

PROCUREMENT RELATED RISKS IN THE PUBLIC SECTOR - GAUTENG PROVINCIAL TREASURY

Nelisiwe Dlamini, Cynthia Zigubu and Sebonkile Thaba

Department of Transport and Supply Chain Management

College of Business and Economics

University of Johannesburg

Johannesburg, South Africa

scthaba@uj.ac.za , ziqubumbali@gmail.com, nsdlamini288@gmail.com

Abstract

The aim of the study was to investigate the risks in procurement within the public sector. The study first identified the risks related to procurement, then distributed the questionnaires with 25 respondents by the employees within the public sector. Although the literature review highlighted that corruption was perceived as one of the biggest risks in procurement, all the questions relating to corruption had to be omitted from the questionnaire to prevent political distortion and fear that the respondents will not respond to the questions objectively. It is common knowledge that corruption in the form of collusion in the public sector procurement is widely affecting the ethical way of contracting for goods and services. It was found that current mitigation strategies were unable to prevent future mitigation strategies. The introduction of ethics training could provide positive results in terms of mitigating the procurement risks as employees would be sensitized to what constitutes unethical behaviour in a procurement environment. The procurement officers must take part in continuous professional development regarding proper procurement practices including ethics and values.

Keywords

Procurement risks, Public Sector Procurement, Corruption, Mitigation Strategies and Supply Chain Management

• Background

Supply Chain Management (SCM) is a fundamental portion of prudent financial management in the South African public sector (Ambe & Badenhorst-Weiss, 2012:246). According to Bramer and Walker (2011:453), public procurement is the acquisition of goods and services by public sector organisations from selected suppliers in order to effectively and sufficiently provide basic services to the public. According to Ambe and Badenhorst-Weiss (2012: 241), section 217(1) of the Public Financial Management Act (1999) requires public procurement to be "in accordance with a system which is fair, equitable, transparent, competitive and cost-effective".

Effective identification and measurement of the procurement risk is important as the basis of efficient risk management and risk prevention (Lei, Donghong & Tie, 2009). Procurement risk can be viewed from a transactional viewpoint (CIPS, 2013:2). Lei et al., (2009:3118) indicated that the procurement process is exposed to risk during the different transactions that occur between the buyer, supplier, and other market factors.

Public procurement is subject to increased critical observation aided by technology.

Ambe and Badenhorst-Weiss (2012) added that prior to 1994, public procurement in South Africa was directed to massive, developed contractors and this made it challenging for small and medium enterprises to participate in public procurement processes.

The South African public sectors, programme reviews, and public and political expectations for service improvements (Ambe & Badenhorst-Weiss, 2012:243). The inefficiencies of the procurement function have led to limited visibility for supply chain managers regarding where their products and services originate from and where they are consumed (Coetzee, 2015).

Ambe and Badenhorst-Weiss (2012) suggested that public sector procurement in South Africa is the powerful transformation tool which is aimed at promoting people who were previously disadvantaged by unjust past practices. People living with disabilities spent R26.4 billion in 2010 in ways that conflicted with laws and regulations.

(Smart Procurement, quoted by Ambe and Badenhorst-Weiss, 2012: 245). Supply Chain Management Review (2015: 3) (SCMR) added that the public sector in South Africa spent R500 billion on goods and services and on

construction works between 2013 and 2014. The Institute for Security Studies public protest and violence map recorded that 25 percent of the protests and industrial strikes were owing to poor services in January 2013 and December 2014 interval (ISS Crime Hub, n.d). The SCMR (2015: 4) commented that the high incidence of service delivery protests is indicative of the dissatisfaction that people feel regarding the quantity or quality of public services. The massive problem is that sum amount of money are spent but services are not delivered, services for which the money was intended. Owing to the substantial public spend on goods and services procured by the public sector, there needs to be visibility of the processes followed in order to identify and mitigate any wasteful expenditure that might be avoided.

Mofokeng (2012: 8) commented that the negative publicity regarding public sector procurement indicates the following perceptions:

- Widespread disobedience with the laws/regulations.
- Poor public sector procurement systems.
- Inferior risk management processes in procurement.
- Lack of transparency, irresponsibility, unethical behaviour and inconsistency.
- Non-responsiveness to public pursuit.
- Misuse of public resources and inadequate service delivery.

This clearly indicates that the general population has the perception that corrupt procurement practices are evident and widely prevalent in the public sector in different locations and settings (probably not all locations or settings, since there may be fortunately still many good, honest and ethical public servants).

Finance Minister, Pravin Gordhan, stated that one of the goals of the 2016 National Budget is to reduce the amount of wasteful expenditure by the government while providing adequate resources to social services for the poor.

National Treasury and South African Revenue Service (SARS), 2016: 2). R73.7 billion of the 2016 budget which has been allocated to general public services, will be managed by the provincial treasury and this places scrutiny on the performance of the procurement departments (National Treasury, 2016:3)

Ntayi, Ngoboka and Kakooza (2012: 114) identified procurement related risks as:

- **Corruption:** Corruption in public procurement occurs when a specific supplier is consistently favoured in order to enrich the favoured supplier.
- **Kickbacks:** A kickback is a payment made by the supplier to the public official who influenced the selection process, after being rewarded a contract and receiving payment for the contract
- **Bid rigging:** Bid-rigging is a form of corruption and occurs when the bidders eradicate competition by increasing prices, this results in the government paying more and ultimately bearing the costs of the bidder. This can be achieved through a variety of ways from when competitors withdraw a bid from the application, to when a competitor chooses to submit bids only in certain geographical areas or only to particular public organisations (The Organisation for Economic Co-operation and Development, 2009).
- **Fronting:** When a company does not disclose the relationship with the influence of public officials involved in awarding a contract, fronting occurs and the public officials benefit financially through the front company.

In response to the above, the study proposes to investigate, describe, and critically evaluate the various procurement-related risks the public sector is faced with. The study will also evaluate the relationship between procurement risks and poor service delivery in the government.

• Literature Review

Insight into the background of South African public procurement has revealed that public procurement is associated with several risks and that these risks may emanate from maladministration, corruption, lack of accountability, lack of knowledge and insufficient capacity to efficiently execute the procurement process which in turn affects the whole service delivery process and economic growth initiatives (Deputy Protector-Republic of South Africa, 2015:5). Public procurement has over the years been the center of attention in the media platforms due to various corrupt and fraudulent activities taking place within the public sector. Kogan and Tapiero (2007: 378) argued that public procurement related risks stem from many reasons both internally induced and occurring externally with their effects felt internally. The following nine public sector procurement related risks were identified from the literature and case studies carried out by Edler, et al (2010:85).

1. Corruption

Specific public sector departments and municipalities have been under public scrutiny following the media headlines reporting mismanagement, corruption and failure of financial systems (Kanyane, Houston & Sausi 2013:130). South Africa ranks 61 out of 168 countries based on the perceived levels of public sector corruption (Transparency International, 2016). The Corruption Perceptions Index (CPI) ranks countries or territories based on how a corrupt country's public sector is perceived to be. However, corruption is not the major obstacle to achieving transparent and effective procurement instead, "poor performance in the public sector officials who are politically enclined (lack of political will), is the major cause of government not achieving its governmental policies" (Derek Luyt quoted by Kanyane et al., 2013: 131). In other manner, the lack of political will from local government leaders or politicians to enforce honest and ethical procurement practices and principles is apparently sinking from the top to local government level where local operators appear to feel that- if they get a chance, "They will nor can until caught". Quintal (2016) reported on News24 that a local mayor in Beaufort West was caught conducting corrupt procurement practices, and was simply admonished with a R10 000 fine after his disciplinary hearing by the ruling party. In addition, he was not dismissed but retained his post as mayor of the city (Quintal, 2016). Little wonder then that procurement corruption at local and municipal level is yet to be eradicated.

Kanyane et al. (2013:132) identified corruption as the main threat, which affects all tiers of public service (national, provincial and local) as an obstruction to the transformation of South Africa. The Institute of Internal Auditors South Africa (IIA SA) used a corporate governance index to measure the perceptions of public workers on the role of ethics in the organisational culture between 2014 and 2015; and discovered that 50 percent of national government respondents strongly agreed that ethics is an important part of their organisational culture, 57 percent of provincial government respondents strongly agreed and only 24 percent of local government respondents agreed to this view (IIA SA, 2016: 9). Based on the provincial government's stronger views on ethical behavior, it would not be completely unrealistic that there are fewer occurrences of corrupt activities related to procurement at this level compared to local government. It is apparent that corruption manifests itself in a number of different ways and it is important to consider the ripple effect one corrupt act can have on the public procurement system. Neupane, Soar and Jianming (2012:305) stated that corruption in public procurement leads to lack of accountability; lack of control; lack of political control and inappropriate procurement practices.

2. Corruption Risk Factors

Corruption can manifest during any of the stages that occur during the public procurement process, which Neupane et al. (2012:307) listed as: project planning; project design and documentation; tender process; contract awarding and accounting and auditing. In earlier research, Ware, Moss, Campos and Noone (2011:81), stated that the procurement is exposed to corruption during advertising, prequalification, and administration and supervision. According to the Supply Chain Management Review (SCMR) (2015:16) "the public SCM cycle has three essential phases: pre-tender, tendering and post-tender". The question then begs to be asked: "At which phase does the most public procurement corruption happen: at the pre-tendering phase (giving 'inside information' to friends or family for kickbacks or 'a cut' on the awarded tender contract). Furthermore Supply Chain Management Review (SCMR) (2015:16) states that at the tendering phase (direct the adjudication or selection process in a certain direction towards a friend or family members proposal (RFQ/ RFP) or in the post-tender process (you will get the contract but please note the following 'kick-backs' to me are expected once awarded)? ". The SCMR (2015:37) illustrated that the pre-tendering procurement phase consists of initiating the project, gathering information, specifying the requirement and developing the strategy to approach the market. This is a crucial phase where information may be misused by the corrupt procurement officials to influence the outcome of the bid. The tendering phase presents its own areas of risk during the bidding process where fronting may take place or collusion during negotiation and contract awarding. Lastly, the post-tender stage provides an opportunity to monitor the financial health of suppliers, the aspects influence the willingness of suppliers to participate in collusion with procurement officials.



Figure 1: The Stages in the Procurement Process. Source: The Supply Chain Management Review (2015:37).

2.1. Forms of Corruption

- Collusion

During the pre-tender phase, a procurement official may disclose confidential information to favour supplier regarding a tender, placing the supplier in an advantageous position compared to other suppliers competing for the contract (Neupane et al., 2012:307). The motive for a procurement official taking part in collusion is personal financial gain received from the selected supplier upon payment from the tender. The SCMR (2015:19) provided the following example as an illustration of collusion in public procurement:

- *Collusion among construction companies tendering to build World Cup stadiums.*

“An investigation conducted by the Competition Commission (CC) prompted by increased construction and upgrading cost revealed that the construction companies involved with the 2010 FIFA World Cup took part in alleged prohibited practices relating to collusion between a number of major construction companies.”(AFP, 2014:n.p.).

- Fraud

Baciu (2013:7) stated that fraud in public procurement is any dishonest behaviour of the suppliers involved in the tender. This is because fraud can take many forms from senior procurement officials planning unnecessary projects for their private benefits, (Neupane et al., 2012:307) to suppliers being dishonest regarding the costs associated with fulfilling the contract.

- Unauthorized expenditure

Unauthorized expenditure in public procurement is defined by the Auditor General (2015: 35) as “expenditure that was spent out of scope from the approved budget”. Skenjana (2014) stated that in certain instances officials have intentionally approved payments or appointment of service providers that went beyond their signing powers. The Auditor General report on the audit outcomes of Gauteng for 2014-2015 has disclosed that there has been a decrease in unauthorized expenditure over the last three years from R462million in 2012-2013 to zero in 2015. The question needs to be asked then: “Is all unauthorized expenditure necessarily and definitely all unethical expenditure?” For instance, a case where money was spent beyond the scope of the approved budget, to transfer to the emergency relief fund during a drought, would still be deemed unauthorized but not necessarily unethical.

2.2. Bid rigging risk in South African Public Sector Procurement

It is common knowledge that corruption in the form of collusion in the public sector procurement is widely affecting the ethical way of contracting for goods and services. The amount of bid rigging activities taking place in the public sector procurement has led an organisation like Economic Cooperation and Development (OECD) to implement

procedures for preventing or possible mitigating the risk of bid rigging in the public sector procurement (OECD, 2009 and 2012).

As in the case of the South African Public Sector Procurement (SAPSP), OECD (2012) recognised that for a procurement system to be open, transparent, efficient, cost-effective and competitive, it is of utmost importance that government contracts for goods and services should be aimed at achieving the best value for money.

South African public procurement seems to be no different to public procurement in the US and it was proven in the assessment which was conducted by Haberbush (2000:85) where he noted the practice of limiting competition from the pre-qualification of bids, sealed bid process, difficulties in detecting bid rigging schemes and joint ventures.

2.3. Fronting Risk in Public Sector Procurement

Fronting is another risk which related to the public sector procurement and it is widely believed to be affecting the efficiency of the public sector procurement for achieving its policy objectives. Kapdi and Sulaiman (2015) noted a greater concern in South African companies which have adopted a tick box approach to Black Economic Empowerment (BEE) initiatives but despite these BEE initiatives, fronting activities are still being practiced. A question may then be asked whether all BEE initiatives promote the objects and purpose of the BEE Act.

Kapdi and Sulaiman (2015) further noted the following non-exhaustive list of practices as identified in the BEE Act that will be regarded as fronting practices:-

- Window-dressing – Window-dressing refers to practices in an organisation which prevent black people from partaking in core activities of the enterprise.
- Benefit diversion - This simply refers to the practice where economic benefits which were received as a result of the BEE status of an organisation are not directed to black people in the ratio specified in the contract document.
- Opportunistic intermediaries – Relate to agreements in which the terms and conditions were negotiated on unfair and unreasonable basis with another organisation as a means of enhancing an organisation's BEE status.

The question is therefore: "Does BEE procurement requirements promote "fronting?"; in other words the black-owned companies are awarded other than non-owned businesses, which benefit more from the contract at a higher cost. The country whilst the black owned companies makes a different-cut for fundamentally doing very little or adding little value to the actual process of executing on the contract?", why is a contract awarded to a BEE owner who lack the skills or knowledge nor the capacity to deliver on the contract?

2.4. Contracts

Huntchison and Pretorius (2014: 6) defined a contract as an "agreement entered by two or more persons with the intention of creating a legal obligations". In light of this definition it is understood that for an agreement to be binding, it should be recognised by the law as legal. Various other requirements must be satisfied together with the agreement. However, the label 'contract' is in practice not reserved for agreements that succeed in creating binding obligations. Even if one or more of the requirements for validity are not present, the contracts fails (Huntchison & Pretorius 2014: 6).

Huntchison and Pretorius (2014: 5) further stated that agreements entered into public sectors or state organisations are not straight forward agreements as they present their own fair share of contractual difficulties, any other ordinary contracts. Public procurement contracts straddle the divide between public and private law which in turn leaves loopholes for private companies to exploit the government.

From these arguments a conclusion can be drawn that without a proper contract administration and management, the government might find itself facing legal disputes or entering into contracts or agreements that is not necessarily satisfy its specific requirements. An example of the risk associated with public sector procurement contracts is when a contractor who has been awarded a contract sub-contracts more than 25 percent of the contract value to another enterprise which does not have an equal or higher BEE status level.

Also, the Public-Private Partnerships (PPP) mitigate associated business risks because it promotes joint development activities, which cater to both the public and private sectors. As such, large green projects can be implemented that neither the public nor the private sector can achieve on their own because of their limited financing or technological options (The Global Green Growth Forum, 2012).

2.5. Kickbacks

Kickbacks refer to a bribe that influence a decision making process of awarding procurement contracts. A payment of a kickback is normally done by a supplier to public officials who then after receiving such payments have an obligation to give an undue advantage to that particular supplier (Business-anti-corruption, 2014).

The Public Service Commission (PSC) (Albert, 2011) found that 11 types of corrupt activities were common between the period of September 2004 and June 2010 from phone calls logged with the National Anti- Corruption Hotline. The PSC found 720 cases of procurement irregularities in the two public bodies, nine national departments and three provincial governments were randomly selected for audit. Procurement irregularities occurred in the form of deviation from policies and procedures when awarding tenders. Nepotism was a common practice for buyers awarding contracts to friends and family or rigging tenders in exchange for kickbacks (Albert, 2011).

2.6. Incompetency of staff

Public sector officials and servants are required as part of the general procurement guidelines to be accountable and to report on their procurement processes. This implies that the government must ensure that individuals and organisations are monitored and held responsible for their plans, performance and outcomes (SA. General Procurement Guidelines, 1999:7). Openness and transparency in administration is considered to be a fundamental component of accountability.

The SA General Procurement Guidelines (1999:7) procurement framework stated that:

- Heads of departments should be responsible to ministers in the administration of procurement actions.
- All senior procurement servants in government should deliver high-level management and co-ordination activities.
- Individual procurement servants in government should be held responsible for their services to senior procurement servants and stakeholders of the government organisations.
- All procurement servants should honour the stipulated guidelines and be responsible to management.

2.7. Supplier's financial status

Private-Public Partnerships (PPPs) are becoming desirable in global government institutions owing to their potential value for money (VFM); (Soomo & Zhang, 2015). A study conducted by Soomo and Zhang (2015) on the private-partnership failures suggests that the financial instability of the suppliers may have a negative direct impact on the public sector; this may lead to consequences of not obtaining VFM, which is one of the principles embedded in the SA General Procurement Guidelines. Soomo and Zang (2015) identified the six types of transportation PPP failures. According to Table 1, if PPPs are not financially modified, so the value for money will not be achieved- as the tender concession might be cancelled, furthermore; the government might halt the project, nationalise it or even suspend the supplier's contract.

Types of Transportation PPP Failure. Source: Soomo and Zhang (2015:2)

Table 1. Types of Transportation PPP Failure

Number	Type of failure	Definition
1	VFM not achieved	The public sector is unable to achieve VFM, and taxpayers suffer losses
2	Concession cancelled	The concession contract is cancelled by the government, and a new tendering process is launched
3	Concession tender cancelled	The concession tender is called off at the initial stages (i.e., before signing agreement) due to poor financial viability of project or some other reason
4	Project nationalization	The government nationalizes the project (i.e., the project comes under public ownership)
5	Project halted	The project halts for a long time due to conflicts, legal proceedings, or technical issues
6	Contract suspension	The government temporarily suspends the concession rights of the concessionaire

2.8. Relationship with Suppliers

Supply chain professionals rely on external suppliers to the public sector to deliver the required goods and services in order to satisfy public sector needs. Erridge and Greer (2002:503) stated that one of the means adopted by the UK to increase interdependence and shared power between the government and its suppliers in achieving the demands of

the global economy is the development of a strategic approach to public procurement by emphasizing coordination and long-term relations with suppliers.

In South Africa different laws and policies have been put in place to govern relations within the supply chain. According to Fombad (2014:69), the demand for transparent and accountable procurement of PPPs is documented in Section 217(1) of the Constitution of the Republic of South Africa 1996, which announces that all organs of state in the South African government and institutions directly related to the government should procure the economic model of goods and services- in accordance to a system that is “fair, equitable, transparent and cost-effective”.

The South African government has developed regulations which standardise relationships with suppliers in all state avenues. A document on general procurement guidelines outlines the five procurement pillars which were designed to ensure successful government procurement. The SA General Procurement Guidelines (1999:4) stated that departments should apply effort and research in confirming that:

- Procurement opportunities are accessible to prospective suppliers and that available opportunities are reported in the Government Tender Bulletin (GTB).
- Procurement departments should manage conditions where market circumstances limit competition.
- Provision of accurate and timely information is provided to the suppliers for empowerment of bids.
- Elimination of bias and favoritism is eradicated.
- Bidding costs do not discourage capable suppliers from bidding.
- Justification of costs incurred to promote competition are corresponding with the benefits received.

2.9. Internal Controls

Ambe and Badenhorst-Weiss (2012:245) suggested that public procurement has been accepted as a profession that plays a crucial role in managing public resources effectively. Ambe and Badenhorst-Weiss (2012:245) further state that numerous countries worldwide have identified procurement as an area exposed to financial negligence and unethical practices and have endeavored to include procurement into the strategic views of the government policies.

The Preferential Procurement Policy Framework Act (PPPFA), 2000 (Act 5 of 2000) associated Regulations were published to propose a framework for a preferential procurement system. The PPPFA and its Regulations incorporate the 80/20 and 90/10 preference point systems (SA. Policy Strategy to Guide Uniformity in Procurement Reform Processes in Government 2003).

According to the Guide for Accounting Officers/ Authorities (2004:30), the PPPFA framework outlines all the requirements and manner in which procurement activities should be executed. The purpose of the act is the improvement of SMMEs and HDIs, endorsement of women and physically handicapped people, jobs creation, stimulation of local enterprises in a certain regions and supporting locally produced products.

The Policy Strategy to Guide Uniformity in Procurement Reform Processes in Government (2003) stated that “Public Finance Management Act, 1999 (Act 1 of 1999 as amended by Act 29 of 1999) (PFMA) was promulgated to regulate financial management in the national and provincial spheres of government”. Hence, the National Treasury has been identified as the prevailing financial expenditure in the corporate government.

• **Research Problem**

The main concern issue regarding the procurement risks in the public sector is to provide the basis for public funds to be vulnerable to mass-management and waste, thereby leading to weak delivery of public service and limited transformation in South Africa. According to the Supply Chain Management review (2015), even though the National Treasury has implemented risk prevention strategies to mitigate procurement related risks in the public sectors, risks still manifest themselves in many forms, the incompetency of staff, weak internal controls and inefficient contract administration and management are some of the internal contributors which flawed procurement practices in the public sectors.

• **Main Research Question**

To what extent is the Gauteng Provincial Treasury’s procurement process exposed to procurement related risks?

• **Sub Research Question**

- What are the causes and attributes of the identified procurement risks to which the Gauteng Provincial Treasury procurement process is exposed?
- How are the procurement related risks mitigated to prevent manifestation of risks in the Gauteng Provincial Treasury?
- How effective are the risk mitigation strategies employed by the Gauteng Provincial Treasury?

- How can the mitigation strategies be improved to prevent future occurrence of procurement risk and poor service delivery in the Gauteng Provincial Treasury procurement process?

- **Primary Research Objective**

To determine the extent to which the Gauteng Provincial Treasury's procurement process is exposed to procurement related risks.

- **Secondary Research Objectives**

- To explore the main causes of the procurement related risks identified during the procurement process in the Gauteng Provincial Treasury.
- To assess the risk mitigation strategies employed by the Gauteng Provincial Treasury in preventing procurement risk manifestation.
- To evaluate the effectiveness of the risk mitigation strategies employed by the Gauteng Provincial Treasury in preventing procurement related risks.
- To evaluate the ability of current mitigation strategies to prevent future occurrence of procurement risk and poor service delivery by the Gauteng Provincial Treasury.

- **Research purpose**

The purpose adopted for this study is descriptive research. Descriptive research serves the purpose of obtaining accurate data of events, persons and situations (Saunders, Lewis & Thornhill 2012:171). Churchill, Brown and Suter (2010:79) added that descriptive research is "mostly concerned with determining the frequency with which something occurs". The study proposed to investigate, describe, and critically evaluate the various procurement-related risks prevalent in the public sector by following a description- explanatory research design.

Leedy and Ormod (2010:182) suggested that descriptive research involves identifying the characteristics of observed phenomenon and exploring the extent to which variables correlates. The relevant types of descriptive research for the purposes of this study is a cross –sectional study, which provides a snapshots of a sample of elements at a single point in time (Churchill et al, 2010:109). According to Saunders et al., (2012:41), descriptive research design paves the way to answer questions in research such as who, what, why and how?

Text – 10 font, no indexing.

- **Research philosophy**

Saunders et al., (2012:128) described a research philosophy as a system of beliefs and assumptions through the methods and strategies adopted when conducting research. This study reflects the philosophy of positivism. Positivism includes collecting data about an observable reality, searching for regularities and relationships in the data to create law-like generalisations (Saunders, Lewis & Thornhill 2012:134).

The nature of the study is a true reality where the law-like, generalizations and causal relationships were explained by researchers who maintained objectivity and independence on the study being researched. A deductive approach was adopted in this study where theory from existing literature was used to identify the various risks at the Gauteng Provincial Treasury, to predict their occurrence and analyse mitigation strategies for controlling the risks.

- **Research Methodology**

A quantitative approach was used to collect primary numerical data to help address the major procurement related risks which the Gauteng Provincial Treasury procurement (GPTP) is exposed to. The data was analyzed using the quantitative and descriptive statistics to answer the secondary research questions.

- **Research strategy**

The research strategy that was selected for this study is a survey. Churchill *et al.*, (2010: 115) suggested that one benefit of a survey is that a specific representative population can be targeted and recruited to participate in a survey. Zikmand, Babbin, Carr and Griffin (2010) argued that in a survey research, a sample is interviewed in some form or the behaviour of the respondents is observed or described in such.

McDaniel and Gates (2001) described a survey as a form of research in which the researcher(s) interact with the respondents to obtain facts, opinions and attitudes. Churchill *et al.*, (2010:116) highlighted that sample surveys allow the results of the sample to be projected to the overall population.

- **Data collection and data analysis**

The unit of analysis for this study was The Gauteng Provincial Treasury, which is tasked with the safe-keeping of all financial matters of the province and promoting good governance by ensuring strategies are funded through the relevant procurement policies. The Gauteng Provincial Treasury was chosen as a unit of analyzing with the aim of managing the provincial government finances of all the 13 departments within the Province. Supporting efficient and sustainable public financial management is to promote a fundamental economic empowerment, good governance, social development and a higher standard of living for all Gauteng communities and its responsibility for the arrangement of all government transversal contracts in the province which usually amount to multi-millions of rands.

The target population was procurement executives and practitioners who work with the six stages of the procurement process including: project initiation, gathering of informations, specification of requirements, development of sourcing strategy, bidding, negotiation and management of supplier relations. This enabled the identification of processes which were the most vulnerable to risks in the procurement process. It was estimated that the Gauteng Provincial Treasury had a population of 140 employees working at the supply chain divisions.

The sample strategy was to identify individuals who had been in procurement positions at the provincial treasury for a period of two years and longer in order to obtain a long-term view of the responses. Probability sampling was adopted as the most suitable sampling frame. Saunders *et al.* (2012:261) stated that probability sampling is suited for survey research and the chance of each case being selected from the population is equal. The Gauteng Provincial Treasury provides for demand, acquisition, logistics, disposal, risk, and performance management. To ensure an equal response rate, stratified random sampling was utilised as the most appropriate technique where the total population was divided into the six stages of the procurement process. Consequently, this allowed for a proportional representation of the target population. The six steps of the procurement process were converted into strata which resembled a stratified population with six groups.

The sample size was incorrectly inflated that 30 respondents from each strata will respond to the questionnaire and that the population will be 180 in total. However, only 31 respondents returned the questionnaires.

Primary data were collected in order to obtain the current view of risks associated with procurement. The primary data were collected through a pen and paper questionnaire in order to maintain anonymity of respondents who wish to be anonymous. Analysis of the data was completed with assistance from Statkon services which are made available for students at the University of Johannesburg (UJ). The data was analysed descriptively using tables of frequencies, reliability analysis and tests of independence.

Churchill *et al.*, (2010: 256) proposed that in-order to ensure reliability of the data collected, there should be consistency of the responses received to questions administered to the same respondents, over different time periods. The SPSS Survival Manual (2011:6) suggested that the reliability of a survey may be assessed by administering to the same population on the different occasions, and computing the correlation between the obtained scores. In order to ensure that the terms used in the questionnaire were understood, and to avoid respondent error or respondent bias the questionnaire was distributed as a pilot study first to five respondents to test for reliability. This approach helped to ensure that it would be feasible to record the data. There was no researcher error nor researcher bias during data collection as the questionnaire was strictly adhered to, no questions were rephrased nor added.

Internal validity is the extent to which the items that make up the scale are all measuring the same underlying attribute (SPSS Survival Manual, 2011:6). To obtain content validity of the questionnaire, only questions related to the research questions were formulated. The questions in the questionnaire answer the research questions. The feedback received from the pilot study assisted to maintain construct validity of the questionnaire. Furthermore, the

study utilised the Cronbach's coefficient alpha statistic which was available on SPSS, to provide an indication of the average correlation among all of the items that make up the scale. According to the SPSS Survival Manual (2011:6), the most reliable scale should be a value that is higher than 0, 6. Due to the random sampling of respondents, external validity applied and the results of the research were generalised.

- **Data collection instrument**

The questionnaire and the flow of the questions was designed with guidance from Statkon and distributed to the Gauteng Provincial Treasury. The questionnaire was semi-structured and measured by using the five point likert response format with the end points, (1) "strongly disagree" to (5) "strongly disagree", and (1) to "no extent" (5) to "a greater extent".

A pen and paper questionnaire was chosen for the reason that it is self-administered, convenient and allowed for an immediate response. Even though, a pen and paper questionnaire was administratively expensive, it was important to consider factors which might have prevented respondents from providing research data if they were uncomfortable and agitated answering long questions during working hours. In order to manage boundaries, the questions were asked concisely and respondents were approached in a friendly manner.

- **Results and Discussion**

Demographic profile: There was a poor response from the sample selected from the Gauteng Provincial Treasury (GPT) - Supply Chain Business Unit. 31 respondents completed the questionnaires split as follows: Assistant Director = 13; Contract Administrator = 1; Deputy Director = 1; Deputy Director Contract Management = 1; Deputy Director Risk & Escalation = 1; Deputy Director: SCM = 1; Director- Contract Management = 1; Director Municipal Compliance, Monitoring & Evaluation = 1; Practitioner = 5; Practitioner-Supplier Registration = 1; Practitioner (VMD) = 1; Senior Buyer = 1 and Senior Contract Officer = 2. Approximately 39 percent of the respondents were between the ages of 31 to 40 years old. 41.9 percent of respondents that work in the procurement business unit at GPT have national diploma qualifications and 19.4 percent of the respondents have bachelor's degrees. 32.3 percent of the respondents have senior certificates

The respondents included 96.8 percent of permanent employees at the GPT. 48.4 percent of the respondents indicated that they work for the contract and supplier relationships business unit of the Gauteng Provincial Treasury (GPT). Approximately 42 percent of the respondents reported that they had been working for the GPT for a period between 6 to 15 years. The demographic factors of the respondents seemed reliable and accurate for data interpretation.

Objective one: The main objective of the study was to determine the extent to which the GPT's procurement process is exposed to procurement related risks. Respondents were given a list of possible risks, so that they could identify potential risks which they perceived were prevalent at the GPT. The risks included: collusion; fraud; unauthorised expenditure; bid rigging; fronting; contracts; kickbacks; incompetency of staff; relationships with suppliers and internal controls. The respondents were also given the option of listing any additional risks which they perceived to be prevalent in the GPT's procurement process. See Appendix A for the questionnaire.

Figure 2 below displays the extent to which the respondents perceived the procurement process to be exposed to the listed risks.

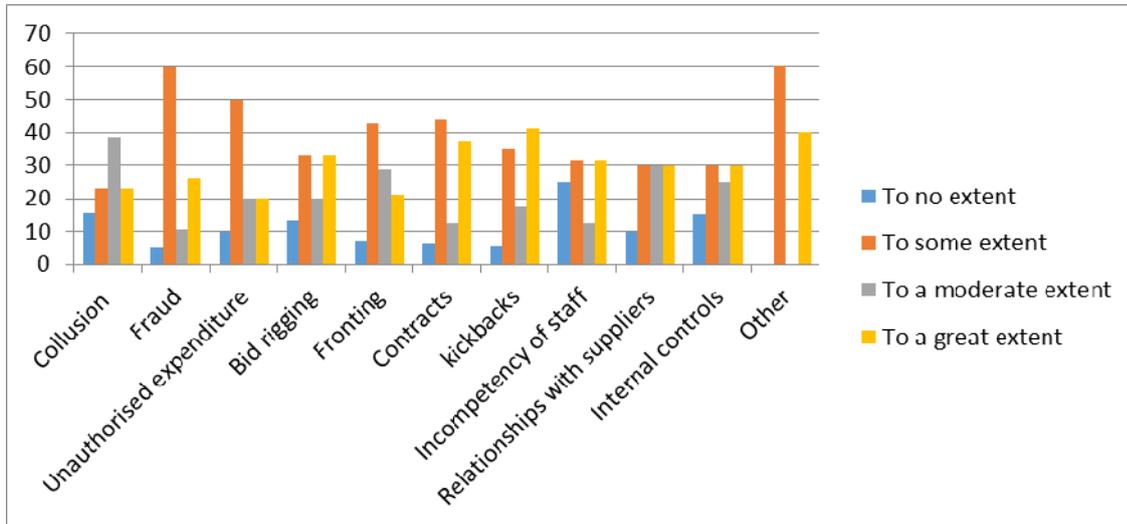


Figure 2. The extent of risks at the Gauteng Provincial Treasury.

It seemed like all the risks which were listed on the questionnaire are a concern at the GPT. Risks with an extent beyond 50% included fronting, contracts, bid rigging, internal controls, kickbacks, relationships with suppliers and collusion. The respondents felt that incompetency of staff was a risk by 43.8 %, unauthorised expenditure by 40% and fraud by 34.1%. The respondents perceived collusion as a major risk at the GPT by 61.1%. Fraud, unauthorised payments and collusion form part of corrupt activities which are part of the public procurement risks. (Neupane et al., 2012:307).

According to the SCMR (2015:20), corruption is South Africa’s major challenge. Ambe and Badenhorst- Weiss (2012:251) argued that such conduct costs South African tax payers hundreds of millions of rand each year. The SCMR (2015:20) maintained that the Constitution, the Competition Act, the Prevention of Corrupt Activities Act, the Prevention of Organised Crime Act and the Whistle-blowing Act were laws have been put in place to combat corruption in South Africa.

Figure 3 displays the risks which were identified as the major risks for the GPT when combining the values for risks with a moderate extent and risks with a great extent.

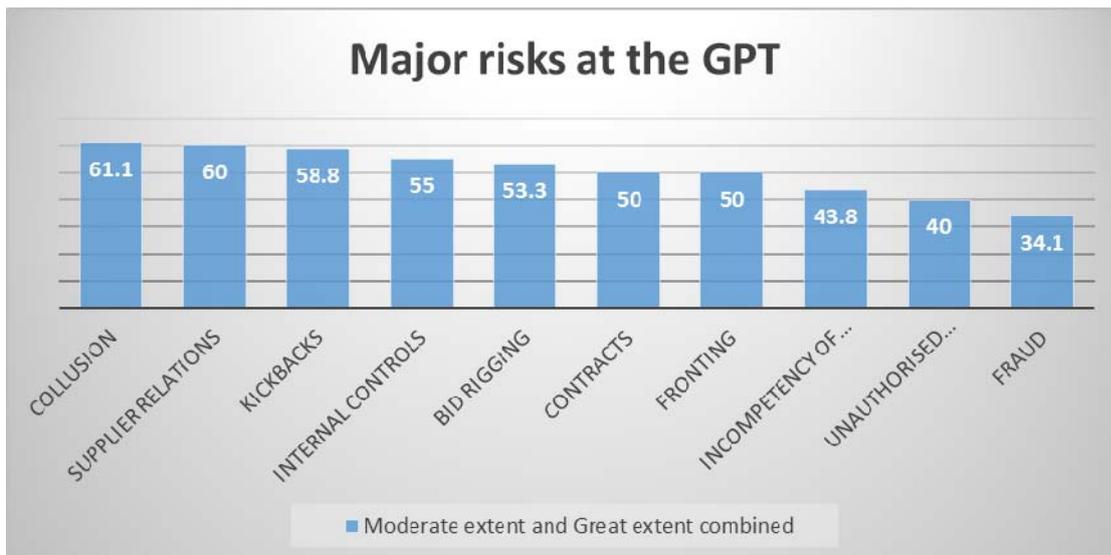


Figure 3: Major risks at the GPT

Furthermore, the study identified the risks which were more prevalent in each stage of the procurement process. Lei *et al.*, (2009:3118) proposed that the procurement process is exposed to risk during the different transactions that occur between the buyer, supplier, and other stakeholders. In this study, internal controls were identified as a major risk at four stages of the procurement process as illustrated below.

Table 1. Procurement Process and Risk Stages

Procurement process	Highest risk at each stage
Initiate project	Unauthorised expenditure, incompetency of staff and internal controls were identified equally by 12.9%.
Collection of data, analysing and market research	Incompetency of staff and internal controls were identified equally by 9.7%.
Specify requirements	Internal controls with 12.9%.
Develop resourcing strategy	Incompetency of staff and internal controls were identified equally by 16.1%.
Bidding Process	Bid rigging by 16.1%.
Negotiate and award contract	Fraud by 16.1%.
Manage contract and supplier relationships	Relationships with suppliers by 25.8%.
Review	Internal controls by 32.3%.

- **Secondary Research Objectives**

- Objective two: To explore the main causes of the procurement related risks identified during the procurement process in the GPT. The respondents' perceptions about the causes of risks revealed that mismanagement of funds was a major cause of risks by 67% followed by inefficient contract administration by 65% and poor management by 42%. Other causes of risks identified by the respondents included ineffective monitoring of compliance to legislation and lack of knowledge.
- Objective three: To assess the risk mitigation strategies employed by the Gauteng Provincial Treasury (GPT) in preventing procurement risk manifestation. Sixteen respondents which accounted to 52% of the total respondents stated that they did not know whether the GPT had adopted risk mitigation strategies to prevent risk manifestation while 48% of the respondents agreed that mitigation strategies have been employed by the Gauteng provincial Treasury.

Ambe and Badenhorst-Weiss (2012:245) identified eleven internal controls which may be used by government departments as mitigation strategies to prevent risk manifestation in legitimate manner. The SCMR (2015:15) indicated that compliance with procurement legislation is important in obtaining government objectives. It seemed like 52% of the respondents who stated that they did not know if the GPT had employed risk mitigation strategies were not utilising internal controls when executing their duties in government. This is referred as non-compliance with policies (Ambe & Badenhorst-Weiss, 2012:250).

According to the SCMR (2015:16), failure to comply with legislation results in procurement risks such as collusion, fronting, bribery and forgery.

Objective four: To evaluate the effectiveness of the risk mitigation strategies employed by the GPT in preventing procurement related risks. Fifty two percent (52%) stated that they did not know whether the employed mitigation strategies were effective in preventing risk manifestation, 35% of the respondents said yes, the mitigation strategies were effective and only 13% of the respondents stated that the strategies were unsuccessful in preventing risks.

Ambe and Badenhorst-Weiss (2012:252) stated that the government did not have adequate measures for monitoring and evaluating the supply chain. The SCMR (2015:4) argued that the constant service delivery protests in SA signal that citizens perceive service delivery as inadequate. This implies that the government supply chain is not delivering the services to the public as it should. Government supply chain performance measurement is required. Bent (2014:54) asserts that supply chain performance management is an approach for measuring, improving and controlling the performance of the supply chain.

Objective five: To evaluate the ability of current mitigation strategies to prevent future occurrence of procurement risk and poor service delivery by the GPT.

Six strategies were identified as factors which can improve current mitigation strategies including the development of new policies, strict funds management, a change in the organisational structure, and appointment of new management, training and a code of ethics. A five point-Likert scale was used to evaluate the extent to which these strategies can improve risk mitigation.

The respondents felt that a code of ethics could improve mitigation strategies to a great extent by 57.7%. Additionally, training was perceived to mitigate risk by 53.5 % while stringent management of funds was anticipated to prevent future occurrence by 29.1% followed by the development of new policies with 28.6 % and the appointment of new management seemed like it would improve risk mitigation by 25%. A change of organisational structure was perceived as the least strategy for risk mitigation with 16%.

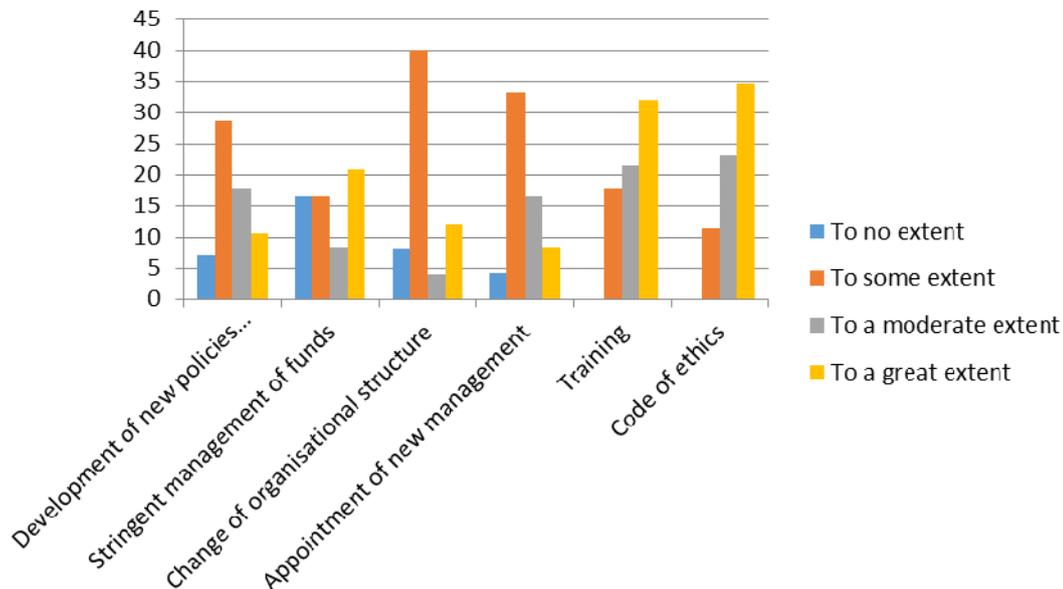


Figure 4: Factors which may improve current mitigation strategies.

- **Conclusions and recommendations**

The study has provided insight that the major risk of concern for the GPT. In answering the research questions, it was established that the GPT's procurement process was exposed to procurement related risks to a great extent.

- The major risk of concern was found to be collusion with a 61.1% risk. The GPT could include anti-collusion clauses in tender documents and state the penalties for bidders and GPT employees that participate in collusion. The Commerce Commission New Zealand (CCNZ) (2010: 2.2) recommended providing training to employees to help with detection and avoidance of bid rigging in order to reduce the occurrence of bid rigging activities. Performing exercises such as gathering information about past tenders and the conditions in the market place with regard to potential suppliers' prices and costs would equip the procurement practitioner to detect any unusual activities from bidders. In addition the CCNZ (2010: 2.2) suggested to keep the identities of bidders' undisclosed to make it difficult for bidders to contact each other.
- The respondents' perceptions about the causes of risks revealed that mismanagement of funds was a major cause of risks by 67% followed by inefficient contract administration by 65% and poor management by 42%. There may be various sources of mismanaged funds at the GPT. The Supply Chain Management Review Update (2016, 2-3) listed travel and accommodation; fixed line, mobile and data communication as sources of mismanaged funds. From an internal perspective, the GPT could assess its specific sources of wasteful activities. Improved demand planning for goods and services to be procured for Gauteng would also help eliminate unnecessary purchases and provide visibility of procurement plans for the provincial treasury. The implementation of data warehousing technology for completed transactions including past transactions would assist with gathering the business intelligence to improve contract management.
- Non-compliance with policies was found to be a concern with 52% of the respondents indicating that they did not know whether the Gauteng provincial Treasury had adopted risk mitigation strategies to prevent risk manifestation. This implies that the internal controls which were established by the government as risk mitigation strategies were not known or used in fulfilling government duties. Providing training to employees to highlight the provisions of the internal controls that complement and support specific roles would empower the employees to understand when and why the internal controls are applicable in their specific work.
- It was alarming to note that only 35% of the respondents indicated that current mitigation strategies were effective and 65% indicated that they were uncertain. The GPT may need to review its internal mitigation strategies annually in order to effectively address the risks. For instance, if the GPT has a toll-free line for employees to use for whistleblowing but the employees are not aware of the toll-free line or do not trust their anonymity to be maintained, the GPT needs to review its strategy.
- It was found that current mitigation strategies were unable to prevent future mitigation strategies. The introduction of ethics training could provide positive results in terms of mitigating the procurement risks as employees would be sensitized to what constitutes unethical behaviour in a procurement environment. Hunsaker (2009) stated that procurement officers must take part in continuous professional development regarding proper procurement practices including ethics and values.

• **Contribution, Limitations and Future Research**

Previous literature has helped to identify the risks associated with the public procurement process. This study has highlighted that the data gathered and major risks in the Gauteng Provincial Treasury does support the literature. Although the literature review highlighted that corruption was perceived as one of the biggest risks in procurement, all the questions relating to corruption had to be omitted from the questionnaire to prevent political distortion and fear that the respondents would not respond to the questions objectively. The study did not include the suppliers that tender with the Gauteng Provincial Treasury (GPT) thus the study does not provide balanced insight into the procurement risks. The sample of the procurement practitioners is too small to be considered indicative of procurement practices in other provincial treasuries. A comparison of the procurement risks between municipal and

provincial procurement level would contribute more insight to the procurement field as previous research has shown that there might be more unethical behaviour at municipal government compared to provincial government.

References

- AFP. 2014. Construction firms 'colluded' over SA World Cup stadiums. DispatchLive. [Online] Available from: <http://www.dispatchlive.co.za/gen/construction-firms-colluded-over-sa-world-cup-stadiums/> (Accessed 2 March 2016).
- Albert, A.2011. Study Reveals Common Causes of Corruption in South Africa[Online] Available from: www.cips.org/en/SupplyManagement/News/2011/April/ (Accessed 20 February 2016).
- Ambe, I. & Badenhorst-Weiss, J. 2012. Procurement challenges in the South African Public Sector. *Journal of Transport and Supply Chain Management* [Online] Available from: <http://jtscm.co.za/index.php/jtscm/article/view/63>(Accessed 20 February 2016).\
- Auditor General South Africa. 2015. General report on the provincial audit outcomes of GAUTENG. [Online] Available from:<http://www.agsa.co.za/Portals/0/PFMA/201415/web%20GAUTENG%20pfma%202015%20.pdf> (Accessed 23 February 2016).
- Baciu, I.2013. Fraud Against the Financial Interests of the European Union, Particularly in the Field of Public Procurement. [Online] Available from: <http://web.b.ebscohost.com.ujlink.uj.ac.za/ehost/pdfviewer/pdfviewer?sid=0f3e1383-624c-4be2-9014-bf90c1c2062b%40sessionmgr198&vid=13&hid=101> (Accessed 24 February 2016).
- Bent, R. 2014. The significance of supply chain management with regard to the attainment of value and strategic objectives for municipalities within South Africa: A case study. [Online] Available from: <http://scholar.sun.ac.za/handle/10019.1/86612?locale-attribute=es> (Accessed 26 August 2016).
- Bramer, S. & Walker, H. 2011. Sustainable procurement in the public sector: an international comparative study. *International Journal of Production and Management*, 31(4):452-476. [Online] Available from: <http://www.emeraldinsight.com/doi/full/10.1108/01443571111119551>(Accessed 22 February 2016).
- Business Anti-Corruption. n.d. [Online] South Africa. Available from: <http://www.business-anti-corruption.com/country-profiles/south-africa> (Accessed 29 February 2016).
- Chartered Institute of Procurement & Supply Chain. 2013. Risky Business: An Introduction to Procurement Risk Management: 2. [Online]Available from: https://www.cips.org/Documents/Knowledge/Procurement-Topics-and-Skills/3-Risk-Mitigation/Risk-Analysis-and-Management/Risky_Business_an_introduction_to_procurement_risk_management-CI_S_Australasia.pdf(Accessed 20 February 2016).
- Churchill, G.A., Brown, T. J & Suter, T.A. 2010. *Basic Marketing Research*. 7th ed. South- Western: Cengage Learning.
- Coetzee. A. 2015. Blind Spots. *Supply Chain Today*: 22. [Online] Available from: https://issuu.com/promech/docs/supply_chain_oct15_web(Accessed 16 February 2016)
- Commerce Commission New Zealand. 2010. How to deter bid rigging: 2.2. [Online] Available from: <http://www.comcom.govt.nz/business-competition/fact-sheets-3/how-to-deter-bid-rigging-2/> (Accessed 11 November 2016)
- Erridge, A., Greer, J. 2002. Partnerships and public procurement: building social capital through supply relations. *Public Administration*, 80(3): 503-522. [Online] Available from: <http://onlinelibrary.wiley.com/doi/10.1111/1467-9299.00315/abstract> (Accessed 24 February 2016).
- Fombad, M.C. 2014. Enhancing accountability in public-private partnerships in South Africa. *Southern African Business Review*, 18 (3): 66-92. [Online] Available from: http://www.unisa.ac.za/contents/faculties/service_dept/docs/Sabview_18_3_Chap%204.pdf (Accessed 20 February 2016).
- Haberbush, K.L. 2000. Limiting the Government's Exposure to Bid Rigging Schemes: A Critical look at the Sealed Bid Rigging Regime. *Public Contract Law Journal*, 30(1), pp. 97-122.Huntchison, D & Pretorius, C. 2014. *The Law of Contract in South Africa*. Cape Town: Oxford University Press.
- Hunsaker, K. 2009. Ethics in public procurement: buying public trust. *Journal of Public Procurement* 9(4).Institute for Security Studies. n.d. Public protest and violence map. [Online]. Available from: <https://www.issafrika.org/crimehub/public-violence>. (Accessed 1 April 2016)
- Kanyane,H., Houston, F & Sausi, K.2013. State of South African Public Service in the Context of Macro Socio-Economic Environment. *Journal of Public Administration and Governance*, 3(1): 126-139. [Online] Available from:<http://www.macrothink.org/journal/index.php/jpag/article/view/3267> (Accessed 28 February 2016).

- Kapdi, N & Sulaiman, S. 2015. Fronting Practices[Online]. Available from:<http://www.jdsupra.com/legalnews/fronting-practices-76327/>(Accessed 5 March 2016)..
- Kogan, K. & Tapiero, C. S. 2007. "Supply Chain Games:Operations Management and Risk Valuation." International Series in Operations Research & Management Science, 113.
- Lancaster. L. (2016, February 12). Desperate and Divided, SA is gatvol. Mail and Guardian. [Online] Available from:<http://mg.co.za/article/2016-02-11-will-south-africans-take-their-frustration-to-the-polls>(Accessed 16 February 2016).
- Leedy, P & Ormrod. J. 2010. Practical Research. 9th ed. New Jersey: Pearson
- Lei. X, Donghong. Z & Tie. W. 2009. Determination of procurement risk coefficient based on principal components analysis. International Conference on Transport Engineering. [Online] Available from: [http://ascelibrary.org/doi/abs/10.1061/41039\(345\)513](http://ascelibrary.org/doi/abs/10.1061/41039(345)513)(Accessed 24 February 2016).
- McDaniel, C. & G. R., 2001. Marketing research essentials. Cincinnati, OH: South-Western College.
- Mofokeng.M. (2012). Improving the Effectiveness of Public Entities Procurement Practices (Master's Dissertation). Johannesburg: University of Johannesburg. [Online] Available from: <http://ujdigispace.uj.ac.za/bitstream/handle/10210/8491/Mofokeng%2c%20M%202013%20Masters.pdf?sequence=1&isAllowed=y>(Accessed 16 February 2016).
- Neupane, A., Soar, J., Vaidya, H & Jianming Yong. 2012. ROLE OF PUBLIC E-PROCUREMENT TECHNOLOGY TO REDUCE CORRUPTION IN GOVERNMENT PROCUREMENT. International Public Procurement Conference. [Online] Available from: http://eprints.usq.edu.au/21914/1/Neupane_Soar_Vaidya_Yong_PV.pdf (Accessed 23 February 2016).
- News24. (2016, February 11). Full speech: State of The Nation Address 2016. [Online] Available from:<http://www.news24.com/SouthAfrica/News/full-speech-state-of-the-nation-address-2016-20160211>(Accessed 17 February 2016).
- National Treasury, South African Revenue Service. 2016 Budget People's Guide [Online] Available from: <http://www.treasury.gov.za/documents/national%20budget/2016/guides/2016%20People's%20Guide%20English.pdf> (Accessed 11 May 2016)
- Ntayi. J. M, Ngoboka. P & Kakooza C.S. 2012. Moral Schemas and Corruption in Ugandan Public Procurement. Journal of Business Ethics: 112- 417. [Online] Available from: <http://link.springer.com/article/10.1007%2Fs10551-012-1269-7/fulltext.html> (Accessed 11 February 2016).
- Quintal. G. (2016, January 27). I'm not corrupt, says Truman Prince. news24.[Online]. Available from: <http://www.news24.com/SouthAfrica/News/im-not-corrupt-says-truman-prince-20160127>(Accessed 30 March 2016).
- Saunders. M, Lewis. P & Thornhill.A. 2012. Research Methods for Business Students. 6th ed. Harlow, UK: Pearson
- Skenjana. N. 2014. Exploring the Pattern of Expenditure in Government Departments. Afesis-corporation. [Online]. Available from: <http://afesis.org.za/local-governance/local-governance-articles/186-exploring-the-pattern-of-expenditure-in-government-departments.html> (Accessed 5 March 2016).
- Soomo, M., Zhang, X. 2015. Roles of private-sector partners in transportation: public-private partnership failures. Journal of Management in Engineering. [Online] Available from: [http://ascelibrary.org/doi/abs/10.1061/\(ASCE\)ME.1943-5479.0000263](http://ascelibrary.org/doi/abs/10.1061/(ASCE)ME.1943-5479.0000263) (Accessed 24 February 2016).
- South Africa. National Treasury. 2003. Policy strategy to guide uniformity in procurement reform processes in government. [Online] Available from: <http://www.treasury.gov.za/legislation/pfma/supplychain/Policy%20to%20Guide%20Uniformity%20in%20Procurement%20Reform%20Processes%20in%20Government.pdf>(Accessed 24 February 2016).
- South Africa. National Treasury. 2004. Supply Chain: A guide for accounting officers/ authorities. [Online] Available from:<http://www.treasury.gov.za/divisions/ocpo/sc/Guidelines/SCM%20Jan900-Guidelines.pdf>(Accessed 24 February 2016).
- South Africa. National Treasury. General procurement guidelines. [Online] Available from: <http://www.treasury.gov.za/legislation/pfma/supplychain/General%20Procurement%20Guidelines.pdf> (Accessed 24 February 2016).
- Pallant. J. 2011. SPSS survival manual. A step by step guide to data analysis using SPSS. 4th edition. Midland Typesetters: Australia.
- Supply Chain Management Review. 2015. [Online] Available from: <http://www.treasury.gov.za/publications/other/SCMR%20REPORT%202015.pdf>(Accessed 28 February 2016).
- Supply Chain Management Review Update. 2016. [Online] Available from: <http://www.treasury.gov.za/publications/other/SCM%20Review%20Update%202016.pdf> (Accessed 11 November 2016)

- The Global Green Growth Forum (3GF). 2012. Accelerating Green Growth Through Public-Private Partnerships.
- The Institute of Internal Auditors South Africa. 2015. Corporate Governance Index 2015 [Online] Available from: http://c.ymcdn.com/sites/www.iiasa.org.za/resource/collection/1FD175F0-82CB-40AF-9127-7A91E5C1058C/2015_Corp_Gov_Index.pdf (Accessed 11 May 2016)
- The Organisation of Economic Co-operation and Development. 2012. Recommendation of the Council on Fighting Bid Rigging in Public Procurement. Organisation for Economic Cooperation and Development, Belgium.
- The Organisation of Economic Co-operation and Development. Detecting Bid Rigging in Public Procurement. [Online] Available from: <http://www.oecd.org/competition/cartels/42594486.pdf> (Accessed 17 February 2016)
- Transparency International. 2016. Corruption Perceptions Index 2015. [Online] Available from <https://www.transparency.org/cpi2015/> (Accessed 11 May 2016)
- Tsipouri, J. Edler, E. Uyerra, H. Bodewes, M. Rolfstam, J. Sylvest, T. Kalvet, S.-E. Hargeskog, D. Waterman, D. Banciu, I. Vass, S. Creese, P. Thevissen. 2010. Procurement Risk Management in the Procurement of Innovation. Concepts and Empirical Evidence in the European Union. [Online] Available from: http://ec.europa.eu/invest-in-research/pdf/download_en/risk_management.pdf (Accessed 28 February 2016).
- Ware, GT, Moss, S, Campos, J.E & Noone, GP. (2011), Corruption in Procurement, in A Graycar & R Smith (eds), Handbook of Global Research and Practice in Corruption. [Online] Available from: https://books.google.co.za/books?hl=en&lr=&id=g3GfGTxJNaAC&oi=fnd&pg=PA65&dq=Corruption+in+Procurement+ware+et+al&ots=eDK1nB3G91&sig=ANewnWL01Ens4o1L66W_hBD-Gac#v=onepage&q&f=false (Accessed 30 March 2016).
- Zikmund, W.G, Babin B. J, Carr, J. C & Griffin, M. 2010. Business research methods. Ohio: South-Western Cengage Learning

Biographies

Cynthia Zigubu, graduated Honours Degree student from University of Johannesburg, Department of Transport and Supply Chain Management

Nelisiwe Dlamini, graduated Honours Degree student from University of Johannesburg, Department of Transport and Supply Chain Management

Sebonkile Thaba is currently a Lecturer in the Department of Transport and Supply Chain Management, University of Johannesburg, South Africa. She earned her M-Tech in Operations Management from University of Johannesburg