Enhanced Local Contractor Participation: Case of Zambia Water Supply and Sanitation Sub-Sector

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Received: 28-01-2024 Revised: 13-2-2024 Accepted: 28-02-2024

ABSTRACT

The construction sector plays a crucial role in Zambia's economic development, especially through public projects focused on areas like health, education, transport, and water and sanitation. These projects, often funded by donors, aim to improve water supply and sanitation, with key partners including Denmark, Germany, the Netherlands, Japan, Ireland, the World Bank, and the African Development Bank. While private construction projects also drive the economy, local contractor involvement in public projects is vital for Zambia's development. However, the dominance of foreign contractors in public projects is a common challenge in many developing countries, including Zambia. This research investigates the obstacles preventing local contractors from becoming main players in Zambia's construction sector, particularly in water and sanitation projects. It employs a Straussian Grounded Theory approach, proposing strategies to enhance local contractor participation. The study suggests that promoting local contractors' growth and competitiveness requires various measures, such as government confidence in their capabilities, tax incentives, procurement reforms, financial support, partnerships, segmented contracts, and fostering self-sufficiency. The research defines theoretical propositions and strategies aimed at increasing local contractor involvement in infrastructure development.

Keywords— Coding, Foreign Contractor Dominance, Local Contractor Participation, Theoretical Propositions, Water Supply and Sanitation

I. INTRODUCTION

Water supply and sanitation (WSS) projects refer to initiatives aimed at developing and managing water resources, as well as providing clean water supply and sufficient sanitation for specific areas [1], [2]. These endeavors primarily rely on funding from donors [1], [3]. Typically, WSS projects are carried out by foreign contractors and consultants, with minimal involvement from local entities in terms of contract value.

The issue of foreign contractors dominating public sector projects is not unique to Zambia but is a widespread concern in infrastructure development across developing nations[4], [5], [6], [7].

In Zambia, slightly over 8% of registered contractors are foreign, and there's a notable disparity with a significant number of contracts awarded to foreign contractors rather than local ones, a trend of concern [8].

Several studies [6], [7], [8], [9], [10], [11], [12], [13], [14] have aimed to highlight two main points: the significance of increased local involvement in developmental projects and the examination of obstacles hindering such participation. However, there appears to be minimal scholarly effort in uncovering the underlying phenomena, strategies, and mechanisms crucial for enhancing local contractor engagement in public sector projects.

This research adds to the theoretical discussion concerning the factors that deter local contractor involvement in public sector projects, particularly within the water supply and sanitation sub-sector. Moreover, its objective is to lay the groundwork for implementing strategies and mechanisms that promote the engagement of local contractors in public sector endeavors, focusing specifically on water supply and sanitation projects.

Thus, the study endeavors to identify the fundamental phenomena, strategies, and mechanisms necessary to enhance the participation of local contractors in public sector initiatives related to water supply and sanitation.

II. LITERATURE REVIEW

Numerous investigations have been conducted to analyse both developed and developing countries, aiming to uncover the primary obstacles to local contractor participation in various construction projects.

In Tanzania, a 2021 study [15] highlighted key issues contributing to the limited involvement of local contractors in civil works, including corruption,

favouritism, bureaucratic hurdles, and a shortage of registered local contractors. Furthermore, inadequate opportunities hinder skill development among workers, impacting their ability to manage construction projects effectively and eroding client confidence. Limited financial options, high-interest loans, and non-payment by clients pose significant challenges, restricting local contractors from competing for larger projects and hampering their growth. Even for other sectors such as the road sector, scholars have identified that political influence starts as early as road project selection stage [16] with failure to look at more critical factors alluding to sustainable development [16], [17], [18].

Similar challenges have been identified in Ghana, South Africa, Nigeria, Zambia, Tanzania, and Iran:

In Ghana, a study [7] revealed that local contractors delivered subpar work due to organizational deficiencies, staff turnover, and unskilled labour.

South Africa faced issues in 2009 [10] where local contractors lacked financial means, proper skills, and faced delayed payments from the government.

Nigeria saw foreign contractors dominate larger projects [14], while local contractors struggled with profit loss, late payments, poor tendering practices, and inadequate skills.

Nigeria's local contractors encountered financial mismanagement issues [6], resulting in bankruptcy, poor work quality, and project abandonment due to insufficient project management knowledge and funding.

In Tanzania, limited participation in civil works [13] was attributed to capital shortages, few contract opportunities, inadequate equipment and skills, and substandard facilities.

Zambia's 2020 study [19] in Lusaka District revealed project delays and abandonment due to poor business skills, high interest rates, financial limitations, industry-specific risks, late client payments, lack of collateral, and inadequate technical skills.

An analysis conducted in 2010 [20] refers to an article by Wooldridge (2010) from The Economist, outlining various challenges faced by developing countries beyond poverty, including inadequate distribution systems, unpredictable income streams, environmental pollution, unsatisfactory governance, and insufficient infrastructure and services. The foreign dominance in construction exacerbates the issue, redirecting wealth from industry to other countries. Encouraging local participation becomes imperative to reverse this trend.

A case study in the Lusaka District in 2020 [21] explored the effects of Chinese contractors' dominance in the local road construction industry, revealing adverse impacts on other sectors like mining, manufacturing, and agriculture, all reliant on robust road infrastructure for operation. Additionally, foreign dominance contributes to

the regression or closure of local businesses, exacerbating unemployment among local construction workers. The study underscored the significance of local contractors' involvement in benefiting from foreign expertise and ideas.

A policy analysis on the 20 Percent Subcontracting Policy [8] emphasized the importance of skills transfer and knowledge acquisition through local construction firms' participation as subcontractors. The Zambian government acknowledges the urgency of addressing this issue to expedite skills and technical knowledge transfer [22]

A report by Engineers Against Poverty [9] emphasized the detrimental effects of the lack of local procurement in construction projects, leading to increased poverty and diminished economic growth. Insufficient infrastructure maintenance exacerbates these challenges, with existing facilities breaking down due to neglect, further hindering poverty alleviation efforts and economic development.

Successful programs and methods have improved local contractor participation, primarily in public sector projects. Examples include cooperative enterprises in Latin America, targeted procurement procedures in South Africa, and innovative delivery models in Malawi and Durban, South Africa. These initiatives have resulted in increased job opportunities, skill development, and improved infrastructure standards.

Strategies and mechanisms for increased participation primarily focus on government intervention, and indigenous involvement, client engagement. Government initiatives include scaling up efforts for capacity building, implementing policies like the 20 Percent Subcontracting Policy, and removing market entry intervention barriers. Indigenous involves participation from project planning stages, while client intervention emphasizes project needs assessment and subcontractor procurement strategies to ensure project completion and mitigate financial constraints. These efforts aim to enhance local contractor participation, foster skill development, and promote economic growth within communities.

This review of literature suggests that there appears to be minimal scholarly effort in uncovering the underlying phenomena, strategies, and mechanisms crucial for enhancing local contractor engagement in public sector projects.

These studies typically focus on predetermined deterrent factors using quantitative methodologies, thereby introducing bias from the outset. Even when attempts are made to incorporate qualitative methodologies, the absence of a Straussian Grounded Theory approach in these academic works results in:

- Failure to integrate factors derived from literature with omissions identified through qualitative analysis.
- Inadequate exploration of how these factors impede local contractor participation.

This reveals a gap in knowledge regarding the fundamental elements necessary for devising strategies to boost local contractor involvement and thus the need for this study.

III. METHODOLOGY

This research centres on determining the components essential for improving local contractor involvement in the water supply and sanitation sub-sector. Utilizing a Grounded Theory methodology, the study develops a conceptual framework, as depicted in Figure 1, based on several key constructs: (a) factors deterring local contractor participation, (b) resulting phenomena and suggested strategies, and (c) theoretical propositions aimed at enhancing local contractor engagement.

Grounded Theory, originating as early as 1967, has undergone various adaptations over the years[23], [24], [25]. This study employs a Straussian Grounded Theory approach, which is influenced by objectivism and reflexivity [23]. The latter emphasizes that researchers can uncover and report on an objective, external world. Recent editions of the Strauss and Corbin approach have softened the technical processes while highlighting the researcher's reflexive role.

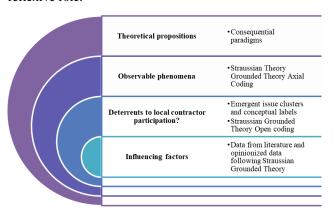


Figure 1: Conceptual framework

In contrast to Glaser and Strauss's Classic Grounded Theory (CGT), Strauss and Corbin's approach features a structured analysis with ongoing validation, blending induction and deduction. This has led to the perception that a properly grounded theory must follow a systematic, planned process [23], [25], [26], [27], [28].

This study adopts the Straussian Grounded Theory because it allows researchers to familiarize themselves with the research area before starting, facilitates the development of theories with rich conceptual density, employs a systematic coding process (open, axial, and selective), treats sentences as lines for broader textual analysis, encourages interrogative questioning to open data to interpretations, and promotes comparative thinking to explore data further [23], [26], [27], [28].

The Straussian Grounded Theory enabled the distinction between notions that "compel" facts and those that "allow the formation" of new categories, thanks to the application of theoretical knowledge grounded in methodological and epistemological principles.

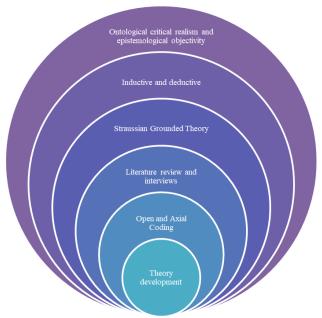


Figure 2: Research methodology

By adopting the Straussian Grounded Theory, this study embraces a qualitative method embedded in the Grounded Theory inquiry approach. Figure 2 illustrates the research methodologies adopted, presented in an onion-like structure.

In this study, established Grounded Theory data analysis methodologies, commonly referred to as coding, were adhered to. The researcher identified phenomena and formulated theories within the framework of predetermined methodological procedures for Grounded Theory. Figure 3 outlines how the researcher:

- Generated data through observations, interactions, and collected materials, incorporating insights from the literature to inform the analytical strategies of the research.
- Employed a concurrent and iterative method for data collection and analysis.
- Formulated theories based on consequential paradigms derived from the observed phenomena identified during open coding analyses.

In this study, the researcher employed two coding processes: open coding and axial coding.

- a) Open Coding Process: Qualitative data was disassembled into distinct components, meticulously scrutinized, and compared for similarities and differences.
- b) Axial Coding Process: This analytical endeavour involved sorting, synthesizing, and organizing extensive data sets, then reconfiguring them into new clusters following open coding. Axial coding was instrumental in coding observed phenomena.

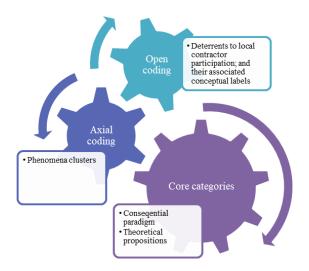


Figure 3: Research methodology

The researcher adopted an iterative approach to data collection and analysis, focusing on defining core categories and ensuring that all clusters from axial coding were linked to a core category. These core categories served as the basis for defining consequential paradigms and formulating theoretical propositions.

Furthermore, the researcher employed theoretical saturation to determine when to conclude the iterative process of data collection and analysis. This decision was made when minimal new information emerged.

IV. DATA ANALYSIS AND RESULTS

The deterrents identified from the coding of interview responses to discern descriptors and associated conceptual labels were categorized as illustrated in Figure 4 illustrates these codes and associated conceptual labels established in this study.

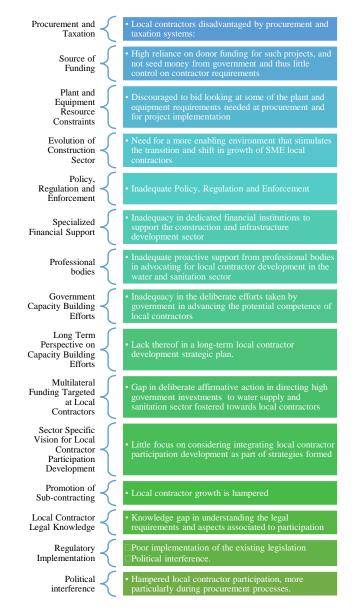


Figure 4: Deterrents and associated conceptual labels

These 15 codes were established in this study following an open coding analysis. Associated conceptual labels were induced from statements coded within these interview responses and example quotes are presented as part of data analysis. Take for instance the Code: Procurement and Taxation. The following example quotes are presented.

Example Quotes:

- "Could the procurement routes taken in these public sector works affect the participation of the local Zambian contractors?"
- "But yeah, so I like the way you're asking me because as we can see, the issue is cross

- cutting from procurement to the availability of funding and the capacity building."
- "There was need for a deliberate move to just relax the taxing of these small people, for them to just build up. You can have a tax regime, but one which is very lenient on them and one where they can easily afford."
- "But what has happened is that in most of these bids, there is no clear discrimination on targeting the local contractors."
- "Even when we say that these bids are targeting the local contractors, foreign contractors are open to participate and most of the requirement actually they favour the foreign contractors."
- "Local contractors or local companies do have the technical capacity but it's just the requirements that are put in bidding documents that disadvantage them."
- "The procurement system clearly disadvantages local contractors by insisting on certain requirements..."
- "The procurement system is skewed towards favouring foreign contractors because the emphasis, the undue emphasis on the capacity in terms of financial resources and equipment clearly disadvantages local contractors."

Following the coding of each line of these statements, a conceptual label was induced. For this code this was captured as:

Local Contractors Disadvantaged by Procurement and Taxation Systems:

- "Disadvantage local participation by requiring performance bank guarantees, due to the strict scrutiny of banks and with banks of the perception that foreign contractors are a better bet than a local contractor in issuing such guarantees."
- "Taxation disadvantages the transitioning and growth of small-medium enterprise (SME) local contractors from emergence to been competitive with foreign contractors in bidding."
- "Lack of deliberate local contractor bias/discrimination as part of procurement processes."

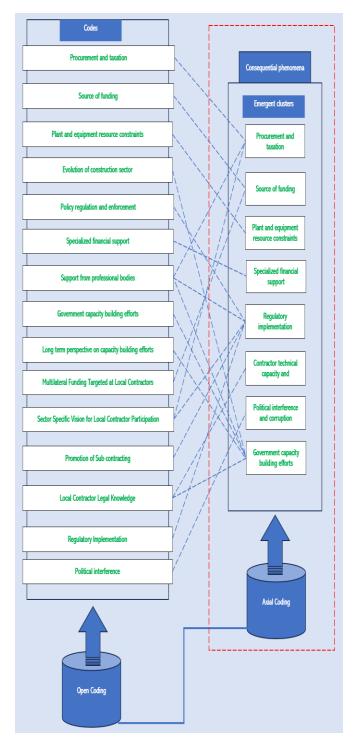


Figure 5: Axial coding analysis: emergent clusters and associated codes

As earlier alluded, this study aims to identify the underlying phenomena and their influence on the growth and competitiveness of local contractors in infrastructure development. It constitutes the second research objective, where consequential phenomena are organized into clusters derived from axial coding conducted on the emergent coding categories.

The associated conceptual labels originate from conceptualized codes aligned with deterrents to local contractor participation. These clusters and their corresponding codes are depicted in Figure 5. Each phenomenon offers a comprehensive and descriptive understanding of the obstacles and difficulties related to local contractor participation in WSS public sector.

A. Procurement and Taxation

The following consequential phenomena are observed under this cluster:

- (a) Taxation policies that disproportionately burden local contractors hinder their financial growth and competitiveness, demanding the implementation of tax incentives and leniency to foster their development.
- (b) Absence of deliberate local contractor bias within procurement processes limits their ability to compete, necessitating affirmative actions by procurement to level the playing field and promote fair competition.
- (c) Proactive support from professional or regulatory bodies, such as National Council for Construction, for local contractor development in the water and sanitation sector is insufficient. This calls for a more active role, and collaboration with procurement and government regulatory authorities in advocating procurement and taxation polices fostering local contractor growth.
- (d) Sector-specific visions often overlook the integration of local contractor participation development in structuring of procurement and taxation policy, regulatory instruments and processes. This highlights the need for strategic planning in formulation and restructuring of procurement and taxation policies, statutory instruments and processes that includes and promotes the growth of local contractors within the water supply and sanitation sector.

B. Source of Funding

The following consequential phenomena are observed under this cluster:

(a) The lack of government-initiated investment from seed money hampers local contractor participation, highlighting the need for increased funding from domestic sources to promote local involvement in the sector. The dominance of donor-funded projects creates a dependency on external funding, limiting government control and flexibility in promoting local contractor participation, highlighting the need for greater self-sufficiency:

- Donor-imposed project requirements favouring technical expertise over local capacity disadvantage local contractors, necessitating negotiations for more inclusive project criteria that support indigenous contractors.
- Overreliance on donor funding inhibits the development of a robust local construction industry, emphasizing the importance of diversifying funding sources and encouraging domestic investment.
- (b) Utilizing multilateral funding opportunities and directing government seed money towards water supply and sanitation projects presents a strategic avenue to boost local contractor participation and enhance community hygiene and health. Harnessing multilateral funding opportunities, coupled with robust government investment, provides a sustainable pathway to amplify local contractor participation, while simultaneously addressing public health concerns:
 - Directing funds towards water supply and sanitation projects can have a transformative impact on community health and hygiene, making it imperative to allocate resources strategically to promote local contractor engagement.
 - Multilateral funding, when channelled effectively, serves as a catalyst for local contractor growth and involvement, fostering economic development and improving quality of life for communities.

C. Plant and Equipment Resource Constraints

The following consequential phenomena are observed under this cluster:

- (a) Imbalanced resource availability between local and foreign contractors results in unequal competition during bidding, necessitating a shift towards segmented contracts that alleviate plant and equipment limitations and favour local contractors.
- (b) Disproportionate resource requirements in procurement processes hinder local contractors' ability to compete effectively, underscoring the necessity for adaptable procurement strategies that accommodate varying capacities:
 - Segmented contracts that align with local contractors' resource capabilities enhance their competitiveness by enabling them to bid

- on projects suited to their technical and equipment strengths.
- Shifting from rigid resource-focused criteria to outcome-based assessment methods in procurement processes can level the playing field and promote local contractor participation.

D. Specialized Financial Support

Dedicated financial institutions are lacking, hindering local contractor participation in the construction and infrastructure development sector, necessitating the establishment of specialized financial institutions to support the industry's growth. Establishing specialized financial institutions dedicated to construction and infrastructure development offers local contractors increased access to funding, promoting their growth and participation:

- Dedicated construction bank(s), similar to models in other countries, can provide tailored financial solutions to local contractors, addressing their unique funding challenges and fostering sectorspecific growth.
- Integrating specialized financial support within the water supply and sanitation sector encourages local contractor development and reduces financial barriers, allowing for more competitive bidding and participation.

E. Regulatory Implementation

The following consequential phenomena are observed under this cluster:

- (a) Inadequate policies, regulations, and enforcement mechanisms have perpetuated the dominance of foreign contractors, highlighting the need for comprehensive policy reform and active enforcement to create a level playing field. Local contractor development requires a comprehensive policy framework that includes affirmative actions, regulation enforcement, and transparent procurement processes to counteract the dominance of foreign contractors:
 - Fostering local contractor participation demands a collaborative effort between regulatory bodies, government, and professional associations to design and enforce policies that promote equal competition.
 - Addressing the lack of policies and regulations that prioritize local contractors necessitates a multifaceted approach that involves legal reforms, enhanced enforcement mechanisms, and active industry engagement.
- **(b)** Proactive support from professional bodies for local contractor development in the water and

- sanitation sector is insufficient, calling for a more active role in advocating and fostering local contractor growth. The role of professional bodies must extend to actively driving local contractor growth through regulating foreign contractor registration and participation eligibility such as enforcing joint ventures with local contractors for selected projects.
- (c) Sector-specific visions often overlook the integration of local contractor participation development, highlighting the need for strategic planning that includes and promotes the growth of local contractors within the water supply and sanitation sector. This study for instance postulates that relying solely on the promotion of sub-contracting limits local contractor advancement, requiring a shift towards jointventures or private-public partnerships (PPPs) to provide a more comprehensive avenue for indigenous company capacity development. While promoting sub-contracting is beneficial, it must be accompanied by comprehensive measures that empower local contractors to advance beyond limited subcontracting roles, promoting greater autonomy and growth:
 - Sub-contracting should be part of a broader strategy that includes joint ventures, partnerships, and capacity-building initiatives, enabling local contractors to evolve into competitive industry leaders:
 - Focusing solely on sub-contracting may limit local contractor participation to specific tasks, hindering their overall growth potential, underscoring the need for a multifaceted approach that supports holistic development.

F. Contractor Technical Capacity and Knowledge

The lack of knowledge among local contractors regarding legal requirements and aspects of government and donor-funded projects hampers their participation, necessitating targeted training programs to address these knowledge gaps. Bridging the knowledge gap in legal requirements and aspects is pivotal for local contractors to navigate government and donor-funded projects effectively, enabling them to participate more confidently and competitively. Strengthening local contractor legal knowledge, by for instance publicizing such information and having deliberate free education programs, enhances their overall participation and success in water supply and sanitation projects, fostering an environment of compliance and transparency.

G. Political Interference and Corruption

Political interference during procurement processes negatively affects local contractor participation,

emphasizing the importance of reducing political influence to promote fair competition and local involvement. Poor implementation of existing regulations and susceptibility to political interference hinder the successful execution of laws supporting local contractor participation, highlighting the need for improved implementation mechanisms and reduced political influence. Thus, addressing challenges in regulatory implementation demands a coordinated effort to enhance transparency, streamline processes, and mitigate political interference, fostering an environment conducive to fair competition.

H. Government Capacity Building Efforts

The following consequential phenomena are observed under this cluster:

- (a) There is an inherent gap in government capacity building efforts aligned to making local contractors more knowledgeable regarding legal requirements and aspects of government and donor-funded projects This calls for training programs, through the support of professional and regulatory bodies such as National Council for Construction and Zambia Public Procurement Authority, that provide a comprehensive understanding of legal intricacies and project regulations empower local contractors to engage in bidding processes and project implementation with enhanced expertise.
- (b) The lack of a comprehensive, long-term local contractor development plan has hindered the gradual growth and capacity building of local contractors, necessitating the creation of a strategic plan to achieve balanced competition with foreign counterparts over time. Developing a comprehensive long-term local contractor development plan is essential for nurturing gradual growth, fostering competitiveness, and achieving parity with foreign contractors over an extended timeframe:
 - Strategic planning that spans years, rather than short-term initiatives, allows for a systematic approach to capacity building and skill development, facilitating the emergence of a robust local construction industry.
 - A forward-looking perspective that integrates local contractor growth within broader national development goals can drive meaningful change and enable indigenous contractors to excel and lead in the sector.
- (c) Historical development of the construction sector from pre-independence to post-independence periods has led to limited growth opportunities for local contractors, requiring a shift in focus towards fostering their emergence and advancement. Government initiatives have often

favoured creating local government capacity over enabling indigenous contractor growth in the water supply and sanitation sector. Historical underinvestment in local contractor development has perpetuated their limited growth and participation.

This calls for a comprehensive policy shift towards nurturing indigenous companies in the sector:

- Government initiatives should focus on not only creating capacity but also nurturing local contractor growth, fostering an environment conducive to their emergence and competition with foreign counterparts.
- Promoting local contractor participation necessitates integrating their growth into sector-specific developmental strategies, ensuring that historical limitations are addressed, and indigenous contractors thrive.

This study unveils three theoretical propositions for enhanced local contractor participation:

- Theoretical proposition 1:
 - Tax incentives and leniency policies as catalysts for local contractor development.
- Theoretical proposition 2:
 - Affirmative actions in procurement to promote fair competition.
- Theoretical proposition 3:
 - Specialized financial support for local contractors in the water supply and sanitation sector.

These, and their associated consequential phenomena and codes are illustrated in Figures 6 to 8.

A. Tax Incentives and Leniency Policies as Catalysts for Local Contractor Development

Theoretical proposition 1 is associated to procurement and taxation, and regulatory implementation as illustrated in Figure 6. This figure also illustrates the codes associated, with each code's associated conceptual label earlier depicted in Figure 4.

Implementing tax incentives and leniency policies for local contractors can stimulate their financial growth and enhance competitiveness in the construction industry.

By reducing the tax burden on local contractors, they can reinvest more in their businesses, leading to increased financial stability and improved competitiveness.

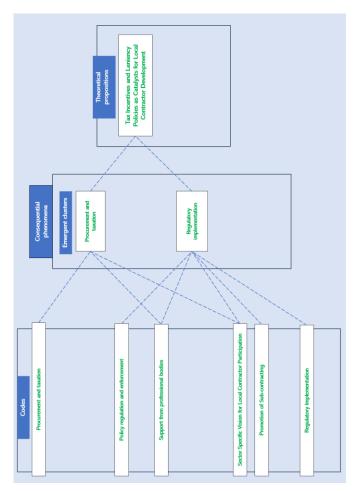


Figure 6: Theoretical proposition 1

B. Affirmative Actions in Procurement to Promote Fair Competition

Theoretical proposition 2 is associated to plant and equipment constraints, regulatory implementation, contractor technical capacity and knowledge, political interference and corruption, and government capacity building efforts as illustrated in Figure 7. This figure also illustrates the codes associated, with each code's associated conceptual label earlier depicted in Figure 4.

The adoption of affirmative actions in procurement processes can effectively level the playing field for local contractors, promoting fair competition and enhancing their ability to compete with larger, often foreign, competitors.

Without deliberate bias-correcting measures in procurement, local contractors may face significant disadvantages. Affirmative actions can bridge these gaps, fostering a more equitable business environment.

C. Specialized Financial Support for Local Contractors in the Water Supply and Sanitation Sector

Theoretical proposition 3 is associated to source of funding and specialized financial support as illustrated in Figure 8.

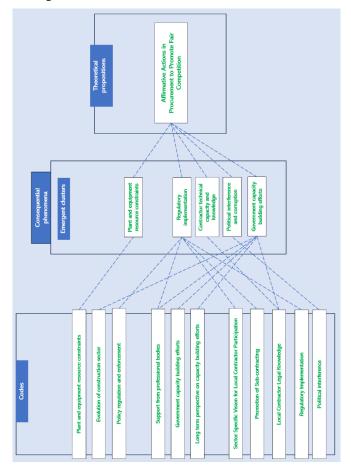


Figure 7: Theoretical proposition 2

Integrating specialized financial support within the water supply and sanitation sector can reduce financial barriers, foster the development of local contractors, and enhance their capacity to bid competitively for projects.

Financial support tailored to the unique needs of local contractors operating in specific sectors can enhance their ability to participate in projects and promote competitiveness within the industry.

V. DISCUSSION

This section presents a discussion based on this study's key findings. Following the results presented in the previous section, the key findings in this study are summarized as:

Deterrents and Consequential Phenomena:

The previous chapter presents several deterrents which infer consequential phenomena that can be clustered into thematic descriptors for emergent categories.

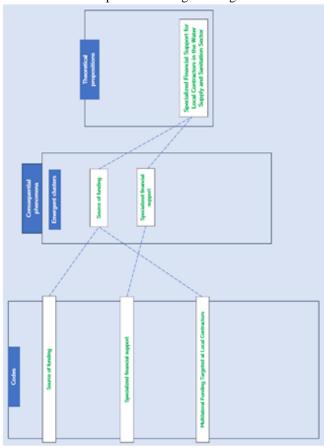


Figure 8: Theoretical proposition 3

These thematic descriptors include procurement and taxation, source of funding, plant and equipment resource constraints, specialized financial support, contractor technical capacity and knowledge, government capacity building efforts, and regulatory implementation.

(a) Theoretical Propositions:

In taking a Straussian Grounded Theory methodology, this study induces theoretical propositions that constitute the primary contribution of this research.

This study presents three theoretical propositions, based on the observed consequential phenomena established, that could service enhanced local contractor participation.

A. Deterrents and Consequential Phenomena

In this study, thematic clusters representing emergent categories are conceptualized, encompassing established deterrents and consequential phenomena discussed in this section.

(a) Procurement and Taxation

The current process for engaging contractors for water and sanitation projects is not favourable to local contractors. In Zambia, the bulk of water and sanitation projects are donor-funded. The funding comes with set criteria eligibility conditions which largely disqualify local contractors from participating in the bidding process because they cannot meet the set conditions. In spite of the enactment of the Zambia National Tender Act of 1986, and the adoption of the Public Procurement Action Plan in 1996 to, among many targets, decentralize procurement to ministries, establish a cadre of professional procurement staff, support specialised training institutions in building cadre capacity and strengthen and audit oversight functions, these actions fell short of addressing the low participation of local contractors in the water and sanitation subsector in particular, and construction of public works in general. This is so because the internal procurement guidelines have little impact on donor funded projects which come their guidelines. The problem of low participation by local contractors has continued [1], [9].

On the issue of taxation, the sustainability of the local contractor is hampered by tax obligations which are standardized, irrespective of the financial capacity of contractors. Even in the absence of an opportunity to undertake a project, tax obligations are mandatory for the local contractor. Moreover, even when a local has project their value added tax obligations fall due once they invoice, irrespective of the receipt of payment. For the foreign contractor however, though tax obligations are also mandatory, they are cushioned by their financial muscle and the opportunity to undertake various projects in different countries, including their countries of origin.

(b) Source of Funding

As mentioned above, the bulk of the source funding for water and sanitation projects is predominantly donor funded. The donor, therefore, dictates the terms and conditionalities to be adopted when executing these projects. Therefore, local guidelines and recipient countries have little input in these documents.

(c) Plant and Equipment Resource Constraints

Because foreign contractors enjoy access to financial facilities that local contractors cannot access because there is no specialized financial institution in Zambia whose mandate it to support local contractors, foreign contractors are better resourced with equipment, personnel, and materials suppliers. In a study in Kenya, [12], report that 64.3% of respondents felt that local contractors did not have adequate tools and equipment to complete the construction works required. The workers also reported that 92.9% of the respondents felt that local contractors did not have goodwill from material suppliers to obtain materials on credit. From this work, it was observed that the materials supplies, and the plant and

equipment were not major deterrents to the low participation of local contractors. It was reported that the acquisition of materials, plants and equipment can be easily structured if a local contractor is given an opportunity to execute a profitable project where all stakeholders meet their obligations.

(d) Specialized Financial Support

Foreign contractors enjoy access to various financial instruments from their countries, such as low/zero interest credit facilities, contingent financial instruments, letters of credit, long lease facilities, various forms of financial support etc. These financial instruments are accorded to foreign contractors even in the absence of proportionate collateral. Local contractors do not enjoy such privileges. Foreign contractors, therefore, have a big advantage over local contractors. [12], in their study report very high proportion of respondents felt that local contractors did not have adequate financial resources to complete construction projects. Similarly, [29], on a study to identify the main challenges preventing local contractors from participating in urban projects, cite the lack of liquidity in the sector as a major contributing factor to low local contractor participation.

(e) Regulatory Implementation

The Government of the Republic of Zambia, having noticed the problem of low local contractor participation in local civil works, enacted several pieces of legislation in a bid to mitigate this problem. Prominent among these pieces of legislation, is the 20% Subcontracting Policy implemented in 2012 [8], raising the threshold of local contractor procurement from 10% to 20%. Whereas this was a well-intentioned policy, it is not enforceable on donor-funded projects. Even on government-funded projects, implementation of this policy has failed. There is need for government to review and understand the technicalities involved the implementation of this policy.

(f) Contractor Technical Capacity and Knowledge

Though [29] report the lack of project management knowledge by local contractors, local contractor technical capacity and knowledge have not been a major deterrent to local contractor participation in civil in Zambia. However, there is a gap in more specifically legal and procurement knowledge.

(g) Political Interference and Corruption

Though [29], include high political relativism in project assignment as one of the main challenges preventing local contractors from participating in urban projects, this was not observed as a main deterrent in the literature survey conducted in this work. [15], identified that among the main issues contributing to a lack of local contractor participation in local civil works were a lack of work opportunities caused by corruption, favouritism, bureaucracy, and a lack of registered local contractors. In a

regulated project by the UK Department for International Development on a program for primary school construction that used small contractors from a local graded register in Malawi, it was observed that the project created a fully visible procurement process, lowering ethics and corruption issues, encouraging contractors to participate confidently. Corruption was not reported as a major problem contributing to low local contractor participation in the water and sanitation subsector in this study. Large of opportunities for local contractors is not largely due to corruption, but in this study, it was reported to be more of incompetence and lack of confidence by the client.

(h) Government Capacity Building Efforts

From review of literature, among the various gaps in the public procurement system, was the lack of capacity building in procurement training institutions. This problem persists. The government should, therefore, deliberately create sustainable opportunities for local contractors which will result into sustainable capacity building [1], [22], [30], [31]. It was observed in this study that most respondents did not seem to realize that the lack of sustainable opportunities for local contractors hindered capacity building.

B. Theoretical Propositions

The study proposes three interventions to address unequal opportunities for local contractors in the Water and Sanitation Sub-Sector:

(a) Tax Incentives and Leniency Policies as Catalysts for Local Contractor Development

Implementing tax incentives and leniency policies can alleviate financial burdens on local contractors, fostering growth and competitiveness.

In the deterrents, we identified the absence of tax rebates and incentives as deterrents to local contractor participation in the sector. Implementing tax incentives and leniency policies for local contractors can stimulate their financial growth and enhance competitiveness in the construction industry. By reducing the tax burden on local contractors, they can reinvest more in their businesses, leading to increased financial stability and improved competitiveness. Currently, local contractors, even without any running projects, are still expected to continue their tax obligations. These tax obligations present serious constraints on the sustainable survival of local contractors and have led to winding up of business by some local contractors. These situations negate the little capacity despite the belief by government that capacity is being built in the sector.

Currently, as soon as the local contractor invoices the client, the tax authority demands immediate VAT payment, despite the local contractor not having been paid. This situation creates financial stress on the local contractor who resorts to borrowing at exorbitant interest

rates and thus leading to financial distress. Financial can lead to closure of a business. It is important therefore, that leniency policies be deliberately instituted to mitigate these common situations of financial distress on local contractors. Additionally, it would be prudent for government to protect local contractors who have demonstrated successful performance and resilience spanning over a period of, for example, more than five years against liquidations triggered by failure to meet tax obligations, particularly under the current conditions. [15] present a lack of work opportunities caused by corruption, favouritism, and bureaucracy as contributing factors to low local contractor participation in civil works in Tanzania. The workers note that the lack of work opportunities makes it hard for workers to build adequate skills. Deliberate government policies including Tax Incentives and Leniency would potentially catalyse local contractor participation in civil works in developing countries through capacity building and help to make the playing field competitive for local contractors.

(b) Affirmative Actions in Procurement to Promote Fair Competition

Affirmative actions in procurement can rectify disparities by granting local contractors similar incentives as foreign counterparts, encouraging fair competition.

Among the deterrents for local contractor participation in the water and sanitation sector in Zambia is the absence of deliberate government affirmative actions to support the sustainable involvement of local contractors in local projects. Foreign contractors have a financial competitive advantage (tax incentives, access to cheap credit facilities), and are therefore, not as heavily impacted by Proposition 1 above, compared to local contractors. Foreign contractors enjoy a lot of privileges such as bank guarantees, bid guarantees, loans, and overdrafts provided by their countries of origin. Local contractors do not have access to the incentives that their foreign counterparts enjoy. It is necessary that local contractors are accorded similar incentives to counter the domination by foreign contractors, in national interest. The adoption of affirmative actions in procurement processes can effectively lead to a gradual increase in the successful participation of local contractors, and potentially promoting their dominance in the sector. Without deliberate bias-correcting measures in procurement, local contractors may continue to face significant disadvantages, particularly lack of opportunity to undertake any project despite participating in many tenders. In a study conducted in Ghana by [7], it was reported that Government activities were believed to give foreign contractor companies advantages over local contractors, thus affecting the bidding phase. This disadvantaged local contractors. The researchers concluded that better government policies and more skilled labourers were needed. Affirmative actions

implemented by governments can bridge these gaps, and positively contribute to the national economies of developing countries. The government needs to prevail over the eligibility criteria to accommodate the limitations of local contractors.

(c) Specialized Financial Support for Local Contractors in the Water Supply and Sanitation Sector

Specialized financial support tailored to local contractors' needs can bridge financial gaps and enhance their competitiveness in securing projects.

Foreign contractors can easily access bank guarantees, loans, and letters of credit from their countries of origin. Local contractors do not have access to such privileges and therefore, fail to meet the eligibility criteria for projects in most instances. Integrating specialized financial support within the water supply and sanitation sector can reduce financial barriers, foster the development of local contractors, and enhance their capacity to bid competitively for projects. Currently, financial institutions as perceive local contractors in civil works as a high-risk investment. In a study on the main problems contributing to a lack of local contractor participation in local civil works in Tanzania, [15], report, among other obstacles, that local contractors have limited finance options, such as low-interest loans. They also reported the non-payment from clients as another common problem that further creates difficulties in financing the work to be completed during a construction contract. Similar observations were made on several studies in other countries: [5], [10], [13], [22], [32]

These studies also suggest the need for specialized financial support to help sustain local contractors to effectively compete against their foreign counterparts. Therefore, governments can help to de-risk the local contractors by bridging the financial support to local contractors. Financial support tailored to the unique needs of local contractors operating in specific sectors can enhance their ability.

V. CONCLUSION

The promotion of local contractor growth and competitiveness in the context of infrastructure development can be significantly enhanced through a multifaceted approach, encompassing government confidence in successful performance of local contractors, tax incentives, procurement reforms, specialized financial support, strategic partnerships, segmented contracts, and a shift towards self-sufficiency. This study defines the theoretical propositions and their underlying phenomena and associated strategies for enhanced local contractor participation.

By addressing the challenges faced by local contractors and aligning government initiatives, legal

frameworks, and funding mechanisms to prioritize their development, a more equitable, competitive, and self-reliant infrastructure sector can emerge, benefiting both local economies and communities.

The primary practical implication of this study is with regards to its influence on policy and legal instruments. It provides government and professional bodies such as Zambia Public Procurement Authority with a basis for policy and legal instrument decision making, structuring and restructuring. These propositions are anchored on the will of the government to introduce and implement a strategic plan to for the sustainable increased of local contractors in the water and sanitation subsector in Zambia. Professional bodies can augment government Efforts By Actively Advocating For Improved Competence By the client and instilling confidence in the performance of local contractors.

This study makes the following recommendations:

- i. There is need for government to adopt an affirmative action to support local contractors and build confidence.
- To sustainably build capacity of local contractors, government must give opportunities to local contractors which will help to grow the competence of local contractors.
- iii. The government should develop a mechanism that is more tax-lenient to local contractors.
- iv. The government should facilitate the establishment of customized financial institutions to support local contractors.
- v. The government should develop a deliberate regulatory framework to enforce regulation.
- vi. Professional should advocate for instilling of confidence in local contractors by government in the interest of Zambia's economic development.
- vii. There is need for further scholarly work related to:
 - A quantitative study to test theoretical propositions as well as the nature of relationships of the variables is necessary.
 - Development of a robust local contractor participation enhancement model based on the results of broader construction industry would be valuable.

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