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Implementing strategic sourcing in South Africa

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Implementing

Strategic Sourcing

in South Africa

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A research report submitted to the Faculty of Commerce, Law and Management, University of Witwatersrand, in partial fulfillment of the requirements for the degree of Master of Business Administration

Johannesburg, 2008

ABSTRACT

Strategic sourcing is currently one of the most powerful levers for profit improvement and is hence receiving increased attention from corporations. This research focuses on the key techniques used in strategic sourcing departments and issues faced in making a strategic sourcing procurement decision in South Africa.

Large South African industrial and resource companies that are acknowledged leaders in strategic sourcing in South Africa were interviewed. The data gathering consisted of structured interviews with the overall leader, or their deputies, of strategic sourcing in each company.

The research objective was broken down into a number of different propositions, supporting the techniques used in sourcing departments and issues faced when making a strategic sourcing procurement decision.

The results showed relatively strong support for the identified techniques (from a review of literature) that strategic sourcing departments use, including cross-functional sourcing teams, sourcing information systems, alignment with corporate strategy and the use of a formal sourcing process. There was little support for value chain mapping and formal supplier relationship management.

There was poor support for the issues identified in the literature as affecting a strategic sourcing procurement decision. Core competencies, the external environment, product and process and technology and demand variability did not play a significant role in a strategic sourcing procurement decision. The only strongly supported area was around cost management.

The South African companies who have been conducting strategic sourcing efforts for the longest are likely to be using the most techniques and most other companies plan to use more. However, the procurement department's involvement in strategic outsourcing decisions remains minimal.

DECLARATION

I declare that this research report is my own, unaided work. It is submitted in partial fulfilment of the requirements of the degree of Master of Business Administration at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other university.

Nicholas Scott Keys

25 November 2008

ACKNOWLEDGMENTS

I am grateful to:

My supervisor, Mike Pycraft, for his guidance throughout the research process;

My editor, Gemma Harries, for editing and improving numerous drafts;

The respondents who gave up their time to participate in this research.

Without their assistance, this research would not have been possible.

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1 INTRODUCTION

1.1 Context

Many businesses have worked to increase their efficiencies through the adoption of new technologies, processes, knowledge leadership and new management techniques (Porter, 1996). For many businesses, procurement is becoming an increasingly significant driver of corporate financial performance (Anderson and Katz, 1998, Wisner, 2003)

Purchased items play a large role in an organisation's costs, typically as high as seventy percent in some industries (Anonymous, 2007). Furthermore, purchasing typically has three to five times the leverage for profit improvement compared to the downsizing of staff (Anderson and Katz, 1998).

This has led to an increased focus on management of outsourced items. However, although significant literature has been dedicated to managing outsourced items and the outsourcing process itself (Ellram and Carr, 1994), less attention has been paid to the strategic issues behind the decisions and the process. Strategic sourcing can be defined as an organisation exploiting opportunities to leverage the corporate buy, minimise linked costs in the supply chain and maximise the value of goods and services to the end consumer, using a systematic framework aligned with corporate strategy (Anderson and Katz, 1998).

There is evidence to suggest that organisations are not achieving the desired benefits from outsourcing. Research carried out by Lonsdale and Cox (2000) has revealed that outsourcing decisions are rarely taken within a thoroughly strategic perspective, with many firms adopting a short-term perspective and being motivated primarily by the search for short-term cost reductions.

The increased competitiveness desired by South African organisations in the current global environment is likely to drive an increase in outsourcing in South Africa.

1.2 Objectives

The objective of this study is to discover and understand the techniques being used in strategic souring departments and the issues that are important for a strategic sourcing procurement decision for companies that have implemented strategic sourcing in South Africa.

1.3 Significance

More and more frequently, businesses are not competing against each other as individual entities, but rather, networks of interrelated businesses are competing against other networks of businesses. Hence, supply chains compete against supply chains. The structure of the relationships between companies in the supply chain is vital to the ultimate competitive success of the supply chain and each individual business therein (Wisner, 2003). Hence, strategic sourcing, and the process behind it is vital for company management.

In a study involving more than 160 purchasing/supply executives, strategic sourcing was identified as the factor that would “drive supply-chain management initiatives” (Carter et al., 2000:16).

1.4 Problem statement

Due to the exploratory nature of the research the problem is phrased as a question:

What are the key techniques used in strategic sourcing departments and the issues in a strategic sourcing procurement decision in South Africa?

1.4.1 Sub-problems

- What are the key techniques being used in strategic sourcing departments in South Africa?

- What are the key issues that influence a strategic sourcing procurement decision in South Africa?

1.5 Delimitations

- The report will be limited to the techniques being used in strategic sourcing departments and the factors being considered when making a strategic sourcing procurement decision. How to make and implement sourcing decisions will not be discussed. An example of this process is given by Franceschini, Galetto, Pignatelli, & Varetto (2001);
- The results of the report will only be applicable to large South African organisations that have already started or wish to start the strategic sourcing process;
- The process of setting up a strategic sourcing department will not be discussed.

1.6 Assumptions

- The current strategic sourcing literature will provide a basis on which to understand the bulk of the key issues influencing a procurement decision and the techniques used in a strategic sourcing department;
- The respondents will share enough information in a strategically sensitive field to provide useful results;
- The results of the interviews of managers in specific industries will be generally applicable to other industries.

2 LITERATURE REVIEW

2.1 Introduction

Supply-Chain Management (SCM) is a growing and relatively new field (Larson and Halldorsson, 2002). There is still debate over the definition of SCM. However, a generally accepted definition is: “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” (Christopher, 1998).

Strategic sourcing can be seen as part of the greater SCM framework.

Outsourcing initially started with services that were of peripheral concern to the organisation, such as cleaning, catering and security, but it is now moving to include critical areas such as design, marketing, manufacture, distribution and information systems, with almost the entire value chain open to the use of outside supply (Jennings, 1997). A number of studies have indicated the effectiveness of disaggregation approaches in many industries in increasing competitive advantage (Batteyri, 1998).

Due to the increased scope of outsourcing, the strategic effect that an outsourcing decision can have on a company’s long term competitiveness is being given more attention (Anderson and Katz, 1998).

Given the large effect that outsourcing decisions have on long-term company performance and the complexity of the decisions that need to be made, a framework for management to follow in making a strategic sourcing decision is required.

As the author has not been able to locate any research on the strategic sourcing process in South Africa, international sources are used throughout the literature review.

There are few practical strategic sourcing frameworks in the available literature. The currently available literature presents either a broad overview of the factors that

affect strategic sourcing decisions (Quinn and Hilmer, 1994; Jennings, 1997) or detailed processes for implementing an strategic sourcing decision once it has been made (Embleton and Wright, 1998). Due to this fact, the literature review in this research concentrates on the following:

- An analysis of the advantages and risks of strategic sourcing. This provides a set of points that should be addressed within the factors identified, as part of the strategic sourcing process.
- An exploration of he issues considered important in making a strategic sourcing decision. These are the issues that need be identified and understood in order to make a strategic sourcing decision.
- The practical application of strategic sourcing. Organisational and decision-making trends and techniques that are used in making a strategic sourcing decision.

A thorough analysis of these factors will allow a questionnaire to be developed that can assess the factors that executives do and should take into account when making strategic sourcing decisions.

The final part of the literature review concentrates on a brief synthesis of the current issues affecting the strategic sourcing decision and the techniques used by management in strategic sourcing.

2.2 Advantages and risks of strategic sourcing

2.2.1 Advantages of strategic sourcing

"On average, companies are realising a 9 per cent cost saving and a 15 per cent increase in capacity and quality through outsourcing" (Anonymous, 1996). This suggests that sourcing is being used more and more frequently to obtain strategic advantages for the business. These include:

- **Allowing for a greater focus on key internal competencies**

Strategic sourcing allows an organisation to increase its focus on the competencies that customers value (Quinn and Hilmer, 1994; Jennings, 2002). Well developed core competencies provide formidable barriers against competition. The reduced management time and resources dedicated to outsourced processes allow management to free up its time (Cassidy, 1994) and leverage the external resources for greater results. The strategic sourcing process can also bring labour peace, talent availability and a cash infusion into the business (Embleton and Wright, 1998).

This is because a focus on outsourcing non-core areas can allow the company to manage less labour and a more homogenous workforce, key talent can be devoted to the companies most important competitive tasks and cash devoted to non-core resources can be freed up.

- **Bring new skills, speed and flexibility to the process**

The outsourcing partner can bring its own skills to the service or product being outsourced, including advantages of knowledge and scope of services offered. This allows a supplier to fully utilise investment, capability and innovation.

The new knowledge brought into the process can result in:

- Process re-engineering which allows the business process to be evaluated and improved (Embleton and Wright, 1998).
- Improved product design (Anderson and Katz, 1998).
- Access to superior quality (Jennings, 2002).

These improvements in the business process and thinking can allow organisations to effectively tap into a joint potential for innovation and effectively managed supplier-buyer interaction points which can be the most fertile points for new innovations to develop (Quinn, 1999).

Greater flexibility in both human resources and product delivery is available when strategic sourcing is implemented. This results in reduced costs (especially in cyclical industries) and higher organisational service levels (Jennings, 2002).

- **Reduce risk**

Demand risks can be reduced for both the buyer and the seller as the seller can be shielded from risk by demand aggregation from other buyers. There is also an increasing trend for risk sharing with new product or process development (Anderson and Katz, 1998; Quinn and Hilmer, 1994).

- **Increase efficiency and reduce costs**

The total cost of ownership can be decreased due to supplier knowledge and scale. This is due to the suppliers increased focus. Hidden costs are often only revealed once a process is outsourced, allowing their reduction to be better managed.

An outsourcing decision can also result in a more competitive supply chain that is more efficient than a vertically integrated one (Anderson and Katz, 1998).

2.2.2 Risks of strategic sourcing

- **Loss of supplier control**

The strategic decision to outsource is frequently made due to short-term cost benefits (Ford et al., 1993; Gross & Wilkinson, 1993). However, the strategic sourcing decision is hard to reverse once complete and the loss of control of the relationship can impact on company financial performance. This can have long-term repercussions such as:

  - **Loss of control of key technology and innovation.** Sourcing decisions based on cost have frequently led to suppliers gaining knowledge and experience and forward integrating in the supply chain. This has eroded the competitive position of many firms (Dertouzos, 1989).

- **Problems with critical business processes**. Certain business processes, even though they are not core, are high risk to the business. These business risks can be mitigated by partnering or forming alliances with suppliers (Quinn and Hilmer, 1994).

- **Loss of cost control.** The management of costs can be problematic, especially when the requirements change (Embleton and Wright, 1998). The aggressive management of supplier cost can also stifle innovation and technical progress over the long term (Domberger, 1998). There is also often a significant loss of flexibility in the process.

- **Loss of critical functions**

Critical skills can be lost when certain items are strategically sourced:

- The loss of certain processes can cause a need for the skills that are not key to the organisation's competitive advantage to be developed in-house (Quinn and Hilmer, 1994).

- Cross-functional skills needed to ensure adequate interaction and innovation with the supplier can be lost. This can result in the firm losing critical skills and knowledge that incrementally cause the firm to lose its key competencies, decrease innovation and ultimately remove its competitive advantage (Jennings, 2002).

2.3 Techniques and processes used in strategic sourcing

Companies are deploying an increasingly wide range of techniques to deal with the strategic sourcing decision process. The following techniques and organisational changes were identified in the relevant literature as aiding in the implementation of the strategic sourcing decision-making process.

2.3.1 Cross-functional sourcing teams

Businesses are starting to structure their purchasing of strategic goods around cross-functional sourcing teams. A cross-functional team would typically consist of persons outside the functional unit (Proehl, 1997). These teams can cope with strategic sourcing decisions better because they provide flexibility, multi-functional knowledge, control, co-ordination mechanisms and fast response (Trent and Monczka, 1994).

Modern supply relationships are characterised by interactions between companies at many different levels simultaneously, including executive, transactional, technical, and emotional. These types of relationships are best controlled using multi-functional teams.

These cross-functional teams are performing a number of the processes required in a strategic sourcing decision, including evaluating and selecting suppliers, developing cost-reduction strategies, performing value analysis activities and developing sourcing strategies (Trent and Monczka, 1994).

The key to the effectiveness of a strategic sourcing team is the availability of key organisational resources, participation of suppliers, higher levels of decision-making authority, effective team leadership and effort levels (Trent and Monczka, 1994). There is also a similar list of reasons for a team's potential failure, including lack of clarity in strategic mission, lack of empowerment, unclear goals, resistance to change, lack of co-ordination, lack of expertise, failure to inform senior management, failure to share learning, lack of understanding of complexity and failure to anticipate potential impediments (Anonymous, 1994).

However, Trent & Monckza (1994) found that the bulk of the resources required to make a team a successful were those that were least available in industry. This included provision of required services and help from others, time availability and budgetary support.

2.3.2 Process and value-chain mapping

The benchmarking of all core internal processes (supply, operational, distribution, etc.) by evaluating the relevant value chain activities is important to undertake before making a strategic sourcing decision (McIvor, 2000).

The position of the company in the value chain needs to be examined by sourcing as this is fundamentally important for the strategy of the company as a whole. A company's position in the network can be a key determinant of the companies success. A company's sourcing is a central means for generating a strong position in the network (Freytag and Mikkelsen, 2007).

The benchmarking process should enable the company to identify its relative performance for each core activity along a number of selected measures. The cost analysis should provide a clear view of all costs associated with the process.

Benchmarking will allow the company to look beyond the products to the operating and management skills that produce the products. It involves searching out the "best of breed" of a process or skill, requiring active participation by the personnel who perform each function within the company. The benchmarking exercise can provide detailed and useful external information to validate the company's performance relative to other companies (McIvor, 2000).

Another newer type of benchmarking is called value-stream mapping where each process is examined for improvement opportunities (Hines et al., 1999). The value chain approach can also identify non-core activities and core activities where the organisation is currently weak and not a market leader. The organisation needs to be positioned strategically in the value chain were value is created (Handfield et al., 2000).

The organisation of a network of interrelated companies is a key determinant of a companies success. However, not many companies manage their strategy as part of

a network and frequently make strategic decisions only after examining their impact on the individual company and not the implications for the network as a whole.

2.3.3 Sophisticated transactional and strategic IT systems

The progressively more complex nature of outsourcing relationships in location, information requirements, product complexity and relationship issues requires sophisticated IT systems. These systems need to capture information around strategic issues – including benchmark costs, relationship and performance issues, and design interchange. The systems also need to capture information about all product in-sourcing costs so that effective decisions can be made (Quinn, 1999).

The IT systems supporting the sourcing effort have grown dramatically to include not only traditional ERP (Enterprise Resource Planning) systems but online catalogues, centralised supplier hubs and e-auctions, logistics systems and electronic systems that help lock in supplier savings (Powell, 2006)

However, strategic sourcing is a subset of sourcing that looks at understanding sourcing opportunities and deciding between and managing opportunities. Technology has resulted in analytical tools and electronic access to large amounts of information. However, most companies have developed their own strategic sourcing process that is tailored to their own culture, capabilities and the unique skills of their staff. This means that very few rote electronic strategic sourcing tools exist (Smock et al., 2007).

However, there is development of niche electronic tools to support strategic sourcing in three areas (Smock et al., 2007):

- Analysing suppliers and supply/demand balances in key markets by using largely web-based market intelligence services;
- Understanding the relative dynamics between companies in a supply chain, where the power lies in the chain, what the power is based upon, and the

influence that this has on the approach that one needs to take towards a supplier / supply chain for maximum strategic advantage;

- Using technology tools that reinforce the rigour in the strategic sourcing process overall.

2.3.4 Supplier formal relationship development and tracking

More complex relationships between companies require the cross-functional transfer of knowledge and technology. Cross-functional sourcing teams (as discussed above) are one method of achieving this transfer.

Formal systems for evaluating supplier relationships are also being developed (Krause et al., 1998). Supplier evaluation systems are generally divided into three methodogical streams: conceptual, empirical and modelling (Rajkumar and Kumar, 2004). Supplier evaluation models are usually based upon multiple criteria (Weber et al., 1991) and include methods such as categorical, weighted point, cost ratio approaches (Soukup, 1997) and fuzzy logic (Rajkumar and Kumar, 2004).

However, organisations are frequently seconding staff to suppliers and customers in order to improve and increase speed and the transfer of knowledge in both directions. Companies are also working at developing the supplier and allowing them to enhance their product and services or capabilities (Wagner, 2006). Development of suppliers originated with Toyota in Japan (Dyer and K., 2000) with the need to modernise themselves and their supply base, but has become more popular in the Western world since the 1990s (Hines, 1997). Supplier development can be managed either reactively i.e. developing and/or working with a supplier when there are quality or delivery problems or strategically where problems and opportunities are identified and acted upon before performance problems actually occur (Krause et al., 1998).

Hahn, et. al. (1990) suggested that supplier development issues could be evaluated along two axes – product, process and operation system-related issues on one side,

and capability-related issues, such as level of technicality, quality, cost and delivery on the other.

Suppliers are also being integrated earlier in the development process (Morgan and Monczka, 2003) and there is a need for clear cost models and combined process improvement initiatives (Carter et al., 2000).

2.3.5 Alignment of sourcing with corporate strategy

Purchasing in organisations has traditionally been seen as an area of cost reduction. It is now frequently being seen as a strategic weapon in ensuring an organisation's competitiveness. This has resulted in the acknowledgment that the supply chain/procurement department has a strategic role to play in the development of processes to align organisational goals with supply chain/procurement goals (Arnold, 1998).

Sourcing strategy is about thoroughly understanding what is needed: the goals for what is to be received from the supply base and what the company is able of supporting with its suppliers, their industry, the power and collaborative dynamics in that industry between suppliers and buyers, and the classic supply / demand, macroeconomic and global implications. It is also about deciding how to approach the market and which suppliers will make up the "market" that is approached (Smock et al., 2007).

Internally procurement is undergoing two distinct trends that also impact strategy: Firstly, the increasing professionalism, training and level of staff being attracted to the procurement function, and secondly the increase in the level of purchasing decisions and the procurement department in the firm. There is currently a stronger link between purchasing structure and firm strategy (David, 1999; Reneau, 1999).

2.3.6 Formal sourcing process

Peterson et al. (2000) states that global sourcing structures and processes are important for the effectiveness of sourcing.

The strategic sourcing process can be broken down into five general stages (Zeng, 2003; Liu and McGoldrick, 1996; McGowan, 1997; Maltz and Ellram, 1997; Fera, 1998; McIvor, 2000):

1. Investigation and tendering.
2. Evaluation.
3. Supplier selection and development.
4. Implementation.
5. Performance measurement and continuous improvement.

The process of managing a sourcing process with sourcing teams is similar and can be summarised in twelve steps (Trecha, 1994):

1. Identify commodities and sourcing team makeup.
2. Organise sourcing teams.
3. Establish commodity goal or deliverables.
4. Profile historical items and supplier usage/performance.
5. Determine future item and supplier requirements/expectations.
6. Investigate supply market, suppliers and commercial issues.
7. Determine specific supplier capabilities.
8. Assess future requirements and expectations against supplier capabilities.
9. Develop sourcing strategy.
10. Implement sourcing strategy.
11. Manage ongoing supplier relationship.

12. Review sourcing strategy at regular intervals.

The processes are similar but the second includes the internal management and selection of sourcing teams as discussed in 2.3.1. These are critical parts of the strategic sourcing effort.

2.4 Issues influencing strategic sourcing procurement decisions

Various authors have proposed different sets of factors that need to be taken into account during the strategic sourcing procurement decision-making process. There is some agreement on a number of factors:

There are two different key views on the strategic sourcing process. Frameworks and issues based on or similar to that proposed by Quinn and Hilmer (1994) focus on core competencies of the company as the basis for making the decision, and take into account the strategic vulnerability of the product being outsourced. A total cost view is also taken into account. Frameworks and issues based on, or similar to, Nayak and Welch (1992) focus on the product and process technology. The maturity of the process technology and the competitor's process technology is emphasised. There has also been an attempt to take into account all of the factors in practical frameworks – such as McIvor (2000), although the frameworks emphasise different issues.

In order to organise the different viewpoints, the issues that affect the strategic sourcing decision as presented in a number of the key articles are shown in Table 1 and are grouped under the following headings:

- Core competencies
- External environment
- Product and process technology

- Demand variability
- Costs

A discussion of the factors as grouped in Table 1 is below.

Table 1 Issues for the strategic sourcing decision

Article	**Core Competencies**	**External Environment**	**Product and Process Technology**	**Demand Variability**	**Costs**
Strategic Outsourcing (Quinn and Hilmer, 1994)	Competitive edge derived from activity	Strategic vulnerability introduced by outsourcing			Transaction costs incurred due to outsourcing
Strategic sourcing: A progressive approach to the Make-or-Buy Decision (Welch and Nayak, 1992)		Competitors process technology	The role of process technology Maturity of process technology		
Global disaggregation of information-intensive services (Apte and Mason, 1995)	Strategic importance Customer contact need Physical presence need			Information intensity requirements	Organisation relative efficiency in performing activity
Strategic sourcing: A framework and a case study (Sislian and Satir, 2000)	Competitive advantage	Process maturity of supplier	Process capability	Demand flexibility	

Article	Core Competencies	External Environment	Product and Process Technology	Demand Variability	Costs
Strategic sourcing (Anderson and Katz, 1998)	Segment the buy around customer risk and process complexity	Move suppliers up procurement pathway of greater co-operation and savings	Segment the buy around customer risk and process complexity		Take the total cost view
Strategic sourcing: Benefits, problems and a contextual model (Jennings, 2002)	Competitive advantage Competitive environment Capability	Supply environment	Technology		Cost
A practical framework for understanding the outsourcing (McIvor, 2000)	Core competencies	Supply base influences Value chain perspective			

2.4.1 Core competencies

The importance of understanding the companies' core competencies is addressed in the majority of the articles presented in Table 1.

The term "core competence" has evolved from the work of Prahad and Hamel (1990) and can be explained as the skills and processes that an organisation has that the customer values and that can be performed better than the competition. It is vital for the company to manage its core competencies and not to allow their development to be out of the company's control.

Effective core competencies, with respect to strategic sourcing, can be defined as (1) Skill or knowledge sets, not products or functions; (2) Flexible, long-term platforms, capable of adaptation or evolution; (3) Being limited in number; (4) Unique sources of leverage in the value chain; (5) Areas where the company can dominate; (6) Elements important to customers in the long run; and (7) Being embedded in the organisation's systems (Quinn and Hilmer, 1994).

It is important to have a strategic view that takes into account core competencies when deciding on what parts of your business to outsource (Gottfredson and Phillips, 2005) as the expertise encoded in a corporation's competencies has the tendency to leak from its sourcing partners to its competitors (Drejer and Sorensen, 2002). In addition, losing control of core competencies can result in loss of opportunities (McIvor, 2000), especially in new areas or in changing external environments.

2.4.2 External environment

The external environment consists primarily of suppliers and associated risks. The number of competitors and their relative power in the marketplace needs to be analysed. The ability of the potential suppliers to integrate forward and backwards into the supply chain needs to be considered and can be approached from a value chain perspective (McIvor, 2000). The degree of sourcing control required also needs to be considered (Quinn and Hilmer, 1994), as strategic items that are part of organisation's core competencies would require a closer relationship with a supplier with more communication channels.

The competitor's relative technology positions also need to be considered – both the uniqueness of the technology and the likely future innovation potential. The competitor's long-term technical competencies and the importance of these in the industry have the potential to significantly change the competitive landscape and hence a company's strategic sourcing decisions.

2.4.3 Product and process technology

The level of process/product technology needs to be considered from a number of different viewpoints: The role of the process technology in providing a competitive advantage to the company, the maturity and stability of the process technology and the relative positions of competitor's process technologies (Welch and Nayak, 1992). Nayak's (1992) model suggests outsourcing items where the process technology does not provide a key competitive advantage, the process is technically mature and the competitors are well developed. This allows the company to focus it resources on areas that provide competitive advantage.

2.4.4 Demand variability

Demand variability can be defined as the variation in requirements for product, mix, volume and delivery requirements for products or services (Slack, 1990). The level of flexibility needed is an indication of the manufacturing capabilities required to cope with the change. Relationships that involve high demand variability are more likely to lead to complex and difficult to manage sourcing relationships than those with less demand variation (Sislian and Satir, 2000).

2.4.5 Costs

The cost factor can be broken down as follows:

- **Internal costs.** Including direct and overhead product costs, management time and effort, costs of future innovation, costs to keep up with the best in class and transactional costs (Franceschini et al., 2001; Varetto, 2001).

- **Supplier costs.** The costs of the service or product are relevant. However, the ability of the supplier to match or exceed internal scope and scale benefits (Jennings, 2002) and the ability of the supplier to sustain competitive advantage through innovation also need to be analysed.

Costs need to be understood from both these perspectives before making a decision.

2.5 Synthesis of Frameworks

In summary, the issues examined during the procurement decision and the techniques used in strategic sourcing departments are shown in Table 2.

Table 2 Synthesis of issues and techniques

Issues affecting the procurement decisions	**Techniques used in sourcing departments**					
	Process and value-chain mapping	Cross-functional sourcing teams	IT Systems	Supplier relationship development and tracking	Alignment of sourcing with corporate strategy	Formal sourcing process
Core Competencies	X	X			X	X
External Environment		X	X	X		X
Product and Process Technology	X	X	X			X
Demand Variability		X	X			
Costs	X	X	X	X	X	

3 DEVELOPMENT OF THE RESEARCH PROPOSITIONS

The literature points to a number of potential answers to the questions posed and allows a number of propositions to be made. The propositions are derived directly from the literature review. Each proposition has a number of supporting statements that will be examined individually.

- **The key techniques used within strategic sourcing departments are:**
    - Cross-functional sourcing teams are used in the strategic sourcing departments.
    - Value-chain mapping is used in strategic sourcing departments.
    - Information systems are used in strategic sourcing departments.
    - Formal relationships and measures with suppliers are instituted and used in strategic sourcing departments.
    - Strategic sourcing is aligned with corporate strategy.
    - There is a formal strategic sourcing process.
- **The key issues that influence a strategic sourcing procurement decision are:**
    - Core competencies play a role in the strategic sourcing decision.
    - The external environment is taken into account during the strategic sourcing procurement decision.
    - Product and process technology plays a role in the strategic sourcing procurement decision.

- Demand variability plays a role in the strategic sourcing procurement decision.
- Costs play a role in the strategic sourcing procurement decision.

It needs to be noted that as most of the literature is US-based, it is unlikely to take into account unique South African or developing country issues or techniques. The methodology is designed to extract some of these additional issues or techniques, if any are present. They have been analysed and added to the results if identified.

4 METHODOLOGY

4.1 Population

The objective of this study is to discover the techniques used in strategic sourcing departments issues important for a strategic sourcing procurement decision in South Africa. Little would be gained from sampling information from entire population of South African companies, as very few companies have implemented strategic sourcing. Strategic sourcing is also practised formally only in larger organisations.

There is no formal estimate of the number of companies that have implemented strategic sourcing in South Africa. The number is likely to be between 10 and 40 organisations according to an interview with a previous head of The Institute of Procurement and Supply South Africa (December, 2007).

4.2 Sample size and selection

As stated in 4.1 the population is restricted to South African organisations who have implemented strategic sourcing.

Furthermore, the sample is restricted to South African organisations that are successfully applying a number of strategic sourcing techniques and are acknowledged leaders. A purposive sample was drawn from interviews with both a past and a current chairperson of the IPSA (Institute of Procurement and Supply South Africa). The chairpersons were asked to recommend companies that were successfully practising strategic sourcing.

A sample of eight organisations was selected. The organisations represent a relatively broad cross-section of South African industry and include mining and resource companies, petro-chemical companies and parastatals.

The organisations selected are:

- **African Oxygen Limited (AFROX)** – A South African-based supplier of gases, welding and safety products and services. The company is controlled by the global gas company Linde.
- **Anglo American** – A global mining and natural resources company with significant assets in South Africa.
- **ArcelorMittal South Africa** – The South African subsidiary of a global steel manufacturer.
- **Exarro** - A South African-based mining group, with a diverse commodity portfolio in coal, mineral sands, base metals and industrial minerals.
- **SASOL** – A South African-based coal-to-liquids and gas-to-liquids company. The company produces fuels and chemicals.
- **Siemens** – The South African division of Siemens, an electrical engineering and electronics company that services industry, energy, healthcare and consumer market segments.
- **Transnet** – A South African state-owned freight transport and logistics company, comprising of ports, rail and pipeline assets.

A senior manager in each organisation who has overall responsibility for the organisation's strategic sourcing effort, or reports directly to this person, was interviewed, for the purposes of this research.

4.3 Research design

Due to the exploratory nature of the research, the research has been designed around a structured interview with open-ended questions.

A structured interview can assist in exploring a research topic, although the lack of a fully structured questionnaire might have drawbacks (Leedy and Ormrod, 2001), especially with respect to difficulties in synthesising the data and influences of the researcher's personal point of view. Despite these drawbacks, structured interviews are powerful data collection tools that can yield very useful insights with respect to the motivations and reasoning of the respondents (Silverman, 1993).

Background data on the respondent, company and industry was gathered before each interview. The interview was constructed in a two-stage process. Initially, open ended questions are asked around the two key research propositions:

- What are the key techniques used in strategic sourcing decision departments in your company?
- What are the key issues that influence the strategic sourcing procurement decision?

The respondent was then prompted to explore the how's and why's of the key issues and techniques that are identified as part of the key research propositions from the literature review, as explained in section 2. A set of guidelines for the structured interview is attached in Appendix A – Interview Outline.

The interviews were all conducted by the author to reduce interviewer variability. The interviews lasted between one and two hours. Notes were taken during the interviews, and these were recorded on a template designed to categorise and prompt information to support the various propositions. A blank template is attached in Appendix A – Interview Outline.

The respondents were assured that their identities would remain confidential in order to increase the likelihood of candid and honest responses.

All interviews were recorded and transcribed.

4.4 Reliability and Validity

4.4.1 Reliability

In order to ensure reliability of the data collected the following steps were taken:

- As the survey instrument is exploratory and the sample size is small, it is vital that the instrument captures the key issues and is clearly understood by the respondents. A pilot version of the instrument was tested on a sample of the following people before being posed to the respondents. The sample included: One academic expert in the field, one senior strategic sourcing manager, and two junior strategic sourcing managers. The interview template was modified to remove uncertainty and to introduce questions and factors that the respondents believed to be particularly applicable to South African practice, or that consistently came up in the test interviews.
- In order to ensure that the responses obtained are relevant, a sample of experienced practitioners was selected (as detailed in section 4.2). In addition, the respondents job responsibilities were verified prior to the interview and in more detail during the interview.

4.4.2 External validity

The research is based upon current thinking as shown in the literature review outlined in section 2 and the interviews are biased to resource, mining and chemical industries. This should allow the research to be mostly applicable to large South African companies that have implemented strategic sourcing.

4.4.3 Internal validity

The research is not trying to determine causal relationships, so only construct validity was examined. The link between the problem, research propositions and instruments is discussed in section 4. The construct validity is further verified by the use of the pilot study of the questionnaire prior to the research.

4.5 Data Analysis Methodology

The data was analysed using a number of techniques including content analysis, construction of tables of issues and Cresswell's data analysis spiral (Leedy and Omrod, 2001).

The data analysis was split into two sections around the two sub-research propositions.

The first research proposition around techniques used in a strategic sourcing department was analysed in the following manner:

The text from the transcribed interviews was coded. The codes identified the text as being relevant to one of the techniques (as discussed in section 2.3) or not relevant at all. The techniques are: Cross-functional teams, process and value-chain mapping, increasingly sophisticated transactional and strategic IT systems, supplier formal relationship development, alignment of sourcing with corporate strategy and formal sourcing process. Each technique has an associated statement which are explained in the following sections.

Any text that was relevant was tagged with one of these techniques. A piece of text could have more than one code attached to it. The coded items were then collated under headings for each of the factors. The respondents responses were kept separate.

The statements under each heading were examined for common themes between different respondents and common themes within the literature review. Special care was taken to note divergent or South Africa-specific views.

The themes that were identified by a number of respondents were further collated and common responses were grouped. Responses were also grouped around strong themes from the literature review.

A statement that had a ‘Yes’ or ‘No’ answer was then constructed around each theme.

Each statement was coded as being directly relevant and supportive of the proposition or as being additional information, and not directly relevant.

The support for each statement was enumerated by counting the number of respondents that supported it. In some instances respondents did not clearly support or not-support a statement. This was also noted.

The resulting data is a set of statements grouped under each of the sourcing technique headings. The statements are coded as either supporting the propositions or giving extra information. A count of support is provided and extra information for use in the discussion is grouped by each sourcing technique heading.

A similar approach was followed for the second proposition around the key issues that influence a strategic sourcing procurement decision.

The responses were coded with the following issues (as discussed in section 2.4): Core competencies, external environment, product and process technology, demand variability and costs.

The detailed analysis for each section is discussed in sections 5.1 and 5.2 below.

5 DATA ANALYSIS

5.1 Data analysis for sourcing department techniques

As discussed above, the data was grouped under the following headings based on the propositions: Cross-functional sourcing teams, process and value-chain mapping, transactional and IT systems, supplier formal relationship development and tracking, alignment with corporate strategy and a formal sourcing process. A summary of this data is available in Appendix C – Summary of interview results.

The data was then grouped by themes identified by the respondents or the literature as discussed. The yes/no statements around the themes were then constructed and are listed in the sections below.

Each statement or theme is listed with the following additional columns:

Proposition/Other – This classifies a statement as being directly relevant to supporting a proposition or as being for additional detail or interpretation.

Number answered – This shows the number of respondents who discussed the theme/statement. The interviews, although standardised, allowed the respondents significant freedom in their responses.

Number supported – This records how many respondents talked about the theme and supported the theme.

5.1.1 Statements for cross-functional sourcing teams

The proposition that requires support is:

> *"Cross-functional sourcing teams are used in strategic sourcing departments."*

The following statements directly support the proposition:

There is a cross-functional sourcing team – This was taken in the broadest definition of cross-functional sourcing teams. Cross-functional was defined as both staff from different functions within the organisation, such as finance, engineering, procurement, health and safety and quality. 'Team' was also taken with a broad definition to include teams that set strategy for the strategic sourcing effort, undertake the actual strategic sourcing work or act as advisors in the strategic sourcing process.

The sourcing teams have an internal technical, commercial and data leg – The statement confirms that the sourcing teams within the procurement department consist of different staff who are focused on technical (product specification), commercial (supply terms) and data (spend and commodity information) legs.

The sponsorship of the team is cross-functional – The strategy, direction and sometimes the final decisions of the team are decided on by a cross-functional team that includes end user (normally business unit staff) and other functions (such as finance and quality.)

The following further statements are drawn from detailed questions or recurrent insights about cross-functional sourcing teams provided by the respondents:

The primary team is made of staff from sourcing – The primary team is defined as the team that does the strategic sourcing work. This would include selecting suppliers, mapping out value chains and identifying opportunities. "Staff from sourcing" are those staff that are under direct line management control of the sourcing or procurement department.

The primary team is led by sourcing with BU functional members – The Business Unit (BU) functional members are staff in a different division of a company that do not form part of the sourcing operation. They could be end users, engineers, quality staff or finance staff working for the business units.

The primary team is led by non-sourcing members from the business units – This is where the sourcing team contains both sourcing and functional staff members and is led by the functional staff.

Teams are central – The teams are located and run primarily as a head office function.

Teams are business unit based – The teams are located and run primarily in the individual BU's.

Teams are organised around commodities – The teams are structured around commodities, where a commodity is defined as a particular type or grouping of spend.

Teams are measured centrally – The team's performance is measured at a central level. In other words all business units procurement is collated and measured together.

Teams are measured in the business unit – The team's performance is measured at each business unit.

The results of the different statements or themes are summarised in Table 3.

Table 3 Statements for cross-functional sourcing teams

Theme	Proposition / Other	No. answered	No. supported
There is a cross-functional sourcing team	P	7	6
The sourcing teams have an internal technical, commercial and data leg	P	7	4
The sponsorship of the team is cross-functional	P	5	4
The primary team is made up of staff who work for sourcing	O	7	5
The primary team is lead by sourcing with BU functional members	O	7	2
The primary team is led by non-sourcing members from the BU's	O	7	1
Teams are central	O	7	5
Teams are BU based	O	7	3
Organised around commodities	O	7	7
Measured centrally	O	7	5
Measured in BU	O	6	5

5.1.2 Statements for process & value stream mapping

The proposition that requires support is:

> *"Value-chain mapping is used in the strategic sourcing department."*

There was not significant discussion of this topic by respondents when prompted. However, there were a number of responses around benchmarking and total cost of ownership when prompted. These have been discussed under costs in section 5.2.5.

The key statements that support the proposition are:

Process and/or value chain mapping is used – This is taken as true if Key Value Driver (KVD) mapping is used or a supplier's process or materials value chain is mapped out.

Key Value Driver (KVD) tree used – A key value driver tree is defined as a map that is built which shows the key cost and usage drivers in a raw material or consumable.

Processes mapped – Supplier production processes are mapped out.

The results are presented in Table 4 below and use the same categorisations as previously discussed.

Table 4 Statements for Process and Value Chain Mapping

Theme	Proposition / Other	No. answered	No. supported
Process or value chain mapping is used	P	6	3
Key value driver tree	P	6	3
Processes mapped	P	6	0

5.1.3 Statements for transactional and IT systems

The proposition that requires support is:

"Information systems are used in the strategic sourcing department."

Transactional and IT systems were not generally discussed without prompting. They did not seem to be top of mind for the respondents.

The following statements that support the proposition were identified:

Transactional and IT systems are in use – Transactional IT systems are used in some way to support the strategic sourcing effort.

IT systems are used to benchmark spend – IT systems such as a spreadsheets or other programs are used to benchmark spend and/or benchmark components (such as commodity prices or exchange rates) of an item's spend.

IT systems are used to track relationship and performance issues – Aspects of the relationship with suppliers is captured in an IT system. This could include delivery performance, quality ratings or contracts.

IT systems are used for design interchange – The IT systems are used to interchange design information. These would include CAD/CAM and automated CAD model exchange systems.

A contract database is used – An electronic database that stores contract and pricing data for suppliers is kept.

The following further statements are drawn from detailed questions or recurrent insights about transactional and IT systems provided by the respondents:

Spend items are coded by type – An effort has been made to code spend categories and items consistently across the organisation.

Strategic sourcing activities need a manual solution – There is reference to a non-specific solution e.g. Microsoft Excel being used in the strategic sourcing process.

SAP is used – The SAP ERP system is used to support procurement efforts. This refers to the ERP system developed by SAP AG. It could be use of any relevant modules (such as finance, supply chain, product development) in the strategic sourcing process.

The results are presented in Table 5 below and use the same categorisations as previously discussed.

Table 5 Statements for Transactional & strategic IT systems

Theme	Proposition / Other	No. answered	No. supported
Transactional and IT systems are in use	P	7	7
IT systems are used to benchmark spend	P	7	5
IT systems are used to track relationship and performance issues	P	7	5
IT systems are used for design interchange	P	7	0
A contract data base is used	P	4	3
Common coding of spend items	O	6	6
Strategic sourcing activites need manual solution	O	7	7
SAP is used	O	7	7

5.1.4 Statements for supplier formal development and tracking

The proposition that requires support is:

> *"Formal relationships and measures with suppliers are instituted and used in the strategic sourcing department."*

The following statements that support the proposition were identified:

There is a standardised supplier measurement system – A system for measuring supplier performance that may include delivery, quality, price and technology is in place.

The company is working on standardised supplier measurement system – The company is or is about to implement a standardised supplier measurement system.

The company is influencing a supplier's manufacturing process – The company intervenes in some way to change the supplier's manufacturing process.

The supplier is encouraged to understand and be involved in the customer's business – The company actively explains itself and its operations to its suppliers so that they can provide a better service.

The results are presented in Table 6 below and use the same categorisations as previously discussed.

Table 6 Statements for supplier formal relationship development and tracking

Theme	Proposition / Other	No. answered	No. supported
Standardised supplier measurement system	P	7	4
Working on standardised supplier measurement system	P	7	3
Influence on suppliers manufacturing processes	P	3	2
Supplier encouraged to understand and be involved in the customers business	P	4	4

5.1.5 Statements for alignment of sourcing with corporate strategy

The proposition that requires support is:

> *"Strategic sourcing is aligned with corporate strategy."*

The following statements that support the proposition were identified:

Sourcing strategy is set in an integrated manner by the business units and sourcing department – Both the business unit and sourcing department play a role in setting the strategy.

There is evidence for consideration of more than cost savings – Business needs other than cost reduction were considered. These could include quality, safety and expansion.

A forum where sourcing and business units interact regularly at senior levels exists – There is a meeting that takes place more than once a year where strategy

and performance of strategic sourcing efforts is evaluated and/or set. This meeting consists of senior central sourcing and senior business unit representatives.

Savings are reflected ahead of time in the end user's budget – Potential savings for strategic sourcing are identified and removed from business unit accounts when plans are signed off.

The following further statements were drawn from detailed questions or recurrent insights about alignment of sourcing with corporate strategy provided by the respondents:

Sourcing is measured centrally – The sourcing savings and efforts are measured by a central procurement function and not in each business unit.

Sourcing savings are measured in the business unit – The sourcing savings are measured in the business unit that makes them.

The results are presented in Table 7 below and use the same categorisations as previously discussed.

Table 7 Statements for alignment of sourcing with corporate strategy

Theme	Propo-sition / Other	No. answered	No. supported
Sourcing strategy is set in an integrated manner by BU and central sourcing department	P	7	7
Evidence for consideration of more than just cost savings	P	7	3
A forum where sourcing and BU's interact regularly at senior levels exists	P	5	3
Savings are reflected ahead of time in the end user's budget	P	7	4
Sourcing is measured centrally	O	6	6
Sourcing savings are measured in the BU	O	6	4

5.1.6 Statements for formal sourcing process

The proposition that requires support is:

> *"There is a formal strategic sourcing process."*

The following statements which support the proposition were identified:

There is a formal supplier selection process – A consistent documented process is followed for the selection of suppliers.

There is a formal strategic sourcing process – The strategic part of the process is standardised. This would include idea generation, identification of cost savings and mapping of goal attainment.

McKinsey has been used for sourcing consulting – McKinsey, an international consulting company, has been used for some aspect of strategic sourcing or procurement consultation in the organisation.

The results are presented in Table 8 below and use the same categorisations as previously discussed.

Table 8 Statements for formal sourcing process

Theme	Proposition / Other	No. answered	No. supported
There is a formal supplier selection process	P	7	6
There is a formal strategic sourcing process	P	7	5
McKinsey has been used for sourcing consulting	O	5	5

5.2 Data analysis for issues affecting the strategic procurement decision

As discussed, the data was grouped under the following headings based on the propositions: Core competencies, External environment, Product and Process technology, Demand variability and Costs. A summary of the data collated under the different headings is available in Appendix C – Summary of interview results.

The data was then grouped by themes identified by the respondents or the literature, as discussed. The yes/no statements around the themes were then constructed and are listed in the sections below.

The columns and headings in the tables are the same as those in the previous section (refer to section 5.1).

5.2.1 Statements for core competencies

Core competencies never came up without prompting in the discussion. There was virtually no recognition of core competencies by the respondents when the topic was raised. Respondents talked about core competencies of the sourcing department and a little about core competencies of the company itself. These have not been included as themes as it is believed that they were only bought up by respondents in order to answer the question.

The proposition that is looking for support is:

"Core competencies play a role in the strategic sourcing procurement decision."

The following two statements were selected to support the proposition:

Own internal core competencies are taken into account – The supplier's own internal competencies are taken into account when making a sourcing decision.

Sourcing is involved in a decision making role during an outsourcing process – One of the areas that the literature review pointed key competencies as being

particularly relevant was during in-source / out-source decision-making. This statement evaluates the respondent's sourcing department's involvement in outsourcing decisions.

The results are presented in Table 9 below and use the same categorisations as previously discussed.

Table 9 Statements for core competencies

Theme	Proposition / Other	No. answered	No. supported
Own internal core competencies are taken into account	P	3	1
Sourcing is involved in a decision-making role in an outsourcing process	P	4	2

5.2.2 Statements for external environment

The discussion of the external environment came up frequently when the respondents were discussing cost.

The proposition that is looking for support is:

> *"The external environment is taken into account during the strategic sourcing procurement decision."*

The following three statements were selected to support the proposition:

Benchmarking is undertaken in the raw material and supply environment – The product that is being supplied is benchmarked by the sourcing department against similar products from other suppliers and/or the supply environment, including commodity prices, economic data and exchange rates are assessed.

Benchmarking of the company against its competitors is undertaken – The company's sourcing departments will benchmark their products and/or processes against those of competitors or other companies with similar processes.

Customers and their requirements are compared and assessed – The company's sourcing departments will benchmark the customer requirements against what the company is delivering.

The results are presented in Table 10 below and use the same categorisations as previously discussed.

Table 10 Statements for external environment

Theme	Proposition / Other	No. answered	No. supported
Benchmarking is undertaken in the raw material and supply environment	P	7	6
Benchmarking of the company against its competitors is undertaken	P	6	4
Customers and their requirements are compared and assessed	P	1	0

5.2.3 Statements for product and process technology

The proposition that is looking for support is:

> *"Product and process technology plays a role in the strategic sourcing procurement decision.*"

The following three statements were selected to support the proposition:

An assessment of the relative state of process technology against competitors and the role in providing competitive advantage is undertaken – The company looks at the state of its processes against those of its competitors and the competitive advantage that those product and process technologies give it.

An assessment of own processes and technology is undertaken – The company looks at its own processes and technologies when making a sourcing decision.

The company is involved in supplier's processes or technology – The company looks at and assists with its supplier's processes when making a sourcing decision

The results are presented in Table 11 below and use the same categorisations as previously discussed.

Table 11 Statements for product and process technology

Theme	Proposition / Other	No. answered	No. supported
Assessment of relative state of process technology against competitors and role in providing competitive advantage	P	0	0
Assessment of own processes and technology	P	7	3
Involved in suppliers processes or technology	P	7	2

5.2.4 Statements for demand variability

This item was not mentioned by the respondents without prompting and often required significant explanation by the author and examples.

The proposition that is looking for support is:

> *"Demand variability plays a role in the strategic sourcing procurement decision*."

The following two statements were selected to support the proposition:

Demand variability is taken into account when making a sourcing decision – The company's variation in demand is assessed when sourcing a product or service.

Information complexity is taken into account when making a sourcing decision – The level of complexity in the information that needs to be exchanged between the company and the supplier during the delivery of the product or service is assessed when sourcing a product or service.

The results are presented in Table 12 below and use the same categorisations as previously discussed.

Table 12 Statements for demand variability

Theme	Proposition / Other	No. answered	No. supported
Demand variability is taken into account when making a sourcing decision	P	7	0
Information complexity is taken into account when making a sourcing decision	p	7	2

5.2.5 Statements for costs

Cost played a large role in the interviews with respondents. They dominated the discussion during many points of the interview with most respondents.

The proposition that requires support is:

"Costs play a role in the strategic sourcing procurement decision."

The following statements were selected to support the proposition:

Cost drivers model is used – The sourcing department uses a model that breaks the costs of an item down into different drivers. This could include commodity indexes, material costs, labour costs, transport costs and internal costs.

Total cost of ownership used – The cost of a product throughout its lifecycle is included.

Value in use models are utilised – The cost vs. benefit analysis for an item is included during the costing of an item. The tradeoffs between different qualities of raw materials or the trade-off between different supply locations against different use destinations is analysed by the strategic sourcing team.

KVD trees are used – A specific methodology of Key Value Driver (KVD) trees is used. This includes the actual commodity cost drivers, supply drivers (such as transportation) and usage drivers (such as the productivity of an internal operation).

TCO (Total Cost of Ownership) measured continuously – The TCO is measured on a monthly or quarterly basis and not just at the time of the sourcing decision.

Three-quote system is used – A three-quote system was specifically mentioned during the interviews.

The results are presented in Table 13 below and use the same categorisations as previously discussed.

Table 13 Statements for costs

Theme	Proposition / Other	No. answered	No. supported
Cost drivers model	P	7	7
Total cost of ownership used	P	7	5
Value in use models utilised	P	7	4
KVD trees	P	7	3
TCO cost measured continuously	P	7	4
Three quote system	P	7	1

6 DISCUSSION OF RESULTS

6.1 Techniques used in strategic sourcing departments

6.1.1 Cross-functional teams

As discussed in the literature review, cross-functional teams are required for the strategic sourcing process because they provide flexibility, multi-functional knowledge, control, co-ordination mechanisms and a fast response.

"Cross-functional sourcing teams are used in strategic sourcing departments" was discussed by all respondents and supported by six (out of seven) of them. There was an extremely strong belief in the benefits of team work amongst most respondents and significant effort was put into co-ordinating this effort. One respondent stated: "In most businesses you make money by working separately, but you save money by working together, which is quite tricky to do."

All the teams are organised around commodities. Commodities are usually defined by a raw material class such as brass, plastics and services. Some companies have made sure that the definition of the classes also takes into account the business structure; this aids easier interaction between procurement and the rest of the business.

However, the manner in which cross-functional teams are structured is significantly different between different businesses. There are a number of distinct characteristics that differentiate the teams. These include the structure and leadership of the team, and roles and responsibilities of team members.

The team membership always includes a member of the sourcing department. A high number of companies (five out of seven) have teams that are made up entirely of members of the sourcing department. This is contrasted with two of the companies whose teams are made up of team members that are drawn from across the business.

The teams with only sourcing staff members have different structures but there is significant similarity in these structures. A typical structure for a single team is shown in Figure 1. A respondent stated that “a typical team will have a commercial resource and a technical resource”.

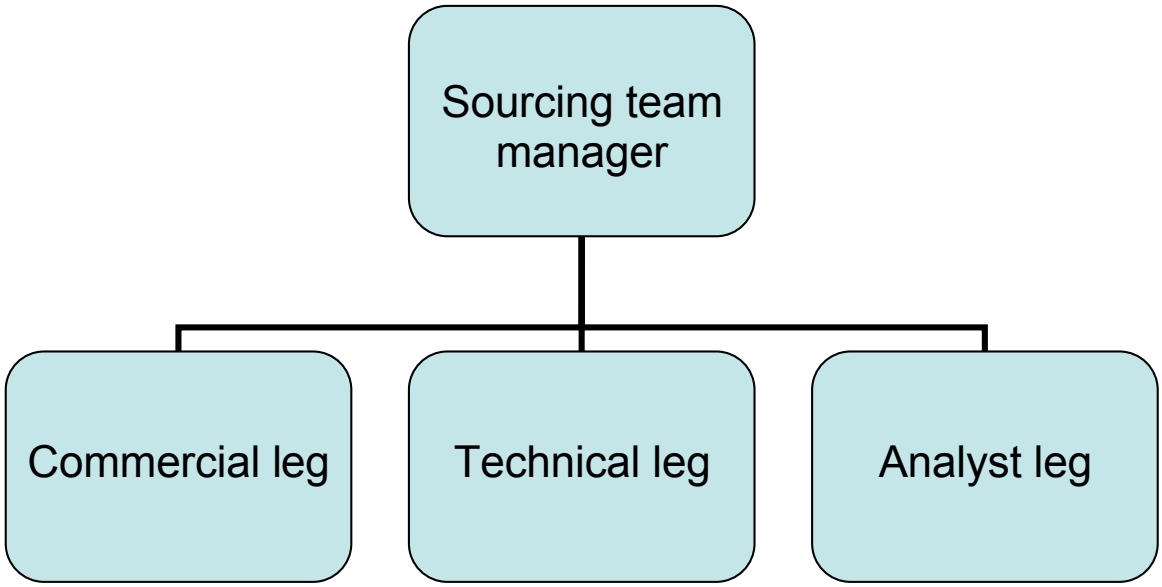


Figure 1 Typical sourcing team for a sourcing department cross-functional team

The three legs have the following responsibilities for most of the respondents that have an team that are all members of the sourcing department:

Commercial leg – Responsible for cost aspects, contracts and freight costs.

Technical leg – Responsible for interacting with the end users of the product in the business. This person needs to understand the end user’s needs and the product specification. They are also responsible for changes in specification of product and technical interaction with the supplier.

Analyst leg – Responsible for extracting data from company systems to provide data for the team and to track the results of the team. This data could include cost data, usage data and in some companies other data around product or process usage. This is discussed further in section 6.1.2.

The two companies whose teams are made up from across the business typically consist of a member from the sourcing department (who may or may not be the leader), members from the primary business unit that is using the product, and an array of members from departments such as finance, safety and health, and secondary business units. One respondent stated: “There is no hard and fast rule which says that each commodity team must be led by a supply chain person. It is really what fits. And in some cases it is actually easier to run a commodity team which is led by an operations guy, because that is where the resistance comes from.”

The teams with only sourcing members have a stronger set of KPI’s (Key Performance Indicators) than those who have cross-functional teams. A large number of the cross-functional teams did not have clear KPI’s. The teams that consisted of members only from the sourcing department were also more directly incentivised, whilst the cross-functional teams did not have direct financial rewards for their sourcing efforts.

The teams that consist of only sourcing department members have all been engaged in the sourcing effort for a longer period of time (refer to Table 14). There is a stronger relationship between the length of time practising a strategic sourcing effort and the structuring of a team with technical, commercial and data-gathering legs. Table 14 shows that more companies that had been practising strategic sourcing for more than five years tend to have this team structure. It should also be noted that all the companies who had been practising strategic sourcing for more than five years and had the team structure consisting of a technical, commercial and data gathering leg had used the same consulting company during setting up a running their strategic sourcing departments. This could also be a cause of the structure.

Table 14 Relationship between time practising strategic sourcing and team structure

	Less than five years practising strategic sourcing	More than five years in practising strategic sourcing
The primary team is made up of staff who work for sourcing	2	3
The sourcing teams have an internal technical, commercial and data leg	1	3

A large subset of the respondents teams rely heavily on resources that are directly part of the sourcing department. For example, technical staff and project leaders work for the sourcing department. This differs from the normal definition of a cross-functional sourcing team as a team that includes people from different functional areas of the organisation. However, the members of the teams in the procurement department have typically spent the bulk of their careers in other parts of the organisation, in technical or leadership roles, so they bring this experience with them. This may be to counter some of the key problem areas that Trent and Monczka (1994) identify in successful sourcing teams, including required services and help from others, time availability and budgetary support.

6.1.2 Process and value-chain mapping

As already discussed, benchmarking and Total Cost of Ownership, which can be seen as part of this section, have been discussed under costs (section 6.2.5.) There is strong support for these two concepts in strategic sourcing.

There was strong support for mapping of Key Value Driver Trees (KVD) trees by the respondents. Three out of six respondents who answered questions about process and value chain mapping use Key Value Driver trees when sourcing from strategic suppliers. There is little available literature on Key Value Driver trees. One of the few sources referring to Key Value Driver trees discussed them in a context around setting strategy in organisations (Ameels et al., 2002). The paper also compared different strategy setting processes of companies. This is not directly comparable to

using them in sourcing, although the emphasis of the key drivers on savings is similar.

The Key Value Driver tree process is a relatively simple process were the key costs of an item are broken down into different value drivers. A partial example for truck tires is shown below in Figure 2. The Key Value Driver tree divides the costs for a purchased item into underlying commodity index, the relationships between them and factors that influence how much of an item is consumed.

The drivers for the cost would include all the cost indexes for a product including underlying commodity costs, exchange rates, importation costs and agency fees. The drivers are laid out in multiple layers, showing how they influence cost build-up. The underlying assumption is that this allows people to understand that the drivers impact on the total cost and spot opportunities for improvement. The example shown in Figure 2 for spend on tires shows the different underlying indexes such as rubber and exchange rates.

The other leg of the KVD tree consists of the drivers that influence the usage of the bought out item. The example shown in Figure 2 for truck tires shows usage drivers such as road condition and distance travelled. These drivers are highly dependent on the item being purchased and its intended usage. Not all the respondents who worked with KVD placed much emphasis on this leg. However, a number of respondents discussed success stories that showed very significant savings by working on this side of the tree.

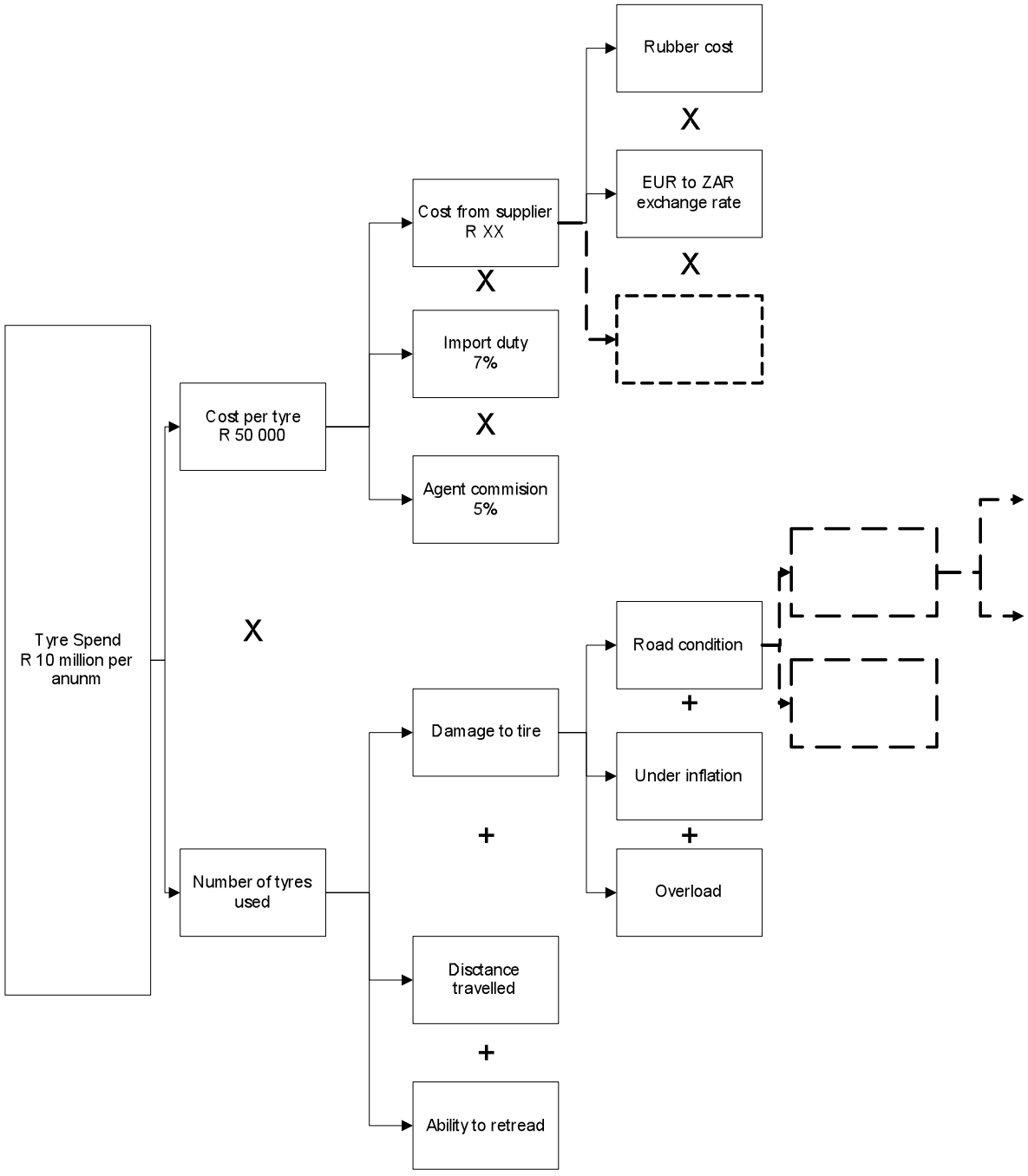


Figure 2 Key Value Driver (KVD) tree example (interview N.Badenhorst, Dec 2006)

There was no support for mapping of supplier's processes. This could be due to the companies surveyed or South African sourcing differences. The companies surveyed bought a large amount of commodity type product where arms-length relationships are the norm. The literature review states that many Western

companies have traditionally not played significant roles in supplier development or processes, and this may still be the case in South Africa.

6.1.3 Transactional and IT systems

The interviews undertaken showed that all of the respondents are using IT systems in their strategic sourcing process. However, these systems are not very sophisticated, integrated, holistic or purpose built.

The bulk of the companies (five out of seven) interviewed use IT systems to benchmark their costs. Most of the companies use spreadsheets to benchmark different supplier prices or use spreadsheet models to build up pricing models. There was also isolated support for companies that build up some industry information on internal internet networks.

The bulk of the companies (five out of seven) were also using IT systems to track supplier relationships. The bulk of the companies were primarily tracking delivery performance using their ERP systems and stated that the tracking and management of supplier relationships was a general area of weakness. Delivery performance weakness was also tied in to general supplier interaction weaknesses. This is discussed further in section 6.1.4.

No companies were using electronic design data interchange with their suppliers. This might be due to a bias in the sample to the heavy manufacturing / commodity industry in South Africa. The amount of design data is likely to be lower for suppliers whose key purchases are raw materials.

Three of the respondents stated that they used a contract database. This allows the terms of agreements with suppliers to be stored in a common repository. This is often considered a cornerstone of a centralised sourcing effort so the low number is surprising. This data may be stored in other forms at the other companies or central IT systems such as SAP may be used to spell out the terms to the business.

Whilst IT systems are being used for strategic sourcing, IT support systems are generally standard ERP packages and standard office applications (e.g. spreadsheets) customised for strategic sourcing use. There is little if any support for IT systems that are designed to specifically support the strategic sourcing effort. The only exception, being companies with a global contract database. This is in agreement with the global situation where most companies have their own specialised electronic systems that assist them with the strategic sourcing effort (Smock et al., 2007).

Two IT issues were continually and strongly brought up by a large subset of the respondents:

Six out of seven of respondents discussed material coding efforts. Material coding occurs when a company attempts to create codes that allow it to categorise and group spend. Many of the large companies were still putting significant effort into this attempt. This is considered a an early building block in a strategic sourcing effort.

Furthermore, it is interesting that all of the respondents were using the SAP ERP system within their business. The system is used to heavily support the strategic sourcing effort. The significance cannot be derived from this study.

6.1.4 Supplier formal development and tracking

Only four out of seven of the respondents have a standardised supplier measurement system in place. These systems ranged from relatively simple systems tracking delivery and quality performance and ranking suppliers to systems that allocate differing levels of business, to suppliers based upon a multitude of criteria. The measurement of suppliers is considered a basic building block of procurement and the knowledge would normally be required for a strategic sourcing effort.

A further three out of seven of the companies are working on new or significantly improving their supplier measurement systems. A number of companies believed that this was a weak part of their strategic sourcing effort. One respondent stated, “We put contracts in place and then forget about them.”

There was little evidence of direct influence on a supplier’s manufacturing process. Only two of respondents had influenced supplier’s manufacturing processes (only three respondents answered this question) – a large amount of this influence was around safety standards and basic quality systems. There was mention of improved technology access, although the specific cases were linked to BEE (Black Economic Empowerment).

There was moderate support (four companies out of the seven discussed this) of suppliers being encouraged by their customers to understand their customer’s business. One respondent stated: “We also try to make them understand that they are important to our business. We are not at arm’s length, we try and get them involved in our business.”

6.1.5 Alignment of sourcing with corporate strategy

The sourcing strategy is set centrally by all the respondents and there is involvement from the business units and hence alignment with business strategy. Most strategic sourcing frameworks (McIvor, 2000; Cánez et al., 2000; Brannemo, 2006) require alignment of sourcing strategy with company strategy as a vital step.

However, only three out of the seven respondents gave evidence of more than cost savings being considered as part of the sourcing strategy from the business. The bulk of the links to strategy in almost all the businesses surveyed were about cost reduction as the strategic imperative. In a few businesses, capacity, safety and quality were also important. This contrasts with the bulk of literature (Anderson and Katz, 1998; Smock et al., 2007; Jennings, 2002) that states that a large number of factors should be considered when making a sourcing strategy.

Three (out of five who answered this particular question) companies have a regular forum where senior business management and sourcing management meet to evaluate performance and set goals. In order to enforce alignment of strategy between sourcing and the business, four of the companies remove planned savings from the business unit budgets when the strategy is agreed upon.

All the respondents measure the sourcing savings centrally in procurement and report a consolidated figure.

6.1.6 Formal sourcing process

Six (out of seven) of the respondents had a formal supplier selection process. The process of selecting a supplier in these companies was formally mapped out. In most companies it consisted of taking into account the commodity being sourced, the supply market and associated risks, understanding cost drivers, and finally, supplier interaction and contract negotiation. All of the companies had formally developed processes. These processes were customised for the companies' needs. Some of the companies had full training programmes for their staff and a number of them audited their staff for process compliance. The processes are similar to those discussed in the literature review in section 2.3.6.

The need for a larger process for the management of the entire strategic sourcing effort was also relatively strongly supported with five (out of seven) of the respondents having a formal process.

The process consisted of similar steps around the teams' commodity focus, strategy development and implementation, as discussed in the literature review in section 2.3.6.

However, the companies placed specific emphasis on the process of agreeing on strategy and monitoring it. This included a formal process of agreeing a strategy with the business unit, frequent monitoring of this strategy in conjunction with the business units, and implementation of methods to ensure the business units (and

sourcing team) achieve the strategy. This would include removing agreed targeted savings from the business unit's budgets ahead of time to further encourage compliance.

The respondents stated that there are frequently problems with the handover of new sourcing strategies to the business. As one respondent stated, "What we found tough was not getting the type of traction that we needed." This could be due to the lack of business ownership, prioritisation or sourcing knowledge in the business units. The audited tracking of savings using a formal methodology and external parties was also frequently discussed.

It is interesting that, five (out of seven) of the companies had used McKinsey's strategic sourcing steps as a basis for their own processes. This has resulted in many similar ideas and is likely unique to South Africa perhaps due to the small size of strategic sourcing in South Africa.

6.2 Issues affecting the strategic sourcing procurement decision

6.2.1 Core competencies

There was no significant support for the consideration of core competencies. Only one company considers the company's core competencies when making a sourcing procurement decision. Even in this company, the process is new and few practical examples were discussed. This contrasts sharply with the literature as discussed in section 2.4.1 where core competencies form a critical part of strategic sourcing.

One reason for the lack of support may be due to the fact that the sourcing department does not play a key role in the outsourcing decision. Only two of the respondents play any role in an outsourcing decision, and these roles appear to be minor.

Strategic decisions around what to in-source and out-source and the effect that this has on a company's competencies are not considered by the sourcing department.

This is likely to be risky given the risks of losing or mismanaging core competencies as discussed by McIvor (2000).

6.2.2 External environment

Nearly all of the companies (six out of seven) conduct benchmarking of the external supply environment, when making a procurement decision, particularly around cost. A number of companies stated that this was a vital competency that took time to develop in their teams. One respondent stated: "That is one of the key competencies that you want in your team. To make sure that people are able to access external sources of information on what is happening in the market."

Four (out of seven) of the companies also benchmark themselves against their competitors. Some of the companies only assess the suppliers of their competitors in order to understand sourcing opportunities; others assess their company's positioning in the market, whilst others benchmark their internal processes (this is discussed further in section 6.2.5.)

None of the companies' sourcing teams evaluate customers and their needs or requirements. This is likely considered by other parts of the business. However, it is not clear how this information gets to the sourcing department. The customer needs would play an important role in determining strategic sourcing procurement decisions.

6.2.3 Product and process technology

There was no attempt to assess the companies' product and process technology relative to competitors and the competitive advantage provided by their process technologies. This is because the sourcing department was the only department surveyed and not other parts of the business. A number of respondents made statements saying that process technology is not relevant in their sourcing environment.

Three (out of seven) of the respondents consider their own process technology when making sourcing decisions. This is generally considered for processes and technologies that are core to the business. The link between the technical departments in the companies and the sourcing department is weak; two of the respondents stated that they had difficulty in obtaining data from elsewhere in the company.

Two of the companies are analysing their suppliers' processes. This involves general systems issues such as ISO (International Standards Organisation) listings, level of technology and research, and development facilities. There is no significant direct input into the supplier's actual manufacturing processes and control systems. One respondent stated that Toyota needs to put a lot of work into their suppliers' manufacturing processes as their suppliers' process quality directly influences their end product quality. However, in their industry, mining, the quality of the Caterpillar truck used by their suppliers does not influence the quality of coal delivered and hence has no impact on the final steel product made by the company. A large amount of the respondents are from resource based industries in this survey and hence the same lack of a need to focus on a suppliers processes may apply to them.

6.2.4 Demand variability

None of the respondents consider demand variability when making a sourcing procurement decision. This may be due to the bias of the suppliers to resources and heavy manufacturing. Another reason may be the lack of involvement of the sourcing department in outsourcing decisions (as discussed in 6.2.1).

Two out of seven respondents took information complexity into account when making a sourcing procurement decision. A number of the businesses stated that more complex operations were kept internal. The information complexity might play a role in the decision to keep these internal. However, not enough information to make a conclusion was supplied.

6.2.5 Costs

All of the respondents use a cost model that looks at the key cost drivers for an item. This will usually include key commodity indexes, currencies and transportation. The more sophisticated respondents build up a "should cost" model from a zero base. This incorporates all drivers and costs, and allows them to argue any price changes with their suppliers from a position of greater strength.

Five out of the seven respondents are using Total Cost of Ownership (TCO) models. Direct costs, indirect costs, internal costs and opportunity costs are taken into account here. A number of the suppliers who are using TCO are currently using it for only CAPEX spend and larger items. They plan to extend it to operational expenditure in the future. Four (out of seven) of the respondents track the TCO continuously; the rest of the companies only assess the TCO at inception. The more sophisticated companies hence assess the planned and actual total expenditure.

Three (out of seven) of the respondents are using KVD trees to reduce cost. One respondent stated that savings opportunities are as follows:

- Price – 3-5%
- Specification – 10-15%
- Usage – 20-30%

The KVD models are dicussed in further detail in section 6.1.2.

One of the companies that has been involved in strategic sourcing for the longest period of time has also developed two further cost models:

Value in use models – A full cost driver model, for each commodity, is built up. In addition, the effect of different specifications for different raw materials on the manufacturing process is quantified. For example, different quality materials could

produce different quantities of scrap or require more or less of other raw materials to produce the correct product. The ratios of end product grades could also differ. This model will optimise spend on raw materials to minimise production costs and maximise the product yield.

Global allocation model – A company that has global operations is working on a model that takes into account raw material costs, transportation costs and plant costs to optimise what raw materials are delivered to which plants in a global group.

7 CONCLUSIONS

7.1 Support for techniques used in strategic sourcing departments

A number of statements around the research proposition examining the key techniques used in strategic sourcing departments have been discussed.

In order to build a model for the strength of support for each proposition, a table is shown below (refer to Table 15). The table shows support for each proposition as "Strong" or "Weak". This is derived by taking all the individual statements that were directly relevant to each statement, counting the positive responses and calculating a mean. If the mean is four or above (out of seven respondents) the support for the proposition is categorised as "Strong", otherwise it is categorised as "Weak". A full version of the table with calculations is shown in Appendix C – Summary of interview results.

Table 15 Support for sourcing techniques propositions

Propositions	Weak	Strong
Cross-functional sourcing teams are used in the strategic sourcing process.		X
Value-chain mapping is used in the strategic sourcing process.	X	
Information systems are used in the strategic sourcing process.		X
Formal relationships and measures with suppliers are instituted and used in the strategic sourcing process.	X	
Strategic sourcing is aligned with corporate strategy.		X
A formal sourcing process is used		X
Count of 'Weak' and 'Strong'	**2**	**4**

Cross-functional sourcing teams have strong support in the companies surveyed. This corresponds with the literature. As discussed, the respondents surveyed are

using a number of innovative structures, including using multi-disciplinary teams with only sourcing staff members.

The support for value-chain mapping in strategic sourcing departments is currently weak but growing. The most mature companies using strategic sourcing are utilising forms of value-chain mapping. KVD trees are a dominant method for the respondents using value-chain mapping.

There is strong support for the use of information systems to support the strategic sourcing effort. What is perhaps surprising is that a large percentage of the respondents are focusing on simple IT issues such as common coding of spend items. Few companies are using IT systems specially developed for strategic sourcing with basic ERP functionality and Excel spreadsheets dominating.

There is relatively weak support for formal supplier relationship management in strategic sourcing departments. Most companies acknowledge this as a weakness and have plans in place to try and improve it.

There was strong support for the alignment of corporate strategy with sourcing strategy. The sourcing departments place emphasis on frequent formal meetings with various levels of the business in order to refine and adjust the strategy.

There was strong support for a formal sourcing process. This would involve managing both the process of sourcing from a supplier and the process of managing the greater strategic sourcing process within the company. Emphasis was placed on interaction with the rest of the company and measurement of savings and timelines.

There is a strong correlation between the literature and the techniques that the respondent companies consider important in their strategic sourcing process. Where the support is weak, companies are working at improving these areas. The more mature sourcing companies are already using these techniques. A number of unique uses of these techniques were identified. The techniques being used by leading strategic sourcing companies in South Africa (as per the sample) are similar to those being used globally.

7.2 Support for issues affecting the strategic sourcing decision

A number of propositions around the key issues that influence the strategic sourcing procurement decision have been examined.

In order to build a model for the strength of support for each proposition, a table is shown below (refer to Table 16). The table shows support for each proposition in a similar manner to the table in section 7.1. A full table with calculations is included in Appendix C – Summary of interview results.

Table 16 Support for sourcing factors propositions

Propositions	Weak	Strong
Core competencies play a role in the strategic sourcing decision.	X	
The external environment plays strong role in the strategic sourcing decision.	X	
Product and process technology plays a role in the strategic sourcing decision.	X	
Demand variability plays a role in the strategic sourcing decision.	X	
Costs play a role in the strategic sourcing decision.		X
Count of 'Weak' and 'Strong'	**4**	**1**

Core competencies do not play a major role in strategic sourcing procurement decisions in the respondents companies. This may be due to the fact that the sourcing department is not the leader in outsourcing decisions. However, given the power of the sourcing department over important relationships and the high risk of competencies being lost to the organisation, this is surprising.

The external environment is not taken into account strongly when making a sourcing procurement decision. Notably, the respondents did take into account the external supplier environment and showed a moderate interest in the competitor environment. However, the full picture of the entire value chain was not taken into account.

Product and process technology did not play a significant role in the sourcing procurement decisions of the respondents. This may be due to the fact that the companies do not participate in the outsourcing process or the fact that the majority of the respondents were not in high technology industries. It might also represent the retention of product and process knowledge within the business units and a focus on costs in the sourcing function.

Demand variability did not play a large role in sourcing procurement decisions. This may be due to the industries from which the respondents originated from and the large focus of the sourcing departments on basic commodities and low-level services. Few respondents talked about sourcing for high complexity products or services.

Costs naturally play a large role in strategic sourcing procurement decisions. The respondents used a large number of models to try and understand and cut costs.

The factors considered when making a strategic sourcing procurement decision and those identified in the literature do not correlate well. This may be due to the sample coming from relatively heavy industries or a South African peculiarity. However, the author believes it is more likely due to lack of involvement that sourcing departments have in strategic outsourcing decisions.

7.3 Conclusion and opportunities for further research

The techniques identified as important in a strategic sourcing department show that the leading South African companies interviewed are using similar techniques to the global leaders, and similarly, that the more mature companies are using more sophisticated techniques. The key issues that influence a strategic sourcing procurement decision are not the same as those identified in the literature and show that the interviewed companies' procurement departments are not involved in strategic outsourcing decisions. Further research over the issues that influence strategic sourcing procurement decisions is required.

Further avenues for research could also include: the small size of the South African strategic sourcing community and the dominance of certain strategic sourcing methodologies because of this. The strong use of KVD trees in South African could also be compared to other countries.

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APPENDIX A – INTERVIEW OUTLINE

Pre-interview information gathering

The following information needs to be gathered and taken into account before conducting an interview:

The name and position of the respondent;

The respondent's roles and responsibilities;

A short description of the business of the company;

The key sourced items for the company;

Company structure – i.e. is the company locally run or are they a subsidiary of an international organisation?

Interview schedule

The interview schedule does not contain any structured, closed questions, since the interview needs to remain flexible to allow for any relevant information to emerge.

Interview Schedule
1) What strategic sourcing techniques do you use your procurement department? Which techniques do you find successful and why? How do you use the techniques? What problems have you had with the techniques? 2) What issues do you take into account when making a strategic sourcing procurement decision? How do you take these issues into account? What problems have you had with these issues? What successes have you had with these issues?

Important points to note:

During the interview special attention needs to be placed on any issues or techniques that are not listed.

Any South African or developing economy points need to be further developed if mentioned.

For the points that are identified in the literature but that are not mentioned by the respondent, the following prompts should be used to elicit more information.

What strategic sourcing techniques do you use your procurement department? Which techniques do you find successful and why?
The following sentence can be used with the points below: Do you use *[bullet point]* in your strategic sourcing/procurement department? How is *[bullet point]* used? What problems/success have you had with *[bullet point]?*
- Process and value chain mapping; - Cross-functional sourcing teams; - Information systems? What changes have been necessary? - Supplier relationship management / tracking? - Corporate strategy; - Formal sourcing process;

What issues do you take into account when making a strategic sourcing procurement decision? Why are these issues chosen?
The following sentence can be used with the points below: Do you take *[bullet point]* into account when making a strategic sourcing prodcurement decision? How do you take *[bullet point]* into account? What problems/success have you had with *[bullet point]?*
- Core competencies - The external environment - Competitors, suppliers - Product & Process technology - Information complexity and variation - Costs

During the interview a recording form was used to ensure that the interviewer recorded information under the correct categories. The recording form is attached on the following three pages.

Strategic Sourcing Questions - Matrix to Capture Data

Interviewee	
Interviewer	
Company	
Position	
Role	
Date & Time	

Techniques used in strategic sourcing departments

	Cross-functional sourcing teams	**Process and value chain mapping**	**Transactional and strategic IT systems**	**Supplier formal relationship development and tracking**	**Alignment of sourcing with corporate strategy**	**Formal sourcing process**
Generic						
How often are they used?						
In what situations are they used?						
What success are they used with?						
South African specifics						
Succesful examples						
Problems and challenges with:						

Specific

What kind of staff are in a team?		Across industry?		What kind of info is pulled?		Formal system?		Are goals formerely aligned?		Global process or local	
Full time / part time		Into key cost drivers?				Measures?		Strategic to company?		Based on an industry process	
How is the team measured?		Benchmarking used?								Steps?	
How is the team rewarded?											

Issues taken into account for a strategic sourcing procurement decision

	Core competencies	**External envirnonment**	**Product and process technology**	**Information complexity and demand variation**	**Costs**
Generic					
How often are these factors taken into account?					
How are the factors taken into account?					
South African specifics					
Succesful examples					
Problems and challenges with:					

Specific

Defined for sourcing?		Competitors		Consider suppliers		Formally assessed?		Life cycle costing?	
Corporate-wide		Suppliers		Consider own technology		How does it influlence the decision making process?		Transactional costs?	
		Customers						Formerly captured over time?	
		Technology position							

APPENDIX B - CONSISTENCY MATRIX

What are the key techniques in strategic sourcing departments and the issues in a strategic sourcing procurement decision in South Africa?

Propositions	Source [Only Key sources listed]	Data	Method of Analysis	Results areas
The key techniques used within strategic sourcing departments are:				Highly used techniques Successful techniques and the why and problems South African specific tech
Cross-functional sourcing teams are used in the strategic sourcing departments.	Trent & Monckza, 1994; Quinn & Hilmer, 1994	Structured interview – specifically Q 1	Content analysis to determine key problems with factors and SA specifics Tabulate techniques used by each company Identify prevalent techniques	
Value chain mapping is used strategic sourcing departments	Handfield, Krause, Scannell & Monckza, 2000	Structured interview – specifically Q 1	As above	
Information systems are used in strategic sourcing departments.	Quinn, 1999	Structured interview – specifically Q 1	As above	

Propositions	**Source [Only Key sources listed]**	**Data**	**Method of Analysis**	**Results areas**
Formal relationships and measures with suppliers are instituted and used in strategic sourcing departments.	Morgan & Monckza, 2003; Cater, Carter, Monckza, Slaight & Swan, 2000	Structured interview – specifically Q 1	As above	
Strategic sourcing is aligned with corporate strategy.	David, Hwang, Pei, Reneau, 1999	Structured interview – specifically Q 1	As above	
There is a formal strategic sourcing process.	Liu & McGoldrick, 1996; McIvor, 2000	Structured interview – specifically Q 1	As above	
The key issues that influence a strategic sourcing procurement decision are:				Validity of propositions Majority opinions Contrasting views South African specific problem issues.
Core competencies play a role in the strategic sourcing decision.	Quinn & Hilmer, 1994; Anderson & Katz, 1998; Jennings, 2002; McIvor, 2000	Structured interview – specifically Q 2	Content analysis Tabulate relevance of issues by respondent and company	
The external environment is taken into account during the strategic sourcing procurement decision.	Jennings, 2002; McIvor, 2000	Structured interview – specifically Q 2	As above	

Propositions	Source [Only Key sources listed]	Data	Method of Analysis	Results areas
Product and process technology plays a role in the strategic sourcing procurement decision.	Nayak & Welch , 1992; Sislian & Satir, 2000; Anderson & Katz, 1998	Structured interview – specifically Q 2	As above	
Demand variability plays a role in the strategic sourcing procurement decision.	Apte & Mason, 1995; Sisilian & Satir, 2000	Structured interview – specifically Q 2	As above	
Costs play a role in the strategic sourcing procurement decision.	Anderson & Katz, 1998; Jennings 2002	Structured interview – specifically Q 2	As above	

APPENDIX C – SUMMARY OF INTERVIEW RESULTS

Research questions / Propositions	Weak	Strong	Total
What are the key techniques used when implementing the strategic sourcing decision making process?			
Propositions	**Weak**	**Strong**	**Total**
Cross-functional sourcing teams are used in the strategic sourcing process.		X	4.7
Value-chain mapping is used in the strategic sourcing process.	X		2.0
Information systems are used in the strategic sourcing process.		X	4.0
Formal relationships and measures with suppliers are instituted and used in the strategic sourcing process.	X		3.3
Strategic sourcing is aligned with corporate strategy.		X	4.3
A formal sourcing process is used		X	5.5
Count of 'Weak' and 'Strong'	**2**	**4**	
What are the key issues that influence the strategic sourcing decision?			
Propositions	**Weak**	**Strong**	**Total**
Core competencies play a role in the strategic sourcing decision.	X		1.5
The external environment plays strong role in the strategic sourcing decision.	X		3.3
Product and process technology plays a role in the strategic sourcing decision.	X		1.7
Demand variability plays a role in the strategic sourcing decision.	X		1.0
Costs play a role in the strategic sourcing decision.		X	4.0
Count of 'Weak' and 'Strong'	**4**	**1**	

Permission to view full interview transcripts can be sought from the author.

Permission to view detailed interview results grouped by proposition can be sought from the author.

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