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Supply chain management challenges in the South African public sector

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This article articulates the challenges that restrain supply chain management implementation in the South African public sector. Supply chain management (SCM) promotes South Africa's New Public Management model by means of improved financial management and is a strategic tool for management and enhancement of its procurement practices. Since its inception (2003), training and workshops have been ongoing across various spheres of government. However, despite the effort in capacitating practitioners with appropriate skills and knowledge, SCM execution still remains a challenge. The article utilised a cross-case analysis of case studies conducted for the certificate in the Advanced Programme in Sourcing and Supply Chain Management at the University of South Africa (UNISA). Purposive sampling technique was used to select the cases. The findings of the article reveals that SCM has been fully employed across all spheres of government and customised policies developed as required by the SCM policy. Notwithstanding the employment of the concept, there are challenges that restrain full execution to achieve its potential. These challenges stem from, among other things, non-compliance with SCM policies and regulations; fraud and corruption; lack of proper knowledge and skills etc. The article concludes by suggesting a framework that could improve the public sector supply chain and ensure efficient and effective SCM implementation.

Key words: Supply chain management, public sector, challenges.

INTRODUCTION

Supply chain management (SCM) now occupies a centre stage in the context of the ongoing financial management reform process in the South African public sector (Mkhize, 2004; National Treasury [NT], 2005a; Ambe and Badenhorst-Weiss, 2011b). SCM builds on, and in some ways completes the cycle of financial management reforms initiated in the mid-nineties. These reforms included the following: the introduction of the medium-term expenditure framework (MTEF); programme-based budgeting; the public finance management act (PFMA); the municipal finance management act (MFMA); performance based budgeting (PBB); and various financial management system and accounting reforms. Ismay (2008) asserted that SCM was introduced in the South African public sector in 2003, in order to move from

a rule-based procurement system to an integrated SCM system. The aim was to promote the new public management model by means of improved financial management and to provide value-added goods and services to government customers. Government action is primarily driven by legislation (NT, 2005a).

According to the SCM policy, accounting officers of government departments, management teams and other levels of staff need to have a sense of and understanding regarding values or principles entrenched in the legislative framework that affect SCM (NT, 2005a). SCM aims to add value at each stage of the process – from demand for goods or services to their acquisition, managing the logistics process and finally, after use, in their disposal. In doing so, it addresses deficiencies related to procurement, contract management, inventory and asset control and obsolescence planning (Mathee, 2006). Uniformity in bid and contract documentation and options as well as bid and procedure standards, among

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other things, promotes standardisation of supply chain management practices (NT, 2003; Migiro and Ambe, 2008).

As part of the South African national treasury's strategic planning, SCM workshops and training were initiated in 2004 across various spheres of government. These workshops and training are aimed at providing guidelines for the implementation of SCM (NT, 2005b). Furthermore, up-to-date guidelines and circulars are issued to address SCM implementation issues. The key objective is to promote, support and ensure uniformity in procurement processes and better services to the community. However, despite the effort in capacitating practitioners with appropriate skills and knowledge, SCM execution still remains a challenge (Ambe, 2009). SCM implementation in many government entities is far from satisfactory (Migiro and Ambe, 2008; Matthee, 2006; Van Zyl, 2006; Ambe and Badenhorst-Weiss, 2011a).

The Evaluation by the Public Service Commission (2009), also reveal major shortcomings in the application of the prescribed SCM, procurement policies, procedures and controls. Government entities are under increasing pressure to tackle issues around SCM (Migiro and Ambe, 2008). This pressure does not only come from the service providers and the general public, but the media is also becoming more interested in stories about procurement and SCM (Business Day Report, 2011). While many departments and municipalities are taking these issues seriously at various stages of their processes, some are struggling to take significant strides in terms of making their procurement and supply-chain processes watertight. This may be as a result of a need for appropriate understanding regarding the concept of SCM and its inextricable link to long-term quality service delivery, human capital development and associated socioeconomic growth (Boateng, 2008).

Therefore, against this background, the purpose of this article is to articulate the challenges that restrain SCM implementation in the South African public sector. The article is explorative in nature and identifies problem areas that can be used to develop instruments to test problems on a wider basis for future research. The article concludes by suggesting a framework that could enhance SCM implementation. The remaining section of the article presents a review of SCM; SCM in the South African public sector; research methods; results and interpretation; discussion of the result and conclusion.

REVIEW OF SUPPLY CHAIN MANAGEMENT (SCM)

SCM is a concept in the business arena that has gained lots of interest lately (Miao et al., 2010; Ghaderi et al., 2010). Miao et al. (2010) asserted that it is a set of practices aimed at managing and coordinating the entire chain from raw material suppliers to end customers. According to Leenders and Fearon (2004), "SCM is the

systems approach to managing the entire flow of information, materials and services from the raw materials suppliers through factories and warehouses to the end customer". Christopher (2005) defined SCM as "the management of upstream and downstream relationships with suppliers and customers to deliver superior customer value at less cost to the supply chain as a whole". Gansler et al. (2004) noted that SCM is the management and control of all materials, funds and related information in the logistics process from the acquisition of raw materials to the delivery of finished products to the end user. The previous definitions represent the various views of many literature sources (Miao et al., 2010). Although the definitions of SCM differ to some extent, they can be classified in three categories: a management philosophy, implementation of a management philosophy, and as a set of management processes (Klemencic, 2006; Lambert, 2006).

Handfield et al. (2009) asserted that a supply chain is a set of three or more organisation linked directly by one or more of the upstream or downstream flow of products, services, finances and information from a source to a customer (Ghaderi et al., 2010). As noted by Fawcett et al. (2007), effective management of these flows requires creating synergistic relationships between the supply and distribution partners with the objective of maximising customer value and providing a profit for each supply chain member. A supply chain is viewed as the formation of a value chain network consisting of individual functional entities committed to the controlled sharing of business data and processes (Bac and Erkan, 2011). Supply chain links suppliers and customers from the extraction of raw materials until the product reaches the ultimate end user and may include suppliers, manufacturers, distributors, retailers and customers (Wisner et al., 2008). Within each of these organisations (or stages), the functions include but are not limited to new product development, marketing, operations, distribution, finance, purchasing and customer service (Klemencic, 2006; Lambert, 2006).

SCM can be employed in different industries and sectors. In the public sector, SCM is concerned with the 'co-ordination of all parties involved in delivering the combination of inputs, outputs or outcomes that will meet a specified public sector requirement' (Ambe and Badenhorst-Weiss, 2011a). These parties include external suppliers, partner organisations, and internal corporate service units both inside and outside (outsourced services) the organisation.

The supply chain consists of an inbound part and an outbound part. Inbound supply chain is the operational requirement for internal customers and outbound supply chain involves placing wider organisational objectives to provide services for delivery to citizens, or a combination of both. Supply chains in the public sector address different focus areas. The focus of SCM can differ from government, sector-to-sector, and SCM can differ from

industry, sector-to-sector. An example of a government sector-to-sector focus area could be in the health sector, where the focus may be more on logistics and the effective movement of goods and services in and out of hospitals whereas SCM in the education sector may focus on streamlining the chain through which teaching materials are delivered to students. The shape of the supply chain and the SCM processes employed will vary considerably depending on a range of different considerations (OGC, 2005).

Public sector SCM is a concept that offers a reference framework for the composition of public sector supply chains and multilevel networks (Migiro and Ambe, 2008). Actors in public sector supply chain comprise (1) private firms which receive orders from public sector agents, (2) accounting officers and (3) policy makers (Essig and Dorobek, 2006). The SCM in the public sector not only concentrates on the question 'which institutions cooperate in goods and services', but also how these enterprises are involved with enterprises operating at other levels. Thus, analyses of intra-network-relationships as well as analyses of inter-network-relationship are essentially necessary elements of the concept.

SUPPLY CHAIN MANAGEMENT IN THE SOUTH AFRICAN PUBLIC SECTOR

Here, the background to procurement reform in the South African public sector is presented; the SCM policy as well as legislative requirements of SCM.

Background of procurement reform processes in South Africa

For about two decades, the South African public sector supply chain has undergone transformation through the introduction of procurement reforms (Ambe, 2009). The procurement reforms began in 1995 and were directed at two broad focus areas, namely, the promotion of principles of good governance and the introduction of a preference system to address socio-economic objectives (NT, 2005a). The procurement reform processes were embedded in section 76(4) (C) of the public finance management act (PFMA) and the preferential procurement policy framework act (Act 5 of 2000) (PPPFA) (SAMDI, 2005).

To introduce and implement the reforms, the SCM unit in the national treasury in 2001 completed a joint country procurement assessment review (CPAR) with the World Bank to assess procurement practices throughout the public sector. The CPAR identified certain deficiencies in practices relating to governance, interpretation and implementation of PPPFA and its associated regulations (Ambe, 2009).

The deficiencies led the provincial treasuries, in conjunction with the national treasury, to embark on a vigorous reform initiative to introduce best procurement

practices that are efficient and effective (Van Gruenen and Van Niekert, 2010). Based on this, SCM was introduced in the South African public sector (Mkhize, 2004; NT, 2005a).

Supply chain management policy

In 2003, the South African Cabinet adopted a SCM policy to replace outdated procurement and provisioning practices. The aim was to implement a SCM function across all spheres of government, which would be an integral part of financial management and would conform to international best practices (NT, 2005a). The SCM policy framework aimed to do the following: promote uniformity and consistency in the application of SCM processes throughout government; facilitate the standardisation and uniform interpretation of government's preferential procurement legislation and policies; and complete the cycle of financial management reforms introduced by the PFMA by devolving full responsibility and accountability for SCM related functions, in addition to financial management functions, to accounting officers and authorities (NT, 2005b).

SCM is built upon ensuring value for money, open and effective competition, ethics and fair dealing, accountability and reporting, and equity (Van Gruenen and Van Niekert, 2010). Ensuring these values will achieve the ultimate goal of uniformity in procurement processes, good governance and economic development (NT, 2005a). The framework for the SCM system constitutes demand management, acquisition management, logistics management, disposal management, risk and performance management. The framework is guided by the preference point system to achieve redistribution of wealth (ensuring equal opportunities). Figure 1 shows a framework for the South African public sector supply chain.

As indicated previously, the elements of the SA government SCM and their activities are explained as follows (NT, 2005a; Van Zyl, 2006; Migiro and Ambe, 2008; Ambe, 2009):

Demand management

Need assessment (demand) precedes the implementation of SCM. The objective is to ensure that goods and services delivered comply with specifications of the identified needs. It also ensures that resources required to fulfil needs identified in the IDP of a municipality is delivered at the correct time, price and place and that the quantity and quality satisfies the needs.

Acquisition management

This is the management of procurement. Each govern-

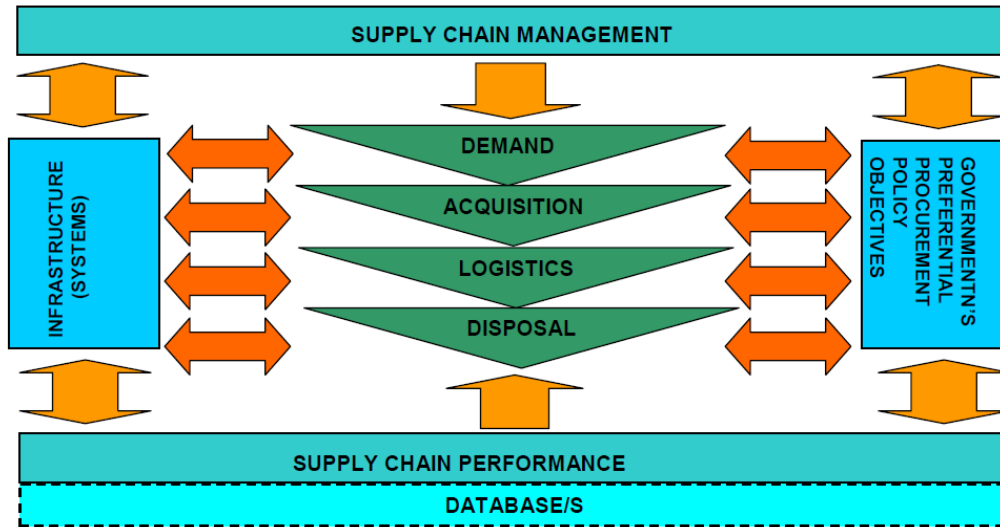


Figure 1. Framework of supply chain management (NT, 2005a).

ment entity decides on the manner in which the market should be approached, establishes the total cost of ownership of assets, ensures that bid documentations are complete including evaluation criteria, evaluates bids in accordance with published criteria and ensures that proper contract documents are signed.

Logistics management

Logistics is the process of strategically managing acquisition, movement and storage of materials (inventory) through the organisation and its marketing channel in such a way that profitability is maximised through cost effective fulfilment of orders. It forms part of the supply chain process that implements, controls and ensures an effective flow of stored goods, services.

Disposal management

Disposal management is the letting away of assets that are no longer needed, including unserviceable, redundant or obsolete assets. It gives due consideration to obsolescence planning, creation of a database of redundant material, inspecting material for potential reuse, determining a disposal strategy and executing the physical disposal process.

Risk management

Risk refers to unintended or unexpected outcome of a decision or action. Risk management is the provision of an effective system for identification, consideration and avoidance of potential risks. It includes the identification

of risks on a case-by-case, allocation of risks to the party that is best suited to manage it, acceptance of the cost of the risk, the management of risk in a pro-active manner and provision of adequate cover for residual risk as well as the assignment of relative risks to the contracting parties through clear and unambiguous contract documents (SAMDI, 2005).

Supply chain performance

Supply chain performance is a monitoring process undertaking a retrospective analysis to determine whether the proper processes have been followed and whether the desired objectives were achieved. The South African Government's national treasury has developed a reporting template that is used by provincial treasuries to monitor SCM implementation process at the relevant municipalities. To continuously improve the supply chain performance, municipalities are expected to adopt the template to enhance their supply chain performance.

With reference to the SCM policy, each government entity was to adapt the policy to suit its needs. The structures for management of supply chain activities within the country are unique. The document "SCM guide for Municipalities/Municipal Entities" prescribed roles and duties for those who put SCM into action. The SCM policy requires the creation of bid committees. The various committees to be created include: the bid specification committee, bid evaluation committee and the adjudication committee (NT, 2005a). Table 1 shows the bid committees, their constituents and roles.

According to the SCM guide, role players in SCM are the executors in the implementation of SCM regulations and policies. These include the national treasury,

Table 1. Bid committees, constituents and roles.

Bid committee	Constituents of the committee and functions
Bid specification committee	May comprise one or more official, preferably manager responsible for function including external specialist advisors (cross-functional principle); accounting officer or delegated official to appoint chairperson. Roles: Compile technical specifications; terms of reference; requirements; conditions of contract; evaluation criteria; determine goals; and indicate method of procurement.
Bid evaluation committee	Comprises of a SCM practitioner; technical expert from department requiring the good/service. Roles: Accounting officer must appoint the chairperson and members; evaluate bids' accordance with the criteria (PPPFA); Evaluate bidders' tax matters; Submit a report for recommendation regarding the award; check list for restricted bidders; consult the register for tender defaulters.
Bid adjudication committee	Comprises at least 4 senior managers, which include: the CFO; at least one senior SCM practitioner to ensure compliance; and a technical expert who is an official to ensure compliance with the specification. Roles: Accounting officer must appoint the chairperson and members; A member of the bid evaluation committee may present its case to the bid adjudication committee; neither a member of nor a person assisting the bid evaluation committee, nor any advisor may be a member of this committee.

National Treasury (2005a).

Table 2. Key role players of the SA government SCM and their functions.

Key role players	Functions
National Treasury	Introduces and oversees the implementation of SCM; Develops treasury regulations; Issues guidelines, general conditions of contract and bid documents to accounting officer; Setting minimum reporting standards; Monitors policy outcomes.
Provincial Treasuries	Assist departments with the implementation of SCM; Support departments by providing advice and build capacity; Coordinate training in the province; Monitor policy outcomes.
Accounting officer/chief executive officers	Establish a SCM unit under the direct supervision of the Chief Financial Officer; Compile and implement a SCM policy; Adhere to guidelines supporting documents for the implementation issued by the national treasury; Develop internal procedures and processes; Ensure that officials are trained and adequately skilled; Report to national treasury; Comply with ethical standards.
Chief financial officer/ SCM units	Require recruiting, selecting, developing and managing skills to build and maintain an effective SCM Unit; Training skills and resources to develop managers and supervisors to operate and manage varieties of SCM activities, facilities and networks.

National Treasury (2005a).

provincial treasury, municipalities and municipal entities, which include the municipal council, the accounting officer and the municipal SCM units (NT, 2005a). Table 2 shows the key role players of SCM and their functions.

Legislative requirement of supply chain management (SCM)

SCM policies are complex and impact significantly on the smooth functioning of the government and its competitive position. Numerous variables and large body of information influence SCM policymaking. Without a legislative framework, political representatives will not be

able to make informed and intelligent decisions. The legislative requirement of SCM warrants each government entity to create a SCM unit and to implement SCM policy (NT, 2005a). Some of the legislations that guide SCM implementation include:

Constitutional provisions

Section 217 (1) of the constitution of the Republic of South Africa, 1996 (Act No 108 of 1996) provides the basis for procurement and determines that "When an organ of state in the national, provincial or local sphere of government, or any other institution identified in national

legislation, contracts for goods or services, it must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective (Van Gruenen and Van Niekert, 2010).

Public finance management act (PFMA) (Act No. 1 of 1999)

South Africa, public finance management act (PFMA), 1999 (Act No. 1 of 1999) (as amended by Act No. 29 of 1999) is one of the most important pieces of legislation passed by the first democratic government in South Africa. The act promotes the objective of good financial management in order to maximize service delivery through the effective and efficient use of the limited resources. The key objectives of the Act may be summarized as being to: modernise the system of financial management in the public sector; enable public sector managers to manage, but at the same time be held more accountable; ensure timely provision of quality information; and eliminate waste and corruption in the use of public assets.

Municipal finance management act (MFMA); (Act No 56 of 2003)

Local government, MFMA 2003 (NT, 2005b) aims to modernise budget and financial management practices in order to maximize the capacity of municipalities to deliver the services to all its residents, customers, users and investors. It places a sound financial framework, clarifying and separating the roles and responsibilities of the mayor, executive and non-executive councilors and officials. It empowers mayors to political leadership of policy and outcomes, municipal managers and other senior managers to ensure that the municipality has and implements SCM policies and regulations in accordance with chapter 11 of the act (NT, 2003). The principles and reforms encourage a strong, better and more accountable local government sphere, one that is better placed to meet the emerging demands and new challenges of the different communities that it serves in a more consistent and sustainable manner (NT, 2005b:1).

Preferential procurement policy framework act (PPPFA) (No. 5 of 2000)

Parliament approved the PPPFA in February 2000 to adhere to the requirement of the constitution. The Act is a step forward in the process of procurement reforms. It contains a framework for the application of preferences in the public sector bidding system. The framework is applicable to the public sector procurement system of all organs of the state in the national, provincial and local spheres of the government. Any organ of the state that

implements the policy of preferences may only implement preferences within the framework of the Act. The preferences points system must be applied to all procurement. PPPFA and its associated regulations promote historical disadvantage individuals (HDI's) and a broad-ranging set of development objectives by means of allocating preferences points to these various policy objectives (NT, 2003).

Broad-based black economic empowerment act (BBBEE) (Act 53 of 2003)

The act was signed on the 9 of January 2004, among other things. It provided a broad-based charter to promote BEE and issue codes of practice that could include qualification criteria for preferential procurement and other economic activities (NT, 2003).

Anti-corruption measures and practices

The constitution provides for rights such as just administration and access to information, and requires high standards of ethics within public administration. Recent legislation dealing with transparency and anti-corruption has strengthened government's ability to combat corruption, and also protects employees making disclosures against their employers in both the public and the private sectors (NT, 2005a).

RESEARCH METHOD

This article articulates the challenges that restrain SCM implementation in the South African public sector. The article made use of a cross-case analytical approach. According to Eisenhardt (1989) and Yin (2003), cross-case analysis seeks to provide a chain of evidence to determine the pattern of relationships or behaviour. In this article, the purpose of using a cross-case analysis was to seek evidence on the state of SCM implementation in the South African public sector. The cases were purely secondary data sources drawn from a compulsory module for the programme: Advanced Programme in Sourcing and Supply Chain Management, University of South Africa (Unisa). According to the requirement of the programme, students were required to conduct a case study on sourcing and SCM in a public or private enterprise.

A purposive sampling technique was used to select the cases reviewed. The basic criterion for inclusion of a case study was a case addressing SCM issues in the South African public sector (departments and municipalities). Analysis and interpretation of the results of the case studies were done in relation to the components of the supply chain practices (policy). A checklist of compliance from the National Treasury was used to benchmark and evaluates the practices of the municipality or department based on the case study. Therefore, the results were discussed against benchmark practices of demand management; acquisition management; logistics management; risk management; supply chain performance; ethics and conflict of interest; compliance and the legislative requirements of SCM. A limitation of this article is the validity of the case studies. However, the finding is validated by benchmarking the results with related studies on SCM in the South African public sector.

Table 3. List of case studies and their departments or municipalities.

Case study No	Title of case study	Department/municipality where study was conducted	Province
1	The implementation of SCM function in Ngqushwa municipality	Municipality	Eastern Cape
2	Case study about purchasing and supply chain practices in the Department of Health	Department	North West province
3	Ethical and professional standards in the City of Cape Town's SCM processes	Municipality	Western Cape
4	The state of SCM in eThekweni municipality	Municipality	Gauteng
5	Changeover from being decentralised to centralisation of SCM within the Department of Transport and Public Works	Department	Western Cape
6	Purchasing and SCM practices in the department of agriculture in Polokwane municipality	Municipality	Limpopo
7	Uthungulu district municipality: Operating within the policy context of South Africa's SCM processes	Municipality	Gauteng
8	The impact of SCM on the department of rural development and land reform	Department	Gauteng
9	Case study on purchasing and / or supply chain practices that are implemented by statistics South Africa	Department	Gauteng
10	Purchasing and supply chain practised by South African social security agency	Department	Limpopo
11	The challenges that are faced by SCM in the Department of Agriculture, Eastern Cape	Department	Eastern Cape
12	Case study about the implementation of purchasing practices implemented in Gauteng's Shared Service Centre	Department	Gauteng
13	The use of procurement in managing supply chain units to leverage spending, reduce corruption and improve service delivery.	Municipality	Free State
14	Mokopane regional hospital acquisition process and procedures	Department	Limpopo

RESULTS AND INTERPRETATION

Fourteen case studies were reviewed for the study. Eight of the fourteen case studies were conducted in a department while six were conducted in a municipality. Among the cases studies, five were conducted in Gauteng province, one in North West province, two in Western Cape Province, three in Limpopo province and

one in Free State Province. Therefore, the case studies were drawn from six of the nine provinces in South Africa. Table 3 presents the titles of the cases reviewed, the departments/municipalities where the case study was conducted and the province where the department or municipality is situated in the Republic of South Africa.

The cases were analysed individually and collectively and a conclusion was arrived about the general applica-

tion of SCM. The result was discussed against: SCM policy and compliance to legislation; demand management; acquisition management; logistics; risk and disposal management; and ethics and conflict of interest.

SCM policy and compliance to legislation

The legislative requirements warrant each government entity to create a SCM unit and implement SCM. According to the treasury guidelines, deadlines for implementation of SCM were set from 2005 to 2006 for municipalities/department. Compliance with SCM includes operating in line with the principles contained in the legislation and regulations governing SCM in municipalities, operating within the policy context of the South African SCM processes, recognising and applying the implications of the legislative requirements to organisations involved with municipal service delivery. The review indicated that all department and municipalities had developed a customized SCM policy as required. Also, the Chief Financial Officer (CFO) was in charge of the SCM process. However, the implementation remains a challenge. Also, there is lack of compliance on legislation as in many of the cases; there were no three bid committees.

Majority of the cases did not have a SCM unit and faces skills and capacity problems for efficient implementation of the policy; no proper functioning SCM structures (case study 8); inappropriate structures in place for the implementation of SCM (case study 9); policies and regulations were not adhered to and there are inadequate personnel (case study 9); noncompliance in the application of SCM policy (case study 11); lack of proper structures and compliance with SCM policies and regulations (case study 12); lack of understanding regarding the concept of SCM and its extricable link to long-term quality service delivery and economic growth, which are the root cause of problems beleaguering government and people at large (case study 13).

Demand management

Demand management is the first process of SCM framework. It involves planning and managing of resources, setting up goals and target such as to meet the need assessment of the community. During demand management processes, officials are required to ensure timely planning and management of processes; ensure economies of scale in acquiring repetitive goods; appropriate compilation of required specifications and undertaking appropriate industry analysis and research to promote innovation and gain technical benefits. Based on the review, there is lack of proper planning by programme managers (case 2); pre-planning activities were limited to the allocation of funds during budgetary stage of the SCM process (case study 4); lack of appropriate planning and

alignment of needs to budget (case study 6); lack of sufficient funds and serious shortage of skilled labour (case study 7); lack of proper planning and neglecting of demand management roles and responsibilities (case study 8); and lack of appropriate planning of the SCM process (case study 12).

Acquisition management

Acquisition management is the second phase of the SCM process. It refers to all those actions that have to be taken to satisfy the need for material, facilities or logistic services. It involves, in sequence, requirements planning, operational research, technology acquisition, design and development, operational qualification, quality assurance, industrialisation, initial procurement and commissioning. It involves management of procurement by an entity to decide on the manner in which the market will be approached; to establish the total cost of ownership of a particular type of asset; to ensure that bid documents are complete, including evaluation criteria; to evaluate bids in accordance with published criteria; and to ensure that proper contract documents are signed. The review reveals that, there is lack of appropriate bid structures. The data base consisted of many unqualified suppliers who specialise in everything (case study 1); as well as limited players in the process of supplying goods and services (case study 4).

Logistics, risk and supply chain performance

Logistics management is the setting of inventory levels, coding of items, placing of orders, receiving and distribution, stores and warehouse management, expediting orders, transport, management and vendor performance. The process is activated by financial systems to generate payment. Risk management is the provision of an effective system for identification, consideration and avoidance of potential risks in the SCM system. Risk refers to any unintended or unexpected decisions in the course of an action. Individual departments within the municipalities do identify their risks and manage them at the level of their department as they occur.

Supply chain performance is a monitoring process, undertaking a retrospective analysis to determine whether the proper process has been followed and whether the desired objectives were achieved. The review reveals that, there is a pre-quote system that could be easily manipulated (case study 2). Also, there is no proactive system of SCM that takes into consideration value for money (case study 4). Rosters in certain branches were incorrect use (case study 5); delay in payment to companies; delay of delivery of supplies and imperfect orders (case study 13). In terms of risk management, there is inconsistency between various

SCM offices in the application of risk analysis (one office may decide to motivate bidders by using different benchmarking from the others) (case study 5). For supply chain performance, there is lack of monitoring reporting tools and capacity problems (case study 8). There is lack of service level agreement and contract management penalties with no proper monitoring measures for the supply of goods and services (case study 4).

Ethics and conflict of interest

In the SCM process, all parties have to comply with ethical standards. Actors of SCM should deal with each other on a basis of mutual trust and respect; and conduct their business in a fair and reasonable manner with integrity. Actors associated with procurement, particularly those dealing directly with suppliers or potential suppliers, are required to do the following: recognise and deal with conflicts of interest or the potential for such conflict; deal with suppliers even-handedly; ensure they do not compromise the standing of the state through acceptance of gifts or hospitality; be scrupulous in their use of public property; and to provide all assistance in the elimination of fraud and corruption. However, the results reveal the following: that conflict of interest is a major challenge in the SCM process (case study 3); that conflict of interest is of serious concern and there is lack of cooperation with the municipality and most of the contactors are inexperienced (case study 7); irregularities in SCM processes and lack of rotation of suppliers (case study 10).

Haven dwelt on the results of the review; subsequently, the article now discusses the results.

DISCUSSION

This section of the article presents a discussion of the findings. The analysis of the results indicates that there are several challenges that impede SCM implementation. These challenges are discussed subsequently.

Non-compliance to SCM policy and regulations

The SCM policy requires each government entity to adhere to developed and implement a customized SCM policy. As indicated in the findings, the issue of compliance is a major retard in the implementation of SCM as it affects other activities. Issues regarding non-compliance to SCM policy and regulations can be attributed to lack of the requisite SCM skill and competencies as well as the absence of a stricter regulatory culture. These may include the tendency not to utilise a competitive process for both quotations and bids, incorrect utilisation of the preference points system, lack

of appropriate bid committees, use of unqualified suppliers, passing over of bids for incorrect reasons, utilisation of the incorrect procurement process in respect of the thresholds, extensions of validity periods, incorrect utilisation of the limited bidding process, inadequate controls and procedures for the handling of bids, lack of bid information on bid register, ambiguous specifications, appointment of bid committee members not aligned to policy requirements, line functionaries incorrectly drafting bid documents and insufficient motivation for deviations from SCM procedures. These issues have been re-affirm in studies such as in Van Zyl (2006), Matthee (2006) and Ambe and Badenhorst-Weiss (2011b), who noted that non compliance to SCM policy was due to lack of skills, capacity and knowledge of the workforce to be able to fully implement SCM across various spheres of government.

Inadequate planning and linking demand to the budget

Another major challenge to SCM implementation is inadequate planning. Cost effective procurement depends on specialist skills to ensure that buying requirements are reliably determined, appropriate contract strategies are developed, contracts are well managed and the opportunities to secure the best deal at the right time and at the right price. The demand management process hence is integral to any procurement process as it defines the decision making process that allows departments to procure at the right time, at the right place and at the right cost. However, many government entities are still face with the challenges of in-proper planning and linking demand to budget. This may be attributed to limited skills and capacity. Ambe and Badenhorst-Weiss (2011b) acknowledged that training and workshop were vital for successful implementation of SCM.

Inadequate and inconsistency to risk management/irregularities in SCM

Risk management is another major challenge. The findings of the article reveal that there is a lack of internal control environment and the implementation of risk mitigation procedures through the effective utilisation of SCM policy and procedure. This has led to fraud and corruption. Fraud, corruption (Smart Procurement, 2011) and other administrative malpractices within government entities impede SCM. According to Boateng (2008) asserted that a lack of understanding regarding the concept of SCM and its inextricable link to long term quality service delivery, human capital development and associated socio economic growth, may be the root cause of problems beleaguering SCM in government.

Table 4. Major challenges that hinder SCM implementation.

Components of SCM	Key challenges
Legislative requirements to SCM	Non-compliance to SCM policy and regulations. Lack of proper knowledge, skills and capabilities
Demand management	Inadequate planning and linking demand to the budget
Risk management	Inadequate and inconsistency to risk management
Supply chain performance	Inadequate monitoring and evaluation. Lack of service level agreement
Ethics and conflicts of interest	Irregularities in SCM

Source: case studies.

Boateng (2008) asserted that, since 1994, South Africa has enjoyed unprecedented social and infrastructural. Yet, the majority of people who hoped freedom would bring with it relative socio-economic liberation and improvement are feeling increasingly bitter towards government over issues including a lack of perceived quality of governance, service delivery failure, corruption in some spheres of the economy and disillusionment with empowerment policies.

Inadequate monitoring and evaluation of SCM

Monitoring and evaluation is an important aspect of SCM implementation. Inadequate monitoring and evaluation is linked to the absence or the poor presence of a control environment and the government entities are placed in a difficult position to give effect to or implement SCM as required by the policy. Hence deviations or non-compliance goes undetected or is identified after the fact. According to Business Day reports (2011), procurement actors in government have spent millions of Rand in ways that contravened laws and regulations. The national and provincial governments and their entities have notched irregular, unauthorised, fruitless and wasteful expenditure that contravene laws and regulations. There are weaknesses in SCM, controls over information technology, human resource management, capital assets and performance reporting. Most government entities do not have clean audits.

Ethics and conflict of interest

Ethics and conflict of interest greatly affects SCM implementation. The analysis suggests that there is enormous power wielded by some chief financial officers and lack of proper consultation with other senior officials. Whilst the National Treasury Guide to Accounting Officers prescribes a standard approach towards SCM procedure, in many instances given the autonomy of the accounting officer's financial management and the lack of application resulted in department's utilisation discretion

to procure in a manner that would be appropriate for a specific time. This resulted in differentiation in approaches and a lack of standardisation.

Lack of proper knowledge, skills and capacity

Adequate capacity in the form of appropriate structures with fully skilled and professional SCM personnel is key success factors for proper SCM implementation. In some government entities, the quality of SCM personnels' skills and ability are well below standard. According to a study conducted by Ambe (2006) and Migiro and Ambe (2008:241), many SCM actors in the South African public sphere have attended a number of training and workshop on SCM, but they still lack appropriate knowledge for proper implementation. According to McCarthy (2006:4), the completeness of tender documents in government entities is difficult to verify because the register is incomplete. There is also the lack of capacity and knowledge to handle procurement processes that contributes to bad governance Table 4 presents a summary of the challenges retraining SCM implementation relating the core elements.

Based on the challenges identified previously, a framework for implementation was suggested. From the analysis of the findings, it is obvious that actors of SCM need to be trained. In addition, the implementation of SCM is impossible without appropriate information and communication systems. The need exists for the different stages in the chain to be integrated. Moreover, appropriate organisational structures must be developed, including the skill/knowledge profiles of the different positions. Departments and municipalities must then actively recruit appropriate skilled and knowledgeable personnel. Figure 2 shows a proposed framework that could be integrated in the public sector for fully functional SCM.

The implementation framework suggests that to be able to implement SCM successfully, qualified SCM practitioners should be employed. This will ensure that the right personnel are in the right place at the right time. The next step is to engage in ongoing training and to

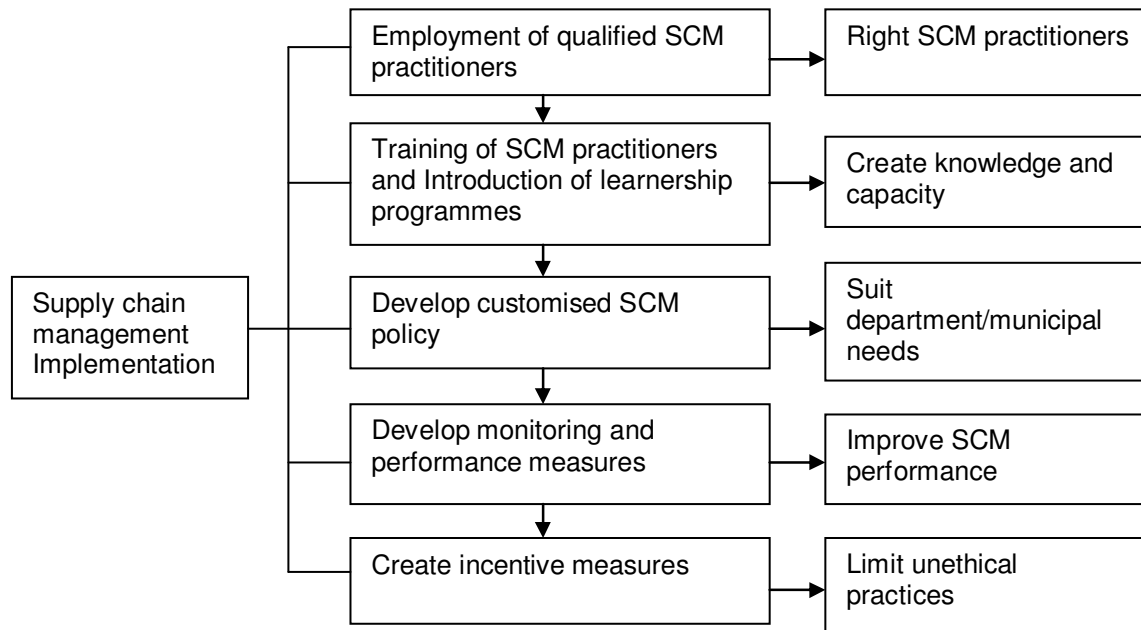


Figure 2. Framework for implementation of SCM.

introduce learnership programmes in SCM to create awareness of policy guidelines and regulations. This will create knowledge and skills and solve the problem of capacity. Furthermore, a customised policy on SCM needs to be developed as required in the SCM policy to suit the needs of the department or municipality. Monitoring and performance measures need to be created for every department or municipal entity. This will help to evaluate SCM performance and ensure that guidelines and principles are adhered to. The implementation process will be boosted by the induction of incentive measures for hard working practitioners. This will motivate SCM practitioners to strive for better performance and limit unethical practices.

Conclusion

The main objective of this article was to articulate the challenges that restrain supply chain management (SCM) implementation in the South African public sector. The implementation of SCM occupies centre stage in the financial management reform process in the public sector in South Africa. The South African government has adopted integrated SCM in its public procurement policy. SCM aims to add value at each stage of the process from demand of goods or services to their acquisition, managing the logistics process and finally, after use, in their disposal. The SCM process is guided by policies and legislations. The framework for the SCM system constitutes demand management, acquisition management, logistics management, disposal management, risk and

performance management. The framework is guided by the preference point system to achieve re-distribution of wealth (ensuring equal opportunities). The supply chain is built upon ensuring value for money, open and effective competition, ethics and fair dealings; accountability and reporting; and equity.

The article employed a cross-case analysis of case studies drawn from a compulsory module for the programme: Advanced Programme in Sourcing and Supply Chain Management, University of South Africa (Unisa). The findings of the study reveal that there are enormous challenges with regard to the implementation of SCM in the South African public sector. These challenges are not limited to municipalities, but extend to all spheres of government. These challenges include, among other things, noncompliance with SCM policy and regulations, lack of appropriate bid committees; lack of strategic planning; lack of skills, capacity and knowledge of the workforce to be able to implement SCM fully.

The findings of the study conform to the results of other studies conducted in the South African public sector. These include, among other things: SCM implementation in the Central District Municipality and its affiliated municipalities (Ambe, 2006); strategic supply chain management by Matatiele Municipality (Van Zyl, 2006); the potential of internal audit to enhance supply chain management outcomes (Matthee, 2006); and evaluation of the implementation of public sector supply chain management and challenges: a case study of the central district municipality, North West province, South Africa (Migiro and Ambe, 2008). All these studies acknowledge that SCM implementation is still in its infancy.

Furthermore, there is no proper implementation and SCM has not achieved its objectives of good governance, uniformity in bid procedures, and so on. The article concludes by suggesting an implementation framework for SCM. Proper implementation and execution of the framework would enhance SCM. A limitation of the study could be validity of the cases reviewed. However, this issue was addressed by benchmarking the findings with other studies in the South African public sector. For further research, based on the results of this article and other studies, a research instrument will be developed to test the extent of the problems in a wider scale and to compile a comprehensive report that will be made available to the authorities.

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