

Assessment of the Public - Private Partnerships Cost Efficiency on Meeting Project Budget Targets in MSAMVU Project

Idrisa Laizer

P. O. Box 1878, Morogoro, Tanzania

Email: [idrisalaizer89\[at\]gmail.com](mailto:idrisalaizer89[at]gmail.com)

Abstract: *This study focuses on assessing Public - Private Partnerships (PPPs) cost efficiency on meeting project budget targets in Msamvu project. A cross - sectional research design was employed, with data collected through interviews from 20 respondents. Thematic analysis were used for data analysis. The findings reveal that PPP model played a crucial role in optimizing project costs, with effective cost estimation and proactive budget management contributing to meeting budget targets. Time management practices were positively influenced by the PPP model, resulting in timely completion of project activities. Based on the conclusions, recommendations are provided for future project implementation. These include enhancing stakeholder engagement and communication, strengthening cost estimation and budget management practices, fostering public - private partnerships for expertise and resource optimization, implementing effective time management strategies, and continuously monitoring and evaluating project performance.*

Keywords: Public-Private Partnerships, cost efficiency, project budget, Msamvu project, cross-sectional research

1. Introduction

Public-private partnerships (PPPs) have gained traction worldwide as effective mechanisms for delivering infrastructure and public services (Wang et al., 2018). These collaborations have been employed across various sectors including transportation, water and sewage, energy, environment protection, public health, and more (Carbonara & Pellegrino, 2014). Many nations, including the UK, Australia, Portugal, Spain, and even developing countries like China, have embraced PPPs to overcome the limitations of traditional public procurement (Ball, 2011). Consequently, governments globally are increasingly reliant on private entities to execute public policies, necessitating cooperation among diverse actors (Teisman & Klijn, 2002). PPPs, therefore, serve as cooperative arrangements between public and private sectors to achieve public service goals.

In Africa, including sub-Saharan Africa, governments have adopted PPPs as a strategy to enhance public service delivery (Danielle & Masilela, 2020). With significant infrastructure deficits and service gaps affecting millions, PPPs offer a potential solution to address challenges such as inadequate access to electricity, safe water, and communication facilities (Berrisford et al., 2018). Despite the potential, PPP experiences in Africa have been mixed, necessitating careful implementation (Farlam, 2005). In Nigeria, for instance, PPPs have been pursued to bridge infrastructure funding gaps and enable effective asset management (Fadeyi et al., 2016). Unlike privatization, PPPs enable government regulation, pricing control, and the sharing of financial burdens, thereby improving asset utilization and service quality (Chang & Phang, 2017).

Tanzania has also embraced PPPs to address infrastructure and service challenges, particularly in the transportation sector (Kavishe et al., 2018). While the country grappled with transport infrastructure and economic competitiveness issues, PPPs were recognized as a means to improve service

quality (Delmon, 2014). To exemplify, the Msamvu Bus Terminal PPP project aimed to enhance revenue, services, and employment prospects (Ngowi, 2016). However, effective PPP implementation has been hampered by factors like insufficient skills, deficient legal frameworks, and project mismanagement (Kavishe et al., 2018). This underscores the significance of careful planning and execution in PPP endeavors.

The importance of PPPs in Tanzania's economic development and public service enhancement is evident (Magoti, 2016). Despite a policy framework, comprehensive evaluations of PPP performance have been lacking (Magoti, 2016). Therefore, this study seeks to assess PPP performance through dimensions such as time to completion, cost efficiency, and user satisfaction (Liang & Wang, 2019). Evaluating these aspects can provide insights into the success and challenges of PPPs in Tanzania, building on previous research by Magoti (2016), Ngowi (2012), and Bengesi et al. (2016). Moreover, it can shed light on factors affecting public value in infrastructure PPPs.

Ultimately, evaluating the performance of PPPs in infrastructure projects involves assessing factors like completion time, cost efficiency, user satisfaction, quality, compliance, value for money, sustainability, contract management, and risk mitigation (Liang & Wang, 2019). In Tanzania, where PPPs have gained prominence as a tool for development, understanding these dimensions is critical for effective decision-making and policy formulation. The Msamvu Bus Stand Project serves as a case study, contributing to a comprehensive understanding of the dynamics that influence PPP success or failure in the country.

2. Research Methodology

This section outlines the research methodology that guided the study. A cross-sectional research design was employed,

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with data collected through questionnaires and interviews from 20 respondents. Thematic analysis was used for data analysis.

3. Research Finding and Discussion

This study aimed to assess the cost efficiency of the Public - Private Partnership (PPP) in meeting the project budget targets within the Msamvu project. To gather data of this objective; interview and documentary reviews were applied as the data collection methods. This objective was guided by the major question stated that "How cost - efficient is PPP in implementing the Msamvu project?". The results of this objective are presented in sub - sections below.

3.1 The total Cost to Construct the Project

The aim of the study was to assess the total cost incurred in constructing the Msamvu Bus Stand Project. According to the interviewed Municipal Director, the construction during phase one amounted to a total cost of TZS 16 billion. It was revealed that a significant portion of this cost, specifically TZS 12.055 billion, was contributed by the LAPF pension fund. The remaining costs were covered by the Morogoro Municipal Council (MMC). This collaborative effort between the LAPF and the MMC played a crucial role in financing the project. The Director highlighted the significance of this collaboration, stating,

The construction of the Msamvu Bus Stand Project was a significant undertaking, with a total cost of TZS 16 billion during phase one. We are grateful for the substantial contribution of TZS 12.055 billion from the LAPF pension fund towards this project, while the Morogoro Municipal Council covered the remaining costs. Currently, the bus stand operates under the efficient management of the Msamvu Properties Company Limited.

The expansion of the bus stand has had a positive impact on its operational capacity and financial performance. Prior to the expansion, the bus terminal had limited capacity, resulting in daily collections of only TZS.350, 000. However, following the completion of the project, the bus stand's capacity has significantly increased, leading to a substantial rise in daily collections. Presently, the bus stand is able to collect TZS 3 million per day. On this, the Director added,

The expansion of the bus stand has significantly improved its operational capacity and financial performance. Daily collections have risen from TZS 350, 000 to TZS 3 million after the completion of the project. This success reflects the transformative impact of the bus stand's infrastructure and financial performance, leading to increased efficiency and revenue generation.

The bus stand's expansion, which led to a tenfold rise in daily collections, highlights improved operational efficiency and financial stability, drawing more users and emphasizing infrastructure upgrades to meet local demands and enhance financial viability. The study underscores the importance of

thorough planning, precise cost estimation, and effective project management, showcasing how such careful execution enhances infrastructure, operational capacity, and revenue. Rigorous monitoring ensures timely completion, cost - effectiveness, and quality outcomes, while also highlighting infrastructure's potential to drive economic growth and community welfare, evident in increased local employment, business development, and economic activity.

3.2 Meeting Project's Budget Targets

The study aimed to assess the project's budget adherence, achieved through in - depth interviews with implementers to gain insights into financial management strategies. Notably, interviews revealed that the project met its budget targets as confirmed by the LAPF pension fund official, showcasing effective budget adherence and diligent financial planning. The LAPF pension fund official emphasized the achievement of budget targets, stating,

Yes, I can confirm that the project budget targets were successfully met. We carefully planned and monitored the financial aspects of the project, ensuring that expenses were aligned with the allocated resources. This allowed us to stay within the designated budget throughout the project's implementation.

The quote emphasizes the project implementers' dedication to proficient financial management, showcasing meticulous planning, vigilant monitoring, and adherence to allocated resources, all instrumental in meeting budget goals. This accomplishment demonstrates their informed choices and consistent fiscal responsibility throughout the project's duration. The success holds important insights for infrastructure project financial management: firstly, stressing the need for careful planning and monitoring to ensure expenses align with resources and adhere to financial limits, highlighting the necessity for robust financial planning and control mechanisms; secondly, achieving budget aims signifies strategic resource allocation without compromising quality, underscoring the importance of astute decision - making; and finally, meeting budget targets reflects positively on financial governance, showcasing transparency, accountability, and prudent management, thereby bolstering credibility and stakeholder trust. The lessons highlight the significance of thorough financial planning, continuous monitoring, and effective cost control measures, all contributing to sustained fiscal discipline and the enduring viability of infrastructure projects.

3.3 Factors Influenced the Project's Budget Management

This study aimed to uncover the factors impacting the project's budget management, achieved by conducting interviews with a Morogoro municipal council official. Valuable insights were garnered about challenges faced and strategies employed to ensure effective budget management. The official highlighted several significant factors that influenced the project's financial landscape, necessitating adaptive responses from the project team. The official stated, Morogoro municipal council official:

Several significant factors influenced the budget management of the project. We encountered unexpected cost escalations due to changes in material prices, which impacted our initial cost estimates. Additionally, delays in obtaining necessary permits and approvals resulted in project timeline extensions, leading to additional costs. Despite these challenges, we proactively managed the budget by adjusting our financial strategies and seeking cost - effective alternatives to mitigate the impacts on the overall project budget.

The study highlights factors influencing budget management in infrastructure projects, notably unexpected cost escalations due to material price fluctuations and delays in permits and approvals. These challenges necessitated adjustments to accommodate increased costs and extensions of project timelines. Despite these issues, the Morogoro municipal council demonstrated proactive budget management through adjusted financial strategies and seeking cost - effective alternatives. These findings emphasize the complexity of budget management and the need for proactive financial planning, contingency measures, efficient coordination, stakeholder engagement, and adaptability in response to unforeseen circumstances. Lessons learned include thorough risk assessment, continuous monitoring, and proactive decision - making to ensure successful budget management in infrastructure projects.

3.4 The Contribution of PPP Model to Cost Efficiency in the Project

This study aimed to evaluate the impact of the PPP model on project cost efficiency. Interviews with a LAPF pension fund representative provided valuable insights into the PPP model's role in achieving cost efficiency. The PPP model's significance in this context lies in its collaboration between public and private sectors, leveraging their strengths and resources for effective project delivery. As per the LAPF pension fund official, the PPP model was instrumental in optimizing project costs and ensuring cost efficiency. The official stated,

The PPP model played a crucial role in achieving cost efficiency within the project. By partnering with private entities, we leveraged their expertise and resources, which helped optimize project costs. The private sector's efficiency in resource allocation and their ability to implement innovative cost - saving measures positively influenced the overall cost efficiency of the project. "

The project's collaboration with private entities leveraged their expertise and resources, enhancing cost efficiency. The private sector's adeptness in resource allocation and innovative cost - saving approaches positively influenced project expenses. Their proficiency in efficient resource allocation streamlined costs and curtailed unnecessary spending. Private involvement introduced fresh cost management perspectives and practices, drawing from their experience in budget - constrained project delivery. Their ability to capitalize on economies of scale, negotiate

favorable contracts, and adopt innovative technologies further bolstered cost efficiency. The PPP model's collaborative nature and risk - sharing cultivated an environment conducive to cost optimization, synergizing public and private resources and approaches. These findings highlight the PPP model's value in achieving cost efficiency and underscore lessons in leveraging private sector expertise, embracing innovation, and nurturing effective partnerships for successful infrastructure project implementation.

3.5 Areas where the Project Exceeded the Budget Target

The study aimed to evaluate budgetary performance by interviewing a Morogoro municipal council official, who provided insights into instances where the project exceeded its budget. Although the project generally adhered to the budget, a few cases of overspending were acknowledged. These were mainly attributed to unexpected ground conditions, necessitating extra remediation work and construction plan adjustments. Such unforeseen challenges can arise during complex infrastructure projects, resulting in unexpected costs. Nevertheless, it's worth noting that the municipal council swiftly addressed these deviations and implemented measures to manage expenses. The official stated,

Although the majority of the project remained within the budget, there were a few instances where we exceeded the budget target. These overruns were primarily due to unforeseen ground conditions that required additional remediation efforts and adjustments in construction plans. However, we promptly addressed these issues and took necessary measures to control costs and minimize any further budget deviations.

The municipal council's proactive response to budget overruns demonstrates their commitment to minimizing their impact. By swiftly tackling challenges and implementing necessary measures, they aimed to curtail further deviations from the budget. These findings emphasize the significance of proactive budget management and the need for contingency plans to address unexpected project challenges. Successfully managing most of the budget while handling cost overruns reflects the municipality's responsible financial management and adaptability to unforeseen circumstances. Identifying areas of budget excess offers stakeholders insights into the contributing factors and valuable lessons for future endeavors, underscoring the importance of meticulous planning, risk assessment, and contingency provisions to effectively manage costs and reduce budget overruns.

3.6 How the Project Team Addressed any Budget - Related Challenges

The study focused on investigating how the project team tackled budget - related issues, accomplished through interviews with a LAPF pension fund official who provided valuable insights into the strategies used. The challenges were recognized within the project's implementation but a proactive stance was taken by the team to address them.

Close monitoring of expenses and strict cost controls were stressed by the official, who highlighted the team's swift response to deviations or unexpected costs. Thorough analyses led to informed decisions on reallocating funds or adapting the project plan, effectively managing the budget and reducing potential risks. The official stated,

Budget - related challenges were addressed through a proactive approach. We closely monitored project expenses and implemented strict cost controls. Whenever we encountered deviations or unexpected expenses, we promptly analyzed the situation and made informed decisions to reallocate funds or adjust the project plan accordingly.

The project team's vigilant monitoring of expenses showcased their dedication to financial discipline and accountability, effectively addressing budget deviations to ensure the project's financial health. Their capacity to swiftly analyze and make informed decisions demonstrated adaptability and resourcefulness in managing budget - related challenges, maintaining control throughout implementation. These findings underscore the importance of proactive budget management, emphasizing continuous monitoring and evaluation. By promptly addressing challenges, the project team exhibited commitment to financial prudence and successful project delivery within allocated resources. Their shared experiences and strategies offer valuable insights for future endeavors, highlighting proactive budget management and agility in facing unforeseen financial circumstances as crucial factors.

3.7 Cost - Saving Measures Implemented

This study aimed to investigate cost - saving measures during the project's implementation, gathering insights through interviews with a Morogoro municipal council official. The research uncovered several strategies for achieving cost savings, including value engineering exercises to identify cost - effective alternatives while maintaining quality. Negotiations with suppliers were also crucial, leveraging project requirements for competitive pricing. Optimizing resource utilization through workflow streamlining and efficient resource allocation further led to substantial cost savings. This underscores the significance of effective supplier management and efficient practices for enhancing project cost - effectiveness. The municipal council official stated,

To ensure cost savings during the project's implementation, we implemented various measures. This included engaging in value engineering exercises to identify alternative solutions that maintained project quality while reducing costs. We also negotiated with suppliers to secure competitive pricing for materials and equipment. Additionally, we optimized resource utilization by streamlining workflows and minimizing waste, resulting in significant cost savings.

The findings highlight the project team's dedication to efficient resource management and fiscal responsibility through the implementation of cost - saving measures, showcasing their commitment to optimizing the project's

financial performance. The importance of proactive cost management strategies is underscored, emphasizing the benefits of value engineering, supplier negotiations, and resource optimization. These insights provide valuable lessons for future projects, stressing the significance of cost - saving measures and a culture of efficiency. Value engineering exercises demonstrate the need for informed decision - making and critical evaluation of cost - effective options, while successful supplier negotiations showcase effective supplier management for favorable terms. Additionally, focusing on resource optimization through lean practices emphasizes the importance of continuous improvement and process optimization, reinforcing the need to prioritize fiscal responsibility and efficient resource utilization in project management.

3.8 Cost Management Practices' Effectiveness Rating

This study aimed to assess the efficacy of cost management practices employed during project implementation. Interviews with a Morogoro municipal council official provided insights into their perspective on these practices. The official acknowledged the implementation of cost - saving measures, such as value engineering, supplier negotiation, and resource optimization. These practices aimed to maintain project quality while reducing costs and enhancing efficiency. The official expressed positive evaluation of these practices, noting that value engineering identified cost - effective solutions without compromising quality. Supplier negotiations yielded competitive pricing for materials, and resource optimization through streamlined workflows minimized waste, resulting in substantial cost savings. This underscores the effectiveness of these approaches in achieving cost efficiency while maintaining project standards. The municipal council official stated,

To ensure cost savings during the project's implementation, we implemented various measures. This included engaging in value engineering exercises to identify alternative solutions that maintained project quality while reducing costs. We also negotiated with suppliers to secure competitive pricing for materials and equipment. Additionally, we optimized resource utilization by streamlining workflows and minimizing waste, resulting in significant cost savings.

The study acknowledges the official's positive assessment of the implemented cost management practices, indicating their satisfaction with the outcomes. The successful execution of these practices reflects the project team's commitment to resource efficiency and cost control. These findings underscore the importance of utilizing effective cost management strategies during project implementation. Employing methods like value engineering, supplier negotiations, and resource optimization enables significant cost savings while maintaining quality. The municipal council official's endorsement of these practices further underscores their role in promoting efficient financial management. The shared project team experiences offer a valuable blueprint for future endeavors, emphasizing the significance of adept cost management practices and their role in overall project success. By adopting similar approaches, teams can enhance cost efficiency, optimize

resource allocation, and achieve improved financial outcomes.

4. Conclusion and Recommendations

Based on study findings, it is concluded that effective cost estimation and proactive budget management are essential. The study highlights the importance of the Public - Private Partnership (PPP) model in optimizing project costs and achieving cost efficiency. Despite challenges such as inaccurate cost estimates and external factors impacting budget management, the project team successfully met the budget targets through careful financial planning, control, and cost - saving measures. Improved cost estimation techniques and proactive monitoring of expenses are necessary for enhancing budget management in future projects.

The study recommends a comparative analysis of PPP models. To expand the understanding of the effectiveness of Public - Private Partnership (PPP) models in project implementation, future studies can compare the Msamvu project with other similar projects that employed different PPP models. This comparative analysis can shed light on the strengths and weaknesses of different PPP approaches, helping policymakers and project implementers make informed decisions when selecting and structuring PPP arrangements.

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