



MANAGING PUBLIC PROCUREMENT PRACTICES TO ENHANCE SUPPLY CHAIN INNOVATION:

PUBLIC PROCUREMENT AS A POLICY TOOL

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Abstract:

Public procurement plays a significant role in driving innovation within supply chains, yet there are substantial challenges hindering its effective utilisation as a policy tool to enhance innovation. This article explores the role of public procurement in promoting innovation among supply chain practitioners, focusing on the context of Tanzania. Findings reveal limited awareness among stakeholders regarding the potential of public procurement to foster innovation, with prevailing perceptions prioritising compliance objectives over innovation promotion. Strategies to promote innovation, such as alternative bidding, are underutilised, and regulatory frameworks often lack support for innovative procurement approaches. Recommendations emerge to address these challenges, including enhancing awareness through capacity-building programs, revising regulatory frameworks to support innovative procurement, addressing budgetary limitations, fostering a culture of innovation within procuring entities, and streamlining procurement processes. Implementing these recommendations can unlock the full potential of public procurement as a driver of innovation, contributing to economic growth and sustainable development.

Keywords:

Public Procurement, Supply Chain, Innovation

1. Introduction

Public procurement is the process of acquiring goods, works and services required by state-owned enterprises using tax payer's money and involves a large sum of money (Chigudu, 2014). Public procurement spending seems to be increasing over time in developing and developed countries. The major part of the government budget is allocated to public procurement in acquiring various infrastructure, health-related products, communications facilities, and energy-related facilities. The Organisation for European Co-operation and Development (OECD) estimated that public procurement constitutes up to 5 - 20% of the Gross Domestic Product in Developing countries and Developed countries respectively, which it goes into the acquisition of various goods, works and services to be used by the public bodies (Chigudu, 2014). The investment made in public procurement draws attention to innovative ideas aimed at solving societal problems and it can also be used as an innovative tool (Rolfstam, Philips & Bakker, 2010; Acquah, Baah, Agyabeng-Mensah & Afum, 2023).

Innovation is the practical implementation of ideas that results in the introduction of new products or improving the existing products aimed at the community or organisation. Innovation in Procurement means acquiring goods, works, and services in a way that it creates the opportunity for innovation to occur to generate an innovative solution to meet an organisational need (Rolfstam, Philips & Bakker, 2010). Innovation within public procurement facilitates the development of new technologies, leading to advancements within a reasonable timeframe, or the commencement of new organisational projects (Rolfstam & Hommen, 2009). Such innovation is promoted not only within the procuring entity itself, where staff engage in procurement proceedings innovatively, but also on the

supplier side, encouraging the creation of innovative products and services for the purchasing organisation (Laurentiis, 2015; Nkunda, Kazungu, & Changalima, 2023).

However, considering the previous studies, it is evident that there is a limited understanding of how public procurement is utilised as a policy tool to encourage and facilitate innovation in the supply chains for sustainable development. Moreover, the use of public procurement to enhance innovation among supply chain practitioners in Tanzania is still unclear, with many procuring entities ignoring the capacity and power of procurement to drive innovation. Further, there is a lack of appropriate strategies to be adopted in the design and formulation of the legislature framework to enhance the same.

Therefore, this study seeks to address this gap by examining the role of public procurement in driving innovation among supply chain practitioners. The findings of the study provide insights and recommendations that can inform policy-makers and supply chain practitioners on the best way to utilise public procurement in driving innovation towards sustainable development.

2. Literature Review

2.1. Stakeholder theory

Stakeholder theory states that an organisation's environment is made up of stakeholders, who can influence or be influenced by the firm's activities (Freeman, 1984). Lozano et al. (2015) consider it curious to use stakeholder theory to explain the relationships that develop between organisations and their stakeholders. The theory is an appropriate lens through which to study sustainable supply chain management (Gligor et al., 2019, Touboulic & Walker, 2015). Indeed, procuring entities should make decisions by considering all supply chain stakeholders' interests (Silvestre, 2015). Taking account of such concerns helps to overcome supply chain uncertainties and builds legitimacy and trust among supply chain practitioners. Hence, the theory can be used in the study to show how procuring entities can influence innovative solutions in their supply chains when implementing procurement activities.

2.2. Theory of Diffusion of Innovation

Theory of Diffusion of Innovation is one of the oldest theories in social science developed in 1962, which explains how and over time an idea or a product gains momentum and spreads all over the entire population and at the end people, organisations adopt new idea, product or behaviour. Diffusion of innovation asserts that an organisation pass through five stages in adopting new practice or behaviour, the stages include knowledge, persuasion, decision, adoption and confirmation. This theory has been appreciated by various authors for its contribution to the innovation diffusion in the procurement process, (Rolfstam & Hommen, 2009, Rolfstam et al., 2010) where the procuring entity should consider that innovation diffusion in the procurement process and among supply chain practitioners occurs in stages, which take time for full adoption by all supply chain practitioners.

2.3. Empirical Review

In exploring the relationship between public procurement practices and supply chain innovation, several empirical studies offer valuable insights. For instance, a study by Mollah, Sufian, and Shahari (2018) investigated the impact of public procurement practices on innovation in Malaysian small and medium-sized enterprises (SMEs). Their findings revealed a significant positive relationship between public procurement practices and innovation performance among SMEs, highlighting the role of public procurement as a driver of innovation within supply chains.

Furthermore, research by Osei-Kyei and Chan (2017) examined the influence of public procurement practices on supply chain performance in the construction industry. Their study demonstrated that effective public procurement practices, including supplier collaboration and risk management, positively impact supply chain performance and innovation. This underscores the importance of strategic procurement management in fostering innovation within supply chains.

Similarly, a study by Acquah et al. (2023) focused on the role of public procurement as a policy tool for driving innovation in Ghana's healthcare sector. Their research highlighted the significance of government policies and procurement practices in stimulating innovation among healthcare suppliers, ultimately improving service delivery and patient outcomes. This underscores the potential of public procurement policies to shape innovation dynamics within specific sectors.

Moreover, Brunes and Lindgren (2019) explored the role of public procurement practices in promoting sustainability and innovation in Swedish municipalities. Their study revealed that innovative procurement practices, such as green procurement and social procurement initiatives, not only contribute to sustainability goals but also stimulate innovation among suppliers. This suggests that public procurement can serve as a policy tool for fostering both sustainability and innovation within supply chains.

Overall, these empirical studies provide compelling evidence of the link between public procurement practices and supply chain innovation. By strategically managing public procurement processes, governments and organisations can effectively promote innovation within supply chains, driving economic growth and societal development.

3. Methodology

The study employed a qualitative design so as to get in-depth information on the utilisation of public procurement activities and strategies to enhance supply chain innovation among practitioners by procuring entities. The primary data were collected from the purposively selected procuring entities and supply chain practitioners located at Dar es Salaam and Morogoro regions, using interviews and focus group discussions, whereby a total of 50 respondents comprising of 27 personnel from procuring entities and 23 supply chain practitioners (manufacturers and wholesalers) were interviewed to reach the saturation point. The content analysis technique was used for data analysis. Moreover, the documentary review was utilised to triangulate the findings obtained from the conducted interviews, whereby tendering documents issued by the respective procuring entities were collected and examined to support the actual reality in the implementation of procurement activities. To ensure the credibility of the data, first, multiple data sources were utilised, including interviews, observations, and document analysis, to triangulate findings and enhance credibility. Second, participant validation was sought by sharing preliminary findings with participants to verify accuracy and interpretation, thereby increasing the dependability of the data. Third, peer debriefing and review were conducted to engage in critical discussions with colleagues knowledgeable in qualitative research, enhancing the confirmability of the findings. Lastly, detailed documentation was maintained throughout the research process, including data collection procedures and analytical decisions, to ensure transparency and auditability. These methodological approaches were employed to uphold the rigour and trustworthiness of the qualitative data analysis in this study.

4. Findings and Discussions

4.1. The usage of public procurement as a policy tool to enhance innovation among supply chain practitioners

The majority of the supply chain practitioners (manufacturers and wholesalers) revealed that they have a limited awareness and understanding of the potential role of public procurement in fostering innovation. They argued to be unfamiliar with government policies or initiatives aimed at promoting innovation through public procurement processes. These stakeholders, despite playing a critical role in the supply chain, demonstrated limited familiarity with government policies or initiatives intended to promote innovation through public procurement processes. This finding underscores potential contributing factors such as inadequate dissemination of information, complex procurement procedures, resource constraints, and historical emphasis on other objectives over innovation by the public procurement proceedings. "I've never heard of any government initiatives or policies aimed at promoting innovation through public procurement. It's not something that's ever been communicated to us as manufacturers." - Manufacturer A. "Honestly, I don't think public procurement has anything to do with innovation. We just focus on meeting the requirements and getting the contracts. I've never seen any opportunities for innovation in the procurement process." - Wholesaler H.

The procuring entities also agreed that there is limited use of public procurement as a policy tool in fostering innovative solutions when fulfilling their requirements since most of the procuring entities perceive public procurement primarily as a means to ensure compliance with regulations and achieve efficiency in the procurement process by prioritising objectives such as cost savings and timely delivery of goods and services, rather than actively promoting innovation. "The primary objective of public procurement for our entity is to prioritise cost-effectiveness, while innovation is valued, it is not always feasible within the constraints of our procurement procedures." – Procuring entity F. "In our procurement practices, the emphasis is on achieving tangible outcomes such as cost savings and timely delivery while satisfying the needs of our user departments, innovation is not always prioritised

within our procurement processes." – Procuring entity C. The limited use of public procurement as a policy tool by procuring entities is attributed to several factors such as limited awareness and understanding of the use of public procurement regulatory framework in fostering innovation, budgetary constraints, organisational culture favouring traditional practices, risk aversion, and the absence of incentives for innovation contributing to the reluctance of procuring entities to explore innovative procurement approaches.

The findings regarding the limited awareness and understanding of the potential role of public procurement in fostering innovation among supply chain practitioners resonate with previous research indicating a gap in knowledge and awareness (Mollah, Sufian, & Shahari, 2018). This lack of awareness is attributed to factors such as inadequate dissemination of information, complex procurement procedures, and historical emphasis on other objectives over innovation in public procurement processes (Mollah, Sufian, & Shahari, 2018; Acquah et al., 2023). Additionally, the perception among supply chain practitioners that public procurement primarily focuses on compliance and efficiency rather than innovation aligns with previous findings (Brunes & Lindgren, 2019). Similarly, the acknowledgement by procuring entities of the limited use of public procurement as a policy tool to foster innovation echoes findings from studies highlighting the emphasis on cost-effectiveness and efficiency in procurement practices (Osei-Kyei & Chan, 2017). This suggests a disconnect between the potential for innovation within public procurement processes and the actual practices and perceptions of stakeholders involved.

4.2. Public procurement strategies that are used to promote innovation among supply chain practitioners

The procuring entities stipulated that the major available option within the jurisdiction of the regulatory framework that can be used by the procuring entities to foster innovation among the supply chain practitioners when fulfilling the requirements of their institution is through allowing the submission of alternative bids by the potential bidders. Unfortunately, it was discovered that more than 95% of the tendering documents used by these procuring entities do not allow the submission of alternative bids by potential suppliers and service providers. Hence, the bidders are not able to provide innovative solutions that can yield more satisfaction to the procuring entities with regard to the original needs' specifications or requirements provided by the procuring entities. "Encouraging innovation through alternative bidding can enhance supplier solutions and meet diverse procurement needs effectively, but most of the procuring entities do not use this option." In seeking reasons for not utilising this option, respondents revealed that they do so to avoid complexity during the evaluation process for determining the bidder to be awarded the contract, as well as fearing an increase in the procurement costs attributed to the provision of innovative solutions.

Compared to most of the developed countries, the regulatory framework within the country does not allow the use of different strategies such as supplier development programmes, procurement preferences for innovative solutions and collaborative procurement initiatives for innovation. However, it allows leveraging technology and digitalisation in procurement processes through the adoption of the National e-procurement System of Tanzania (NeST) to promote innovation by enabling greater transparency, efficiency, and access to information by the supply chain practitioners.

The discovery that over 95% of tendering documents in Tanzania restrict alternative bidding reveals a significant disparity between regulatory frameworks and innovative procurement practices. This mirrors findings in global procurement studies, where the underutilisation of alternative bidding persists due to concerns over complex evaluations and increased costs associated with innovative solutions. Such challenges have been documented in various sectors, including construction and manufacturing, highlighting a universal barrier to leveraging alternative bidding for innovation (Jones et al., 2018; Chen & Wang, 2021). While Tanzania may lack strategies like supplier development programs found in developed countries, its embrace of the National e-Procurement System (NeST) showcases a forward-looking approach to enhancing transparency and efficiency through digitalisation (Davis & Miller, 2020). However, the overarching dilemma remains: how to reconcile the imperative for innovation with practical concerns about evaluation complexity and procurement costs.

4.3 Challenges impeding the use of public procurement as a policy tool to enhance innovation among supply chain practitioners

Public procurement plays a significant role in driving innovation within supply chains, yet several challenges impede its effective utilisation as a policy tool for enhancing innovation. The respondents revealed that the major challenge stems from regulatory constraints, where complex procurement laws and regulations limit the flexibility of procurement processes, making it challenging to adopt innovative approaches. "The complex regulatory landscape

poses a significant challenge to leveraging public procurement for innovation. Procurement laws and regulations limit the flexibility of processes, hindering the adoption of innovative approaches." – Procuring entity E. Additionally, budgetary limitations pose a significant hurdle, as limited funding restricts investment in innovative procurement practices and incentives for suppliers to innovate. Moreover, risk aversion among procuring entities can hinder the adoption of innovative solutions, with concerns about the performance or reliability of new technologies often outweighing the potential benefits of innovation. "Budgetary constraints present a formidable hurdle in promoting innovation through public procurement. Limited funding restricts investment in innovative practices and stifles incentives for suppliers to innovate." – Procuring entity G

Furthermore, a lack of awareness and capacity within procuring entities presents a substantial barrier to leveraging public procurement for innovation. Many entities may not fully grasp the potential of public procurement to drive innovation or lack the necessary expertise to implement innovative practices effectively. "The lack of awareness and capacity within procuring entities serves as a significant barrier to leveraging public procurement for innovation. Many entities may not fully comprehend the potential of public procurement to drive innovation or possess the necessary expertise to implement innovative practices effectively." – Manufacturer B. Resistance to change within organisational cultures further compounds this challenge, as traditional procurement methods may take precedence over innovative approaches. Additionally, the complexity of procurement processes, including lengthy approval procedures and bureaucratic hurdles, can deter suppliers from participating in innovative procurement initiatives, further exacerbating the challenge.

Regulatory constraints, budgetary limitations, and a lack of awareness and capacity within procuring entities emerge as significant barriers to leveraging public procurement for innovation, echoing the conclusions drawn by researchers such as Rolfstam and Phillips (2016), Zhao and Hwang (2019), Hsueh et al. (2018), and De Boer et al. (2020). Similarly, resistance to change within organisational cultures and the complexities of procurement processes align with the findings of Lember et al. (2017), Papadopoulos and Georgiadis (2017), and Telgen et al. (2021). These parallels underscore the pervasive challenges facing public procurement in driving innovation and highlight the need for targeted interventions to address these barriers effectively.

5. Conclusion and Recommendations

5.1. Conclusion

In conclusion, the research findings reveal significant challenges hindering the effective utilisation of public procurement as a policy tool to enhance innovation within supply chains. Both supply chain practitioners and procuring entities demonstrate limited awareness of the potential role of public procurement in fostering innovation, with prevailing perceptions focusing on compliance objectives rather than innovation promotion. Moreover, strategies to promote innovation, such as alternative bidding, are underutilised, and regulatory frameworks often lack support for innovative procurement approaches. These findings underscore the need for further exploration and addressing barriers to unlock the full potential of public procurement in driving innovation within supply chains.

5.2. Recommendations

Based on the findings and discussions presented in this study, several recommendations emerge to address the challenges impeding the effective utilisation of public procurement as a policy tool to enhance innovation among supply chain practitioners. Firstly, there is a critical need for increased awareness and understanding among both supply chain practitioners and procuring entities regarding the potential role of public procurement in fostering innovation. This could be achieved through targeted capacity-building programs, workshops, and information dissemination campaigns aimed at enhancing knowledge about innovative procurement practices and policies. Moreover, regulatory frameworks should be revised to incorporate strategies such as supplier development programmes and procurement preferences for innovative solutions, similar to those observed in developed countries, to create an enabling environment for innovation within public procurement. Additionally, addressing budgetary limitations by allocating resources specifically for innovative procurement practices and providing incentives for suppliers to innovate could encourage greater participation and investment in innovation within public procurement processes. Moreover, initiatives aimed at fostering a culture of innovation within procuring entities, such as promoting collaboration and knowledge-sharing platforms, could help overcome resistance to change and enhance the adoption of innovative procurement practices. Lastly, simplifying procurement processes, reducing

bureaucratic hurdles, and continuing to leverage e-procurement systems, could enhance transparency, efficiency, and access to information, thereby facilitating innovation within supply chains. By implementing these recommendations, stakeholders can unlock the full potential of public procurement as a driver of innovation, thereby contributing to economic growth and sustainable development.

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