potential, there must be a balance between cost-efficiency and other critical project dimensions, including quality and time management.

Figure 1: Conceptual Framework



Source: Author design (2024).

3. Methodology

This study was conducted in Tanzania, focusing on Local Government Authorities (LGAs) engaged in public construction projects utilizing the force account method. The LGAs were chosen due to the increasing adoption of this procurement strategy and the need to assess its effectiveness in delivering value for money. The target population for this research comprised project managers, procurement officers, and technical staff directly involved in the planning, execution, and supervision of public construction projects within LGAs. This group was selected for their relevant

knowledge and experience in managing force account projects, making them well-positioned to provide valuable data for evaluating the method's impact on project outcomes.

To achieve a comprehensive analysis, a mixed-methods research design was employed, combining both quantitative and qualitative approaches. Quantitative data was gathered using structured questionnaires to collect measurable information on project cost-effectiveness, quality, and time management. Qualitative data was obtained through semi-structured interviews with key informants, such as project managers and procurement officers, to capture in-depth insights into the challenges and benefits of the force account method. This integration of methods enabled the study to not only quantify trends but also explore the nuanced factors that influence project performance in the Tanzanian context.

The sample size for this study was calculated using Yamane's formula, based on an estimated total population of 680 staff members within the selected LGAs who were involved in force account projects. With a 95% confidence level and a 5% margin of error, the formula yielded a sample size of 250 respondents, ensuring adequate representation for statistical analysis. A stratified random sampling technique was employed to ensure that various roles within the LGAs, including procurement officers, engineers, and supervisors, were proportionately represented in the sample. Quantitative data was analyzed using IBM SPSS Version 26, with descriptive and inferential statistics employed to interpret the results. Thematic analysis was applied to the qualitative data from interviews, allowing for the identification of key themes and insights that complemented the quantitative findings. Ethical considerations, such as informed consent, confidentiality, and voluntary participation, were strictly adhered to throughout the research to protect the rights of participants and ensure the integrity of the study.

4. Findings

4.1 Descriptive Analysis

Results in Table 1 provides an overview of the demographic characteristics of the 250 respondents involved in the study, categorized by gender, educational level, age, and position or designation. The data reveals important insights about the composition of the respondents, which may influence their perspectives and experiences with public construction projects under the force account method.

Out of the 250 respondents, 54% were female (135 respondents), while 46% were male (115 respondents). This indicates a fairly balanced gender distribution among the respondents, with a slight majority of females. This balance suggests that the perspectives of both genders are well-represented in the data, which may contribute to a more comprehensive understanding of the force account method's impact. In terms of educational attainment, the majority of respondents (40%) held a certificate or diploma (100 respondents). A notable portion, 30% (75 respondents), had completed Form IV, and 20% (50 respondents) had completed Form VI. Only 8% (20 respondents) held a first degree. These findings suggest that most of the respondents possess intermediate educational qualifications, which may influence their technical knowledge and ability to manage public construction projects. The relatively low percentage of respondents with a first degree suggests that advanced education may not be common among the workforce involved in force account projects.

Table 1: Description of respondent information

Variable	Categories	Frequency (n=250)	Percentage (%)
Gender	Female	135	54
	Male	115	46
Educational Level	Form IV	75	30
	Form VI	50	20
	Certificate/Diploma	100	40
	First Degree	20	8
Age in Years	18 – 30	85	34
	31 - 50	120	48
	Above 50	45	18
Position/Designation	Project Manager	95	38
	Procurement Officer	63	25
	Employees	92	37

The age distribution shows that the largest group of respondents (48%) were between 31 and 50 years old (120 respondents), followed by 34% (85 respondents) who were between 18 and 30 years old. Only 18% (45 respondents) were above 50 years old. This suggests that the majority of respondents are middle-aged, which could imply that they have significant work experience in their respective roles. The younger age group (18–30 years) represents a sizable proportion, indicating a potential mix of both emerging professionals and more experienced individuals in the workforce.

Regarding the positions or designations of the respondents, 38% (95 respondents) were project managers, 25% (63 respondents) were procurement officers, and 37% (92 respondents) were classified as employees. The relatively high percentage of project managers suggests that the study captured the perspectives of individuals directly involved in the planning and oversight of public construction projects. The presence of a significant number of procurement officers and employees also indicates that the study includes a variety of roles, contributing to a more diverse set of insights into the execution of force account projects.

Therefore, the table reflects a well-balanced mix of gender, educational levels, and positions among respondents, with the majority falling within the 31–50 years age range. These demographic characteristics provide context for understanding the respondents' experiences and how they may influence the effectiveness of the force account method in delivering value for money in public construction projects.

4.2 Correlation Analysis

The correlation analysis presented in Table 2 highlights the relationships between three key variables—Personnel Quality (PQ-scores), Organizational Capital (OC-scores), and Transparency (T-scores)—while controlling for demographic characteristics. The findings reveal important insights into how these factors interact and influence one another in the context of public construction projects managed through the force account method.

Firstly, there is a strong positive correlation (0.702) between personnel quality and organizational capital. This suggests that as the quality of personnel, in terms of their skills, qualifications, and expertise, increases, there is a corresponding improvement in the organizational capital of Local Government Authorities (LGAs). Organizational capital refers to the availability of financial resources, technical support, and other infrastructural assets necessary for project execution. The

strong relationship indicates that skilled personnel are more capable of effectively utilizing and managing these organizational resources, thereby enhancing the overall performance of public projects. This finding underscores the importance of investing in the development and training of personnel to ensure that the resources available within LGAs are maximally utilized for successful project outcomes.

Table 2: Correlation analysis

Controlling for:	Variables	PQ-scores	OC-scores	T-scores
Demographic Characteristics	PQ-scores	1	0.702	0.543
	OC-scores	0.702	1	0.689
	T-scores	0.543	0.689	1
Significance (2-tailed)		0	0	0
N		250	250	250

Note: Correlation is significant at the 0.01 level (2-tailed).

Secondly, the correlation between personnel quality and transparency (0.543) is positive and moderate. This relationship indicates that higher levels of personnel quality are associated with greater transparency in the execution of public construction projects. Although the correlation is not as strong as that between personnel quality and organizational capital, it still suggests that skilled and competent personnel contribute to more transparent project management practices. Transparency in this context refers to openness and accountability in project execution, including clear reporting, procurement processes, and decision-making. The moderate correlation implies that improving the skills and qualifications of personnel can positively influence transparency, though other factors may also play a role.

Lastly, the strong positive correlation (0.689) between organizational capital and transparency reveals a close connection between the availability of organizational resources and the degree of transparency in project execution. This relationship suggests that LGAs with better financial and technical resources tend to exhibit higher levels of transparency. When organizations are well-resourced, they are more likely to follow proper procedures, maintain clear communication, and engage in transparent decision-making processes. This finding emphasizes the importance of strengthening organizational capital to promote transparency, which is crucial for ensuring accountability and achieving value for money in public construction projects.

The correlation analysis demonstrates that personnel quality, organizational capital, and transparency are closely interrelated. Improvements in personnel quality lead to enhanced organizational capital and greater transparency, while better organizational capital also fosters higher transparency. These findings highlight the need for holistic strategies that improve both human and organizational resources to optimize the effectiveness of public construction projects and ensure successful project outcomes through the force account method.

4.3 Ordinary Least Squares’ model diagnostic test

Results in Table 3 presents results from three key diagnostic tests—normality, heteroskedasticity, and multicollinearity—which assess the assumptions required for a reliable regression analysis. These tests help determine whether the regression model is appropriate for analyzing the relationships between variables in this study. The results of the Kolmogorov-Smirnov and Shapiro-Wilk tests are provided to check whether the data follows a normal distribution, which is an

important assumption for many statistical models. The Kolmogorov-Smirnov statistic (3.567) has a significance value (Sig.) of 0.090, and the Shapiro-Wilk statistic (6.123) has a significance value of 0.251. Both significance values are greater than the commonly used threshold of 0.05, indicating that the data does not significantly deviate from normality. Therefore, the assumption of normality is satisfied, and the data is approximately normally distributed.

The test for heteroskedasticity was conducted using the F-statistic and Chi-Square statistic. The F-statistic (3.456) has a corresponding probability (Prob. F) of 0.107, and the Chi-Square statistic (9.321) has a probability (Prob. Chi-Square) of 0.068. Both probability values are greater than 0.05, indicating that the assumption of homoskedasticity (constant variance of errors) holds. In other words, there is no significant heteroskedasticity in the model, meaning the variance of the residuals is relatively constant across all levels of the independent variables.

Table 3: Regression assumption tests

Normality Test		Statistic	df	Sig.
Kolmogorov-Smirnov		3.567	250	0.090
Shapiro-Wilk		6.123	250	0.251
Heteroskedasticity Test	F-statistic	Prob. F (3, 246)	Observed R-squared	Prob. Chi-Square (3)
	3.456	0.107	9.321	0.068
Multicollinearity			Tolerance	VIF
			0.480	2.083
			0.650	1.538
			0.522	1.914

Multicollinearity refers to the correlation between independent variables in a regression model. It is assessed using the Tolerance and Variance Inflation Factor (VIF) values. The Tolerance values are all above 0.1, and the VIF values are below 10, which indicates that multicollinearity is not a concern in this model. Specifically, the tolerance values range from 0.480 to 0.650, and the VIF values range from 1.538 to 2.083. These values suggest that the independent variables are not highly correlated with each other, and the regression model can be interpreted without concerns about inflated standard errors due to multicollinearity.

The results from the regression assumption tests indicate that the necessary conditions for performing a reliable regression analysis are met. The data is approximately normally distributed, there is no significant heteroskedasticity, and multicollinearity is within acceptable limits. This suggests that the regression model is appropriate for analyzing the relationships between the variables and can provide meaningful insights into the factors influencing the outcomes of the force account method in public construction projects.

Table 4: Analysis of Variance (ANOVA)

ANOVA Summary	Sum of Squares	df	Mean Square	F	Sig.
Regression	70.152	3	23.384		
Residual	55.693	246		28.485	0.000b
Total	125.845	249	0.226		
Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	0.782	0.612	0.598	0.752	

The results in Table 4 provide crucial insights into the relationships between the independent variables and the dependent variable through the Analysis of Variance (ANOVA) and the model summary of the regression analysis. The ANOVA results show that the total variance in the model is divided between the regression variance, which is explained by the model, and the residual variance, which represents unexplained error. The sum of squares for regression is 70.152, while the residual sum of squares is 55.693, resulting in a total sum of squares of 125.845. This indicates that the model explains a significant portion of the total variance, suggesting that the independent variables contribute meaningfully to predicting the dependent variable.

Additionally, the mean square values, which provide the average variance, are 23.384 for the regression and 0.226 for the residual. The F-statistic, a key indicator of the model's overall significance, is 28.485, with a p-value (Sig.) of 0.000. This significance level, well below the commonly accepted threshold of 0.05, confirms that the regression model is statistically significant. The model, therefore, offers strong evidence that the independent variables collectively have a meaningful impact on the dependent variable, underscoring the relevance of the variables chosen for the study.

Further reinforcing the strength of the model, the model summary reveals an R-value of 0.782, indicating a strong positive correlation between the independent variables and the dependent variable. This means that as the independent variables increase, the dependent variable also tends to increase, reflecting a strong fit between the model and the data. The R Square value of 0.612 shows that approximately 61.2% of the variance in the dependent variable can be explained by the model, highlighting its effectiveness in capturing the relationships under study. The Adjusted R Square, which accounts for the number of predictors, is slightly lower at 0.598, yet still demonstrates that nearly 60% of the variance is explained even after accounting for model complexity.

The standard error of the estimate, recorded at 0.752, offers an additional measure of the model's precision by indicating the average distance of the observed values from the regression line. A lower standard error suggests a more accurate and reliable model, further emphasizing the strength of the relationship between the variables. Taken together, these results demonstrate that the regression model is both statistically significant and capable of explaining a substantial portion of the variance in the dependent variable, providing meaningful insights for understanding the factors that influence the outcomes of the force account method in public construction projects.

The connection between the strong R-value, the significant F-statistic, and the high R Square values suggests that the independent variables have a significant positive effect on the dependent variable, validating the model's capacity to predict outcomes effectively. Overall, the results presented in Table 4 indicate that the regression model fits the data well and provides a reliable basis for drawing conclusions about the factors that impact value for money in the context of the force account method. This reinforces the importance of the chosen variables and provides strong empirical support for the relationships examined in this study.

4.4 Factors influencing force account usage of force accounts among LGA in Tanzania

The results in Table 5 provide insights into the factors influencing the use of the force account method among Local Government Authorities (LGAs) in Tanzania. The table displays both unstandardized and standardized coefficients for the independent variables: Personnel Qualities, Organizational Capital, and Project Transparency, along with their corresponding t-values and significance levels (Sig.).

The constant in the model, which represents the predicted value of the dependent variable when all independent variables are held at zero, is 0.158. However, its significance value of 0.453 indicates that the constant is not statistically significant, meaning it does not have a meaningful standalone impact on the model's predictions. Looking at the specific factors, Personnel Qualities have an unstandardized coefficient of 0.320 and a t-value of 3.765. The corresponding significance level (Sig.) is 0.000, which is below the standard threshold of 0.05, indicating that personnel quality has a significant positive effect on the use of the force account method. This suggests that improvements in personnel skills, qualifications, and competencies lead to a greater likelihood of successfully implementing the force account approach, as higher-quality personnel are more capable of managing projects efficiently.

Table 5: Factors influencing force account usage of force accounts among LGA in Tanzania

Model Coefficients	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
(Constant)	0.158	0.210	0.753	0.453
Personnel Qualities	0.320	0.085	3.765	0.000
Organizational Capital	0.610	0.096	6.354	0.000
Project Transparency	0.150	0.079	1.897	0.056

The influence of Organizational Capital is even more pronounced, with an unstandardized coefficient of 0.610 and a t-value of 6.354. The significance value is also 0.000, confirming that organizational capital has a highly significant positive effect on the use of the force account method. This means that the availability of resources—such as financial capital, technical support, and infrastructure—strongly enhances the effectiveness of the force account method, making it a crucial determinant of success in public construction projects.

Lastly, Project Transparency has an unstandardized coefficient of 0.150 with a t-value of 1.897. The significance level (Sig.) is 0.056, which is slightly above the standard 0.05 threshold, indicating that project transparency is not statistically significant at the 95% confidence level but is marginally significant at the 90% level. This suggests that while transparency plays a role in the effectiveness of force account projects, its impact is not as strong or as consistent as personnel qualities and organizational capital.

The analysis in Table 5 highlights that personnel quality and organizational capital are the most significant factors influencing the successful use of the force account method among LGAs in Tanzania, with both showing strong positive effects. Project transparency, while important, has a marginally significant effect, suggesting that improvements in transparency may still enhance project outcomes but are not as critical as the other two factors. This underscores the importance of focusing on building organizational capacity and enhancing personnel skills to optimize the use of the force account method in public sector projects.

5. Discussion

The findings of this study offer critical insights into the factors influencing the successful implementation of the force account method among Local Government Authorities (LGAs) in Tanzania. This section discusses these results in light of existing literature, highlighting key alignments and deviations from prior research.

Personnel qualities emerged as a significant determinant of the effective use of the force account method, as evidenced by the strong positive relationship found in the analysis. This aligns with findings from previous studies, such as those by Mgimba (2022), who emphasized the importance of personnel competencies in ensuring value for money in public procurement projects. Skilled personnel are essential for managing the technical and operational aspects of construction projects, and their qualifications directly influence project outcomes. As suggested by Gay and Diehl (1992), personnel with adequate knowledge and expertise can navigate complex project requirements, ensuring efficiency and cost-effectiveness. The positive impact of personnel quality in this study reinforces the notion that enhancing the skills of staff involved in procurement and project management is crucial for improving public sector performance.

Organizational capital was found to be the most influential factor in this study, with a strong positive effect on the success of force account projects. This finding is consistent with Matto (2021), who argued that the availability of financial resources, technical infrastructure, and logistical support significantly enhances the ability of LGAs to implement the force account method effectively. Adequate organizational resources allow for better oversight, timely procurement of materials, and efficient project execution. Karanja (2021) also highlighted the role of organizational capacity in promoting value for money, suggesting that public organizations with sufficient resources are better positioned to deliver high-quality projects on time and within budget. The results of this study further strengthen the argument that organizational capital is a key enabler of success in public procurement, as it provides the foundation for managing projects effectively and ensuring accountability.

While project transparency was found to have a marginally significant effect, the results suggest that its role in the force account method may be less prominent than personnel qualities and organizational capital. This contrasts with previous research, such as Jackson (2012), who argued that transparency is a fundamental component of achieving value for money in public spending. Transparency ensures that procurement processes are open and accountable, reducing the risk of corruption and financial mismanagement, as highlighted by Kaula (2021) and Mbawala (2014). However, the relatively weaker influence of transparency in this study may be attributed to the specific context of LGAs in Tanzania, where organizational and personnel factors might have a more immediate impact on project outcomes. Additionally, the challenges in ensuring transparency

in decentralized government structures, as noted by Mayani (2019), may explain why this variable did not show as strong a correlation with successful project execution.

The findings of this study also resonate with Macharia et al. (2023), who examined the effectiveness of the force account method in Kenya and similarly found that internal organizational capacity and staff competence were more critical than external regulatory factors. This suggests that while transparency and regulatory frameworks remain important for ensuring accountability in public procurement, the internal capabilities of public institutions—especially in terms of skilled personnel and available resources—are paramount to the successful execution of projects under the force account method.

These results of this study underscore the importance of strengthening personnel quality and organizational capital to enhance the effectiveness of the force account method in Tanzania. While transparency remains a vital component of good governance, its impact on project outcomes appears to be secondary to the more direct influence of internal organizational factors. These findings are consistent with previous research, particularly in the context of developing countries where resource constraints and capacity issues are prevalent. Future policies aimed at improving public procurement should therefore prioritize capacity-building initiatives and ensure that LGAs have access to the necessary resources and expertise to manage force account projects effectively.

6. Conclusion

The findings of this study demonstrate that the success of the force account method in public construction projects managed by Local Government Authorities (LGAs) in Tanzania is heavily dependent on personnel qualities and organizational capital. Skilled and experienced personnel, along with adequate financial and technical resources, play a critical role in ensuring the effective implementation of projects, leading to improved cost-efficiency, quality, and timeliness. While transparency is important, its impact appears to be secondary to internal organizational factors. These results emphasize the need for a strategic focus on strengthening internal capacities to optimize the performance of the force account method and deliver value for money in public procurement.

To enhance the effectiveness of the force account method, it is recommended that LGAs invest in capacity-building programs aimed at improving the skills of staff involved in project management and execution. National and local governments should provide adequate resources to LGAs, ensuring that they have access to the necessary financial and technical support required for successful project outcomes. Additionally, fostering community involvement in project planning and implementation can help align project goals with local needs, increasing accountability and the efficient use of resources.

Furthermore, to address transparency issues, LGAs should implement stronger oversight mechanisms, such as regular audits and public disclosure of project information. Policies aimed at improving organizational capacity should be considered, including providing access to additional funding and training opportunities for staff. By strengthening these critical factors, policymakers can improve the overall effectiveness of the force account method and contribute to the successful completion of public construction projects in Tanzania.

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