

Impact of Policy in Innovating and Transforming Procurement in Infrastructure Projects Managed by Commercial State Owned Enterprises (SOEs)

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Abstract:

To explore how infrastructure projects in commercial SOEs can achieve the public procurement principles of value for money, efficiency, competitiveness and fairness as stipulated in the preferential procurement policy framework act (PPPFA). An exploratory, qualitative approach was adopted to demonstrate the value that public policies can add in the procurement of products services in infrastructure projects. Data were gathered through documents and analysed using the thematic analysis method. Government interventions through procurement policies have the potential to achieve anticipated results when implemented appropriately. The findings indicate that commercial SOEs with adequate support from the state can utilise small, medium and micro-enterprises SMMEs to penetrate new markets and leverage on the private sector participation, thereby enhancing entrepreneurial practices and competitive advantage in large infrastructure projects. Preferential treatment policies also have the ability to drive innovation. The study however recommends that close partnerships or relationships with suppliers should be preferred only when the risks outweighs the benefits. This is one of few studies conducted on infrastructure projects in commercial SOEs. The results can therefore only be generalised to similar SOEs. The study has the potential to contribute knowledge in the management of preferential procurement and application of PPPFA in public infrastructure projects managed by commercial SOEs.

Keywords: Commercial enterprises, competitive bidding process, SMME, PPPFA, mandatory sub-contracting policies

1 Introduction

Public procurement serve as an important mechanism employed by the state to achieve multiple social and economic objectives (Konadu, Sen, Grandia and Meehan; 2017, 2018, 2017). It accounts for a major part of the gross domestic product (GDP) in many countries (Patil , Sen, Bhagat; 2017, 2019, 2017), and provides the best prospects for commercial state owned enterprises (SOEs) to achieve their mandates. On average, public procurement represent for 10% and more of the world-wide GDP (Muñoz-Garcia and Vila, 2019). In emerging economies, public procurement can be 50% or more of overall government spending (Fourie and Malan, 2020). In South Africa the estimate is approximately 22% of gross domestic product (GDP), while the latest annual procurement expenditure is roughly R500bn (Bolton, 2016). A substantial amount of this public funds is thus made accessible to commercial SOEs to ensure effective purchasing and contracting out of products, services and works in public projects inclusive of infrastructure projects (Marimuthu, 2020; Rosyda and Raharja, 2020).

Public procurement is also highly regulated (National treasury, 1999). Strategic sourcing is one of the rising areas of supply chain management (SCM), and also key element in unlocking

strategic value such as efficiency, competition, value for money and innovation in the purchasing of products and services (Siljeur, 2017). It is thus commendable that the National Treasury has taken the decision to implement strategic sourcing to unlock value for the country (National Treasury, 2017). At a primary level, the South African National Treasury through the Public Finance Management Act (PFMA) demands an effective purchasing system that is unbiased, impartial, transparent, competitive and economical (National treasury, 1999). Public procurement at a secondary level, aims at addressing the consequences caused by past unfair discriminations (Manu et al., 2021). Also at this level, the state through commercial SOEs aims to advance preferred individuals and businesses through the allocation of contracts from amongst others big infrastructure projects (SA National Treasury, 2020).

Despite its strategic role, to date limited studies have examined the role played by public procurement and the legislations guiding the public procurement in promoting efficiency, entrepreneurship, competitive advantage and innovation in infrastructure projects (Suhonen et al., 2019). It is for this reason that this study was conducted. The purpose is to discover how infrastructure projects in commercial SOEs can achieve the public procurement value of efficiency, innovation, competitiveness and fairness as stipulated by the Preferential Procurement Policy Framework Act (PPPFA). The aim of the study is to analyse the impact of the PPPFA in infrastructure procurement. In particular, attention are given to the following objectives: (1) To explore the linkages between PPPFA and the principle of competition in order to leverage benefits from the private sector participation (2) To explore linkages between PPPFA and the principle of efficiency to determine whether innovation initiatives were adequately supported. The exploratory qualitative research method was used as an appropriate method to demonstrate the value that public policies can add in the purchasing of products services in infrastructure projects.

2 Literature Review

2.1 Public policy and the procurement principle of competitiveness

Private sector enterprises (PSE) in South Africa, have long recognised the need for a differentiated approach to the procurement (Siljeur, 2017)). These enterprises have since identified strategic sourcing as an effective approach to unlock significant value in procurement. This fact makes private sector participation pertinent to the public sector efficiency. In this regard, section 4 of the PPPFA addresses the pre-qualification criteria and the advancement of SMMEs. The section stipulates that public entities such as commercial SOEs must advertise bids with condition that only bids with one or more of the below characteristics may respond”

- (A) B-BBEE level within the specified threshold*
- (B) Specified small and medium enterprises, supplier and/or contractors*
- (C) Subcontracting intentions of 30% or more to the specified enterprises*

Section 9 of the PPPFA further addresses subcontracting conditions to specified enterprises and suppliers. Conditions are as follows

- (1) Where practical to subcontract in a contract of R30 Million and more, public entities, must contract the specified small and medium suppliers.*
- (2) Where public entities intend to apply subcontracting conditions, the condition of 30% and more of contract value must be clearly communicate to these small and medium enterprise and suppliers.*

Section 4 and 9 strives to activate private sector participation and entrepreneurship through the contracting of SMMEs (Reijonen *et al.*, 2016). This is very prevalent in South Africa, where sub-contracting in infrastructure projects can enhance competition between small enterprises. One such example is the collaborations formed between commercial SOEs and SMMEs through preferential procurement initiatives such as competitive Supplier Development Program (CSDP) targeted at Eskom and Transnet (Vermeulen 2017, Eskom Holdings 2019, Transnet 2019). The competitiveness of SMMEs was viewed from two dimensions: profitability and innovative solutions (Edler and Georghiou, 2017). This is reinforced by Makwara, (2019), who demonstrated that SMMEs including those sub-contracted by commercial SOEs for public infrastructure projects have the capacity to nurture innovation, thereby enhance entrepreneurship practices. The study findings by Singh and Subrahmanya (2018) elaborate on how innovation performance of SMMEs in Asian improves when subcontractors receive assistance from large businesses.

Although, SMMEs have demonstrated their ability to nurture entrepreneurship and innovation, they are often hindered by capacity challenges including limited access to capital and funding (Mphela and Shunda 2018, Olusegun and Akinbode 2020, Hove and Banjo 2018). According to Adediran and Windapo, (2017) large investments are required in construction industry for contractors to obtain and maintain their own facilities and equipment while making the most of its utilisation. Given this substantial investment in plant and equipment, larger businesses in the construction industry, tend to win government contracts thus disadvantaging SMMEs (Normanyo, Ansah and Boakye 2016). The legislation framework is unfavourably position SMMEs against large businesses (Tammi *et al.*, 2017). For example, several studies have highlighted a negative impact on the growth and effectiveness of mandatory subcontracting policies that enforce work to be contracted out to SMMEs without financial and technical support or technical development (Mambwe *et al.*, 2020, Cheelo and Liebenenthal 2018). With all these challenges very few small contractors or SMMEs have progressed to becoming well established suppliers in the construction industry (Manu *et al.*, 2021).

2.2 Public policy and the procurement principle of Efficiency

Despite its ability to reduce cost, increase profits and improve quality products and services, innovation practices are rarely included in public tender contracts, particularly in the awarding of construction and engineering projects (ECP) (Taherdoost and Brard, 2019). The justification for this from two areas: 1.) Traditional approach to procurement that primarily focus on price, thereby neglecting innovation and other factors (Georghiou *et al.*, 2014, Edler *et al.*, 2015) and 2) extensive technical specifications that limit the skills and originality of potential suppliers in offering innovative solutions (Laryea and Watermeyer, 2014). For quite some time, the old-fashioned approach to choosing supplier has been centred on price (Wong, Holt and Cooper, 2014). However, businesses have started to realise that selecting supplier's solely on price, as a sole factor is not sustainable. Hence the inclusion of other factors such as quality and performance and technical capability (Hu and Liu, 2018). In this regard, section 6 and 7 of the PPPFA stipulates that:

State entities must specify the preference point system that is appropriate to the in the bid documents, and that the lowest bid will be used or selected

At face value, the preference point system may appear to support the perception of Eriksson et al., (2019) that most public sectors, still uses the traditional lowest bid method to award contracts. The PPPFA, however, also stipulates that the:

- *“Award of contracts to bidders that do not achieve the highest points may be granted only in agreement with section 2(1)(f) of the Act,*
- *(2) If the state entity plans to use the objective criteria in terms of section 2(1) (f) of the Act, the objective criteria must be specified in the bidding documents”.*

Given these conditions, the preference point system may also seem to support Taherdoost and Brard, (2019) who stated that “even in the case of multi-criteria evaluation, the criterion of the bid price often weights more than 70% making it obvious that this criterion carries a significant influence in the efficiency of the tender process particularly those in construction projects”. About the PPPFA, this assumption can be disputed, since quality that is referred to as functionality is considered. Including quality or functionality has been identified as a vital factor in public procurement evaluation method that has the potential to spur innovation (Stake, 2017) and improve project delivery performance (Kiundu, 2018, Micheli and Cagno 2016, Ottou, Baiden and Nani 2020). A survey conducted among 102 independent retailers in Soweto, supports quality as a vital factor where supplier performance is concerned (Makhitha, 2017). Ninety-five percent (95%) of the respondents agree to this fact. A study that analysed the supplier selection criteria of more than 110 suppliers, reported that the criteria will continue to change to include traditional aspects of performance, functionality and price, in addition to modern features such as innovation or process improvement (Cheraghi, Dadashzadeh and Subramanian, no date).

The use of functionality in the pre-qualification phase during competitive bidding requires detailed specification to capture user specifications. This is discouraged by several researchers due to the negative impact on innovation and project deliver performance (Edquist, Vonortas 2015, Zabala-Iturriagagoitia 2015, Nganu and Mwangangi 2019). On the contrary, in EPC a "preliminary market consultation" to engage with suppliers prior to the evaluation stage is common and preferred over detailed specifications is preferred (Bolton, 2016). As a result, close supplier partnership-style relationships are established and deemed appropriate in such strategic procurement (Czarnitzki, Hnermund and Moshgbar, 2018). The traditional arm's length approaches such as competitive bidding remain suitable for regular and non-complex procurement (Micheli and Cagno, 2016). The preference for preliminary market consultation" is substantiated by Koubaa, (2016) in their perception that “too many suppliers” weakens the supply chain performance in a business” resulting in delays and increased costs

3 Methodology

The qualitative approach enabled the researcher to explore the significance of public policy in the procurement of goods and services for infrastructure projects in commercial SOEs. From the exploratory perspective, the study is deem appropriate since studies in this area are limited. Data were collected through appropriate documents from approved journal articles, mainly from Elsevier, Science Direct, Scielo, Sage, Research gate. Thematic analysis in this case complemented the document analysis (Bartlett and Vavrus, 2017), and enabled the use of both the inductive and deductive reasoning (Vaismoradi and Snelgrove, 2019). Thematic analysis also allowed data comparison from the literature review, which resulted in the establishment of themes upon which the discussions and findings were reached. Regarding validity of the study, dependability was achieved through adopting a logical and detailed process which can be documented and followed easily (Nowell et al., 2017, Friese, Soratto and Pires, 2018).

4 Findings and Discussions

The first objective for the study was aim at exploring the linkages between public policy and competition. Table 1 indicates the themes that were developed and analysed:

Table 1. Themes related to public policy and competitiveness

Category	Themes	Journals
Studies in support of innovation, and Entrepreneurship	Innovation, Policy support	(Love and Roper, 2015), (Rankhumise E and Masilo K, 2018), (Manu et al., 2021) (Singh and Subrahmanya 2018)
	Entrepreneurship, private sector participation	(Edler and Georghiou, 2017); (Makwara, 2019).
Studies that oppose innovation and Entrepreneurship	Low SMME participation in public contracts	(Olusegun and Akinbode, 2020);
	Inefficient Public procurement policies	(Mphela and Shunda; 2018), (Uyarra et al., 2014); (Mambwe et al., 2020)
	Capacity and financial challenges	(Hove and Banjo, 2018), (Adediran and Windapo, 2017), (Normanyo, Ansah and Boakye, 2016).

4.1 Themes in support of the principles of innovation and entrepreneurship

Based on the above themes, there seem to be strong linkages between the principle of competition and entrepreneurship. The PPPFA has proven to be effective in supporting the collaboration between SOEs and SMMEs in driving innovation and competitive advantage (Rankhumise E and Masilo K, 2018). This is aligned to the finding which suggests that adequate amount of subcontracting support is a contributing factor to the innovation capability of SMME (Nwokocho, Nwankwo and Madu, 2019). It thus becomes evident that participation from the private sector, through the sub-contracting of SMME introduces entrepreneurial practices since SMMEs are forced to operate more efficiently (National treasury, 2015).

4.2 Themes opposing the principles of innovation and entrepreneurship

Literature entails that SMMEs need to be profitable in order to achieve innovation and entrepreneurial value (Edler and Georghiou, 2017). Despite the great contribution of SMMEs to innovation and competition, the South African National Development Plan estimates SMME contribution to GDP at 45%, one of the lowest in the world. In addition, very little is still unknown regarding the CSDP performance. The majority of SMMEs in public infrastructural contracts have also been found to be weak at commercial services as a result of limited and inadequate financial support calls for government intervention (Ancarani et al., 2019). All these factors indicate that the advancing of SMMEs through preferential treatment is unsatisfactory.

It is therefore apparent that if the state wants to reduce the high rate of SMME failure, appropriate financial and non-financial support must be made available to commercial SOEs in order to enable SMMEs to leverage entrepreneurship and innovation practices from the private sector (Mphela and Shunda, Georghiou, Edler, Uyarra, Yeow, 2018, 2014). Moreover, the legislation should be drafted with clarity and intention highlighting the risks of mandatory subcontracting rules and how the policy intends to support SMMEs in this regard (Rosli and Mustaffa, 2018, Mphela and Shunda, 2018).

The second study objective aims at examining relationships between Public policy and Efficiency to determine if the current legislative adequately support innovation practices.

Table 2. Themes related to public policy and innovation

Category	Theme	Journals
Studies that support Efficiency and competition	Multi-criterion decision making	
	Quality-Price criterion	(Makhitha, 2017), (Wong, Holt and Cooper, 2014), (Nganu and Mwangangi 2019), (Singh, Nkwe and Karodia, 2015).
	Multi-factor decision criterion	(Cheraghi, Dadashzadeh and Subramanian, no date), (Edquist, Vonortas, and Zabala-Iturriagagoitia 2015).
Studies that oppose of Efficiency and competition	Detailed specifications / Prequalification	Czarnitzki, HHnrmund and Moshgbar, (2018), (Stake, 2017), (Laryea and Watermeyer, 2014)
	Close supplier relationships “Preferred” suppliers	(Basant, 2018), (Abutabenjeh, Gordon and Mengistu, 2018), (Sayed et al., 2019), (Pooe 2016, Israel and Kazungu, 2019; Hansen, 2020; Ettmayr and Lloyd, 2017).

4.3 Themes that support Efficiency and Competition

The above themes indicate strong linkages between the principle of Efficiency and innovation. The PPPFA recognises that relying solely on the cost considerations as a supplier evaluation criteria might raise quality issues, hence quality is considered (Cheaitou, Larbi and Al Housani, 2019). The innovation related themes also revealed that in order to achieve the required level of quality in innovative procurement, close supplier partnerships are deemed appropriate in EPC projects. We can thus deduce that like most public procurement policies, the PPPFA supports the use of multi-factor decisions which incorporates cost, innovation and quality factors (Singh, Nkwe and Karodia, 2015). This in turn adequately addresses the principle of efficiency, particularly in the supplier evaluation and selection stages

4.4 Themes that oppose of Efficiency and competition

Whilst it is clear that close supplier partnerships are preferred in EPC, the approach, when employed inappropriately can create challenges for commercial SOEs to enforce preferential procurement policies (Basant, 2018). Since such relationships oppose the competitive bidding strategy; the public procurement principle of competition is also compromised (Abutabenjeh, Gordon and Mengistu 2018, Sayed et al., 2019). This may also defeat the strategic sourcing objective, established by the PFMA to reach as many suppliers as possible, particularly in the private sector to leverage on entrepreneurial and cost reduction practices. Moreover, global supply chains and foreign investment opportunities might also be sacrificed since a larger supplier base, known to offer businesses opportunities that establish new sources of innovation is reduced (Pooe 2016, Israel and Kazungu, 2019; Hansen, 2020; Ettmayr and Lloyd, 2017). The study thus recommends that preferred suppliers or close supplier partnerships be favoured only when the risks outweighs the benefits and within the conditions set out in the PPPFA (Sorte Junior 2016, Laryea and Watermeyer 2014). Open communications between contractors should be encouraged where there is an opportunity to enhance technical efficiency (Hu and Liu, 2018) without compromising benefits of open bidding or competition.

5 Conclusion and Further Research

This study investigated the impact of the procurement policy on infrastructure projects in commercial SOEs. The findings from the study reveal that government interventions through preferential procurement policies have the potential to achieve anticipated results when implemented appropriately. This indicates that commercial SOEs with adequate support from the state can utilise SMMs to penetrate new markets and leverage on the private sector participation, thereby enhancing entrepreneurial practices and competitive advantage.

Preferential treatment from the state also has the ability to drive innovation through close supplier a partnership-style relationship. However, such supplier approach may contradict principles of open competition. In such instances, the study recommends that the approach should be used only when the risks outweighs the benefits or with approval from the South African National treasury as stipulated by National treasury instruction note 3 of 2016/2017 (National Treasury, 2017). The paper is limited to infrastructure project steered by commercial SOEs. The paper is also a literature review paper and thus limited to desk research. Future research should be undertaken to add practical validation to conclusions in this paper.

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