



**The value creation characteristics essential in the strategic
outsource to third party logistic providers within the automotive
industry**

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Abstract

Many companies are questioning the value created from logistics outsourcing. This is especially evident in contract logistics (specialised warehousing), given the increased commoditisation of transportation and distribution today. A clear need emerged to understand the value creation characteristics at play between third party logistics (3PL) providers and clients, and this formed the basis for this research. More specifically, the research sought to identify the elements driving the quality and functionality of value creation.

The research focused on the South African automotive industry limited to Original Equipment Manufacturers (OEM's) that had outsourced, were currently outsourcing or were planning to outsource their specialised warehousing. The research consisted of a phased approach in which key industry players (clients and 3PL's) were interviewed to understand and expand on the nature of the problem. A questionnaire was then sent out to the OEM's and quantitative analysis was undertaken on the data collected to answer the stated research propositions

It was found that client satisfaction was achieved through long term strategic relationships with 3PL's rather than a short term transactional approach. The value creation that was driving client satisfaction was being achieved through behaviour that sought stronger relationships, cooperation and strategic partnering with each other. Although there was a clear understanding on what the value creation characteristics were, the execution was unclear. Overall, the majority of OEM's that took part in this study indicated satisfaction with their 3PL providers.

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Masters of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It is not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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13 November 2008

Name

Date

Signature

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List of Abbreviations

3PL	-	Third Party Logistics
AVC	-	Added Value Chain Model
BPO	-	Business Process Outsourcing
CSI	-	Customer Service Index
FMCG	-	Fast Moving Consumer Goods
H-W	-	Hayes-Wheelwright
ICT	-	Information, Communications and Technology
KPI	-	Key Performance Indicator
LOI	-	Letter of Intent
OEM	-	Original Equipment Manufacturer
NAAMSA	-	National Association of Automobile Manufacturers of South Africa
NAACAM	-	National Association of Automotive Component and Allied Manufacturers
RBV	-	Resource Based View
SLA	-	Service Level Agreement
TCE	-	Transaction Cost Economics
SCM	-	Supply Chain Management

INTRODUCTION

Many companies have come to the realisation that logistics is no longer a core competency and have actively sought to progressively outsource their logistics functions to third party logistics (3PL) providers in order to strategically gain a significant competitive advantage (Hum, 2000; McIvor, 2000; Sohail *et al.*, 2006). Knemeyer and Murphy (2004) support this argument in seeing a definite rising trend in the outsourcing of logistics.

A competitive advantage is being realised through 3PL relationships increasingly moving away from the traditional transportation and distribution functions to that of inventory management (specialised warehousing), IT services (visibility through track and trace) and value add activities (secondary assembly and installation of products) (Göl and Çatay, 2007).

With the traditional transportation and distribution functions having become commoditised, it is in these new areas (specialised warehousing, IT services and value add activities) where value is being created in the supply chain (Langley *et al.*, 2000-2007). Some commentators have argued that the supply of 3PL warehousing has become commoditised to some extent and 3PL providers would need to enhance service provision (van Hoek, 2000). However the 3PL warehousing in this context refers to FMCG warehousing, falling outside the specialised warehousing category.

Research done by Deloitte and Touche in their Global Manufacturing Study (2003), found that three out of every five manufacturers surveyed had outsourced some or more of their

manufacturing, distribution, logistics and engineering functions. The main outsource drivers were lower costs (Franceschini *et al.*, 2003; Sahay and Mohan, 2006), increase operational efficiency, obtain new technologies, increase responsiveness to customers, enhance flexibility, focus on the core business (Sahay and Mohan, 2006) and to enter new markets (Franceschini *et al.*, 2003; Sahay and Mohan, 2006).

The ever increasing complexity of the market and supply chain, coupled with an increased focus on logistics to decrease costs, will ensure a greater likelihood for logistics activities to be outsourced. Given this view of the complex global logistics environment, logistics outsourcing will continue with its growth trend (Hugo *et al.*, 2004). The value created from outsourcing is unclear and needs to be validated in addition to the characteristics driving it.

CHAPTER 1 - RESEARCH PROBLEM

1.1. Definition of the Problem

Many companies are seeing relationships with 3PL's fail or companies are simply excluding them and in sourcing again, due to unmet expectations (Sahay and Mohan, 2006). Some studies have shown that a significant percentage of all 3PL relationships experience severe problems in the first two years of operation (Das and Teng, 2000).

A lack of strategic purpose and understanding in the initial decision to outsource (Hum, 2000; McIvor, 2000) and subsequently carried through into the outsourcing relationship, is leading to dissatisfaction with the value being created.

Hines (2004) states that by default, outsourcing leads to interdependencies between both parties requiring strong relationship management skills. Hence, the lack of collaborative inter-firm relationships between 3PL provider and client is adding to this destructive cycle whereby the creation of value becomes blurred, leading to dissatisfaction or the eventual demise of the outsource relationship.

A clear need emerges to gain a better understanding of the value creation characteristics at play between 3PL provider and client driving this value creation, and this forms the basis for this research.

1.2. Evidence identifying the problem and need for research

1.2.1. Strategic purpose and understanding

Little literature exists on the strategic management of the logistics function within an organisation, with specific reference to the strategic management (by the client) of the 3PL provider itself. Literature points to what 3PL providers should be seeking to provide in order to win outsourcing market share but not on how to strategically manage an outsource contract, in an attempt to provide the benefits and capabilities as required by the client (Hum, 2000).

Mclvor (2000) warned that companies should consider outsourcing decisions more carefully due to the perceived strategic implications it will have on future business performance. Outsourcing decisions impacted in the longer term on flexibility, customer service, workforce reaction to the decision and the core competencies of the organisation. In many cases, the outsourcing decision was found to have been handled solely by the purchasing department based on the short-term cost criteria rather than on long term strategic analysis (Mclvor, 2000).

Lonsdale and Cox (1998) stated that outsourcing decisions were rarely taken from a strategic perspective, with most adopting a short-term outlook motivated primarily by reduced costs and headcount. Hugo *et al.*, (2004) counters this argument by pointing out the fact that the importance of the outsourcing decision is being given more consideration because of its strategic implication in determining profitability and making a significant contribution to the financial health of the organisation.

1.2.2. The outsource relationship between 3PL provider and client

The importance of the inter-firm relationships between 3PL provider and client was becoming crucial. Globalisation, vertical disintegration, supplier base reduction, operational focus and outsourcing of non core activities were causing companies to rely more on 3PL's than in the past (Harland, 1996). However, inter-firm relationships were still an unknown. The comparison of expectations to that of performance ultimately determined satisfaction and the concept of 3PL relationship management assumed a greater significance for efficient supply chain management (Sahay and Maini, 2002a; Sahay and Maini, 2002b).

There was thus a growing need to move away from a traditional transactional relationship to one of collaboration between both parties. Simply choosing any 3PL was no longer good enough. Fierce global competitiveness and the heightened expectations of customers were forcing companies to forge collaborative partnerships with 3PL providers (Sahay and Mohan, 2006). Companies were realising the need to tie in the expertise and synergy of external supply chain partners (3PL's) in order to achieve success (Göl and Çatay, 2007).

However, establishing and monitoring any given outsource relationship took a considerable amount of management time and support and the benefits from outsourcing were not an automatic outcome (Lacity and Willcocks, 2001). Creating collaborative relationships by partnering, strategic alliances and even non-formal associations required highly skilled relationship managers (Hugo *et al.*, 2004) and hence it took effort to create the 3PL provider-client relationship.

1.2.3. Value measurement derived through outsourcing

Performance improvement and the financial benefits derived from outsourcing have become critical in order to justify the initial decision to outsource. Despite the growing emphasis on outsourcing, researchers have been unable to empirically and systematically pinpoint the impact on a company's performance metrics. Jiang and Qureshi (2005) referred to the outsourcing impact as a conceptual combination of cost reduction, productivity growth and profitability improvement initiatives. They uncovered three major gaps in current outsourcing literature. Firstly, much research had gone into understanding why outsourcing was such an attractive option. However, very little research had gone into the outsourcing impact on a company's performance and the value derived thereof. This was primarily due to the fact that these impacts had not been well documented. Secondly, the measurement of the financial impact of outsourcing was lacking. Much of the evidence gained by Jiang and Qureshi (2005) was based on managers' estimations in place of real measurement with most evidence anecdotal and case study orientated, often based on non-financial measurements. Finally, with the focus having been predominately on cost saving, the ultimate benefit of outsourcing (that of value creation) has lacked attention.

The decision to outsource certain functions needed to be based on the desire to create or protect company value. The company would then be able to focus on its most value-creating activities, thereby maximising the potential effectiveness of those activities (Jiang *et al.*, 2006).

Jiang *et al.*, (2006) supported the second finding of Jiang and Qureshi (2005) in stating that research considering the nature surrounding an outsourcing decision's result was likely to be essential and useful to future outsourcing management decisions. Most of the current available evidence was based on perceptual or self reported data. The emphasis needed to be placed on the use of financial measurement criteria to provide a more objective evaluation of a firm's outsourcing impact than that provided by the perception-based measurements typical of case studies and surveys (Jiang *et al.*, 2006).

Barthelemy and Adsit (2003) believed that the overly optimistic view of outsourcing associated with automatic cost reduction and performance improvement was derived from the fact that most articles about outsourcing were written during the so called "honeymoon" period (i.e. just before or after the contract was signed). The reported benefits were thus not realised but only projected.

1.2.4. The outsourcing decision and process

The majority of current logistics outsource literature has focused on the steps in deciding to outsource or not (McIvor, 2000; Franceschini *et al.*, 2003; Beaumont and Sohal, 2004; de Boer *et al.*, 2006; Kremic *et al.*, 2006).

Halldórsson and Skjøtt-Larsen (2006) found that much research has gone into models and frameworks of how companies approach the procurement of 3PL services. They further found that many academics chose to focus on specific phases of the outsourcing process or the functional explanation of the 3PL existence. Franceschini *et al.*, (2003) found that many authors focused their interest on only some phases of the overall process of outsourcing.

Jiang and Prater (2006) found that most outsource research to date has focused on three main areas: decision-, process- and results-orientated. Over the last decade, most academic studies have focused on understanding outsourcing decision determinants and how to control the outsourcing process. Fewer than 20% of all the studies had focused on the results of the outsourcing process. Selviaridis and Spring (2007) supported this finding when they comprehensively analysed 3PL research by topic. The majority of studies (67%) focused on the outsourcing decision and selection criteria and only 27% on performance measurement. Table 1.1 provides a summary of these findings on a number of existing studies covering logistics outsourcing, categorised by scope and level of analysis.

Research Scope	Appearance Frequency	Percentage	Level of Analysis	Percentage of Studies	Indicative Topics
Determinant	97	37%	Firm	67%	Outsourcing decision; Selection criteria; 3PL growth
Process	114	43%	Dyad	27%	3PL success factors; contracting, performance measurement
Result	52	20%	Network	6%	Logistics triads; Horizontal networks
	263	100%		100%	

Source: (Jiang and Gureshi, 2006, p.46)

Source: (Selviaridis and Spring, 2007, p.127)

Table 1.1: Existing Outsourcing Studies

1.2.5. Existing 3PL studies lack a theory base

The Selviaridis and Spring (2007) study undertook an extensive research on all literature (114 refereed journal papers) concerning 3PL outsourcing published between 1990 and 2005. The findings found that most articles involving 3PL outsourcing had a weak theory base and simply described trends in the industry. Those that did include theory, concentrated on theories such as transaction cost economics (TCE), the resource-based view (RBV), network theory, agency theory, competence theory and social exchange theory to explain

aspects of 3PL outsourcing. In most cases, the use of theory seemed to be the exception rather than the rule.

1.2.6. The unanticipated impact of outsourcing

Although the anticipated benefits seem clear, companies were not aware of the impact that outsourcing could have on other aspects of their business. Franceschini *et al.*, (2003) stated that initially, the idea of outsourcing was an excellent way to improve processes. He warned however, that if used improperly, it could lead to companies losing their skills and knowledge, something difficult to recover in the long term.

1.3. Purpose and Objectives

A growing number of academics (de Boer *et al.*, 2006; Halldórsson and Skjøtt-Larsen, 2006; Jiang *et al.*, 2006; Jiang and Qureshi, 2006) are actively researching whether outsourcing is creating value, what characteristics exist in order to measure or understand the nature of the value created and whether organisations are benefiting from the strategic decision to outsource.

The purpose of this study is to gain a comprehensive understanding on the characteristics of value creation between 3PL provider and client and then practically test whether these characteristics exist in a South African context.

The main objective is to explore the various characteristics at play between client and 3PL provider that influence value creation and this objective will be achieved via four focus areas which are:

- To role of a collaborative relationship between 3PL provider and client;
- The strategic implications when outsourcing to a 3PL provider;
- The effect that time has on value creation in the long and short term; and
- The inherent attributes that the 3PL provider must have in order to determine / influence the level of value creation expected from the client.

1.4. Relevance of this topic in a South African context

The advent of globalisation, an increase in competitive pressure, the subsequent growth in trade and increasing complexity in the supply chain are forcing South African companies to consider the international trend of business process outsourcing (BPO) of non core business functions (Harland, 1996; Berglund *et al.*, 1999; Hum, 2000; Barloworld Supply Chain Foresight, 2008). Logistics forms part of this trend.

Previous academic research, in relation to South African logistics outsourcing, has focused on the analysis of existing practices, trends, and issues surrounding logistics outsourcing (De Koker, 2003; Kujawa, 2003). Both research topics looked specifically at the broader outsourcing environment within South Africa, focussing largely on logistics.

The characteristics of value creation in South African logistics outsourcing, let alone the world, are not that well understood. With South African companies lagging behind in terms of global logistics trends, a positive for South African companies is in having a unique opportunity to learn from the mistakes made abroad and timorously change local strategy to avoid costly mistakes (De Koker, 2003).

South African 3PL providers and clients can use the value creation characteristics, defined in this research, to gain a comprehensive strategic understanding of the dynamics at play in order to realise the value creation between both parties in the long term.

1.5. Scope of the research

With transportation and distribution becoming increasingly commoditised, contract logistics (specialised warehousing) has become a new focus point for value creation within the overall supply chain (Langley *et al.*, 2000-2007). It is in this area where this study will aim to define the value creation characteristics between 3PL provider and client.

More specifically this study focuses on the South African automotive industry – one of the first movers to actively engage in business process outsourcing within South Africa. The study limits the companies to Original Equipment Manufacturers (OEM's) that have outsourced their warehouses and does not include first and second tier suppliers.

1.6. Outline of the research

Chapter 1 has defined the problem, supported by a literature review confirming the existence of the problem and the need for further research related to this topic. The objectives for the research have been documented in order to measure whether the research will have achieved its purpose and provided meaningful recommendations to the various stakeholders.

Chapter 2 consists of an extensive literature review that defines a relevant theory base in support of the research topic. The literature was then used to define the specific research propositions (limited to three) in chapter 3.

Chapter 4 describes the research methodology explaining the reasons for a two phased approach and the type of research chosen. Detail will be provided in terms of the population, sample size, sample method and data collection and analysis.

Chapter 5 summarises the main results of the research as gathered through the survey in the form of questionnaires. This is followed by chapter 6 in which these results are discussed in terms of the propositions defined in chapter 3.

The research is then concluded in chapter 7, summarising the main research findings and ends with recommendations to the potential stakeholders of this research topic.

CHAPTER 2 - LITERATURE REVIEW

2.1. Value Chain

The value chain was first described and popularised by Michael Porter in his 1985 publication, *Competitive Advantage: Creating and Sustaining Superior Performance*. It was used primarily as a strategic tool to systematically examine all the activities a firm performed and how these activities interacted with each other (McPhee and Wheeler, 2006). Collis and Montgomery (2005, p. 80) supported this in stating that “the value chain disaggregates all of a firm’s functions into discrete activities, each of which has its own determinants of cost (called cost drivers), and contributes to satisfying different customer needs”. A value chain is therefore a set of activities where products pass through all activities of the chain in order and some form of value is gained at each activity. The value chain is shown in Figure 2.1.

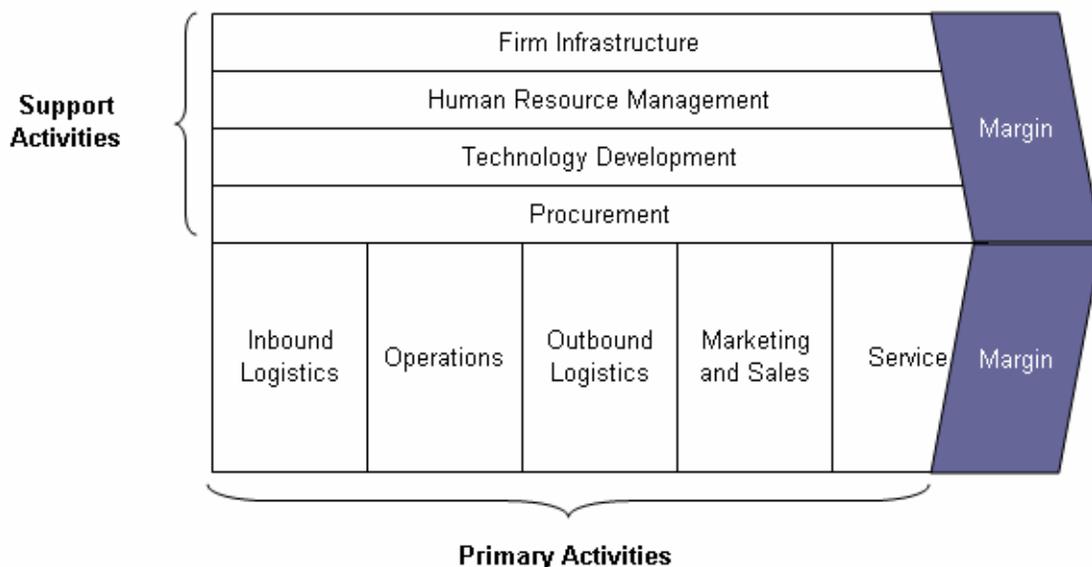


Figure 2.1: Michael Porter's Value Chain Model (Collis and Montgomery, 2005, p.80)

2.1.1. The Value Chain Model compared to the Added Value Chain (AVC) Model

The value chain concept has been extended beyond the individual organisation where activities were predominantly inwardly focused core activities. It was these activities from which companies traditionally derived their value in the form of customer value (McPhee and Wheeler, 2006).

McPhee and Wheeler (2006) have found that successful firms are now replacing inwardly focused strategy-development models (like Porter's value chain model) with alternative models that allow a broader view of the firm in respect of the world it interacts with as a whole. They argue that for the value chain model to be effective for the firm, a full representation of all the available activities should be included in the model, one of which is aimed at creating value through external relationships (i.e. partnering with 3PL's).

McPhee and Wheeler (2006) developed the Added-Value Chain (AVC) model which effectively expanded the set of business activities extracted from a broad range of business models. These included external networks, supply chain management (SCM), product use and end of primary use. Of key interest was the inclusion of outsourcing activities under product use and the application of SCM. These inclusions allowed companies a different approach in how they related or interacted with external parties. The model also included the complex management of external networks, including other firms and partners in order to co-create unique value.

According to McPhee and Wheeler (2006) no potential strategic activities were forgotten or overlooked for enhancing value. It was important that firms competing globally be aware of the effect that their choice of activities could have on their business and this included the use of external parties.

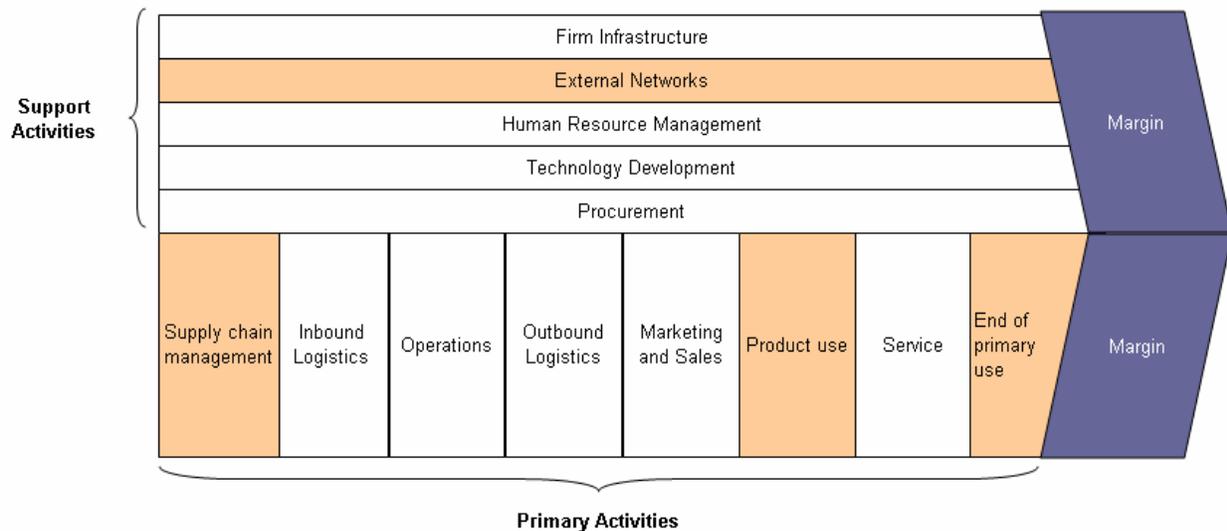


Figure 2.2: Added-Value Chain (AVC) Model (McPhee and Wheeler, 2006, p.41)

2.1.2. Supply Chain Management

Supply chain management (SCM) forms a subsection of the value chain as mentioned in section 2.1.1. The role of SCM is critical to the research problem in order to provide context to the issues and shortcomings highlighted in section 1.2 of this research. A comprehensive understanding of SCM is needed in order to define a 3PL and the role of the 3PL within SCM. Further insight will be gained into the 3PL industry from a South African and global perspective, before proceeding deeper into the theory base.

2.1.2.1. Supply Chain and Supply Chain Management defined

Hugo *et al.* (2004, p. 5) defines the supply chain as “a network of organisations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate customer”.

Vogt *et al.*, (2005, p. 7) uses the US based Council of Supply Chain Management Professionals definition of SCM as encompassing the “planning and management of all activities involved in sourcing and procurement, conversion and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, 3PL providers and customers”. Hugo *et al.*, (2004, p.5) defines SCM as “a management philosophy aimed at integrating a network (or a web) of upstream linkages (sources of supply), internal linkages inside the organisation and downstream linkages (distribution and ultimate customers) in performing specific processes and activities that will ultimately create and optimise value for the customer in the form of products and services which are specifically aimed at satisfying customer demands”.

2.1.2.2. Characteristics of supply chain management

The following characteristics are inherent in SCM, which effectively is a management philosophy (Hugo *et al.*, 2004). These are:

- SCM is a philosophy for conducting business in terms of sharing risk, benefits and rewards. This implies long term cooperation and trust between partners and for

joint planning and mutual exchange of information across all links of the supply chain.

- SCM implies optimised performance from all supply chain members across all processes and activities.
- SCM is based on a shared vision of what customer value is and therefore compatible corporate philosophies are essential in achieving that. The implication is that the top management of all channel members must be committed to the supply chain philosophy and must understand the mutual benefits and risks.

The existence of the supply chain is to create customer value and the 3PL provider (a channel partner in the supply chain) is playing an integral part of this as the outsourcing trend increases. Two cohesive forces are at play within the supply chain. The first is the need to share the benefits by all participants in the supply chain. The advantages of providing a more competitive and lower cost good or service must accrue to all members of the supply chain, including the 3PL. The second force at play is the impact of relationship management. This is crucial in integrating activities, processes and resources upstream and downstream in a continuous chain that optimises the flow of product and information in the supply chain (Hugo *et al.*, 2004).

2.2. Outsourcing defined

Where SCM forms a subsection of the value chain, outsourcing forms a component of SCM. It becomes important to get a brief understanding into the nature of outsourcing before delving into further detail such as the relevant role players. Beaumont and Sohal (2004, p.689) define outsourcing simply as “work that was formerly done inside the company now performed by an external organisation.” Outsourcing can further be positioned on a spectrum ranging from out-tasking to partnership. The following spectrum definitions are given:

- “Out-tasking connotes work being done outside the organisation, with the organisation retaining full control over the operation” (Beaumont and Sohal, 2004, p.690)
- “Partnering implies that the client passes discretion for how the task is to be done to the third party provider. In its strongest form, it means passing ownership and control of functions previously performed in-house, to an outside service provider who is expected to exercise judgment and skill. In a true partnership, both parties will strive to improve and adapt to changing business conditions of the outsourced business process and share cost savings or improved profits” (Beaumont and Sohal, 2004, p.690).

Van Laarhoven *et al.* (2000) defined the outsourcing of logistics activities to third party logistics providers as the activities carried out by a logistics service provider on behalf of a client and consisting of at least management, execution of transportation and warehousing. In addition, other activities included are inventory management, information related services and even supply chain management.

2.2.1. Third Party Logistics Providers (3PL's)

2.2.1.1. What is a 3PL?

A 3PL is an external company used to perform some or all of an organisation's logistic functions previously performed in-house (Bhatnagar *et al.*, 1999). De Villiers *et al.*, (2008) stated that this type of arrangement was commonly known as logistics outsourcing or contract logistics, where a third party fulfilled certain roles and responsibilities in the provision of logistics services between suppliers (first party) and customers (second party).

3PL's are specialist logistics companies that provide a differentiated service (order winners) through the investment in dedicated assets, technologies and processes (Bhatnagar *et al.*, 1999) and subsequently leverage these resources to reduce capital investment, supply chain costs and inventory. Further expected benefits are an improvement in customer service, implementation of industry best practice and the provision of operational and labour flexibility (Hugo *et al.*, 2004; Bhatnagar *et al.*, 1999).

Typical logistics outsourcing takes the form of establishing partnerships, alliances or long and short term contracts (Hugo *et al.*, 2004).

2.2.1.2. Trends in the global 3PL industry

Since 1996, an annual 3PL study (Langley *et al.*, 2000-2007) has taken place, to identifying and track key 3PL trends and the specific views of 3PL clients. The survey covers a wide range of industries including automotive, ICT, pharmaceutical, FMCG,

retail and fashion. Initially the study concentrated primarily on the US market and later expanded to Eastern Europe and Asia Pacific in 2002. South Africa was first introduced in a limited capacity in 2003 with Latin America added to the list in 2004. South Africa was excluded from the study from 2006 onwards. To date, over 6,393 executives have participated in the survey worldwide, with the number of respondents increasing from 163 in 2000 to over 1,430 in 2006 and 1,500 in 2007.

The following condensed findings (i.e. most relevant to the research topic) have been collated based on the reports from 2000 to 2007 (Langley *et al.*, 2000-2007):

- Over the last decade, the worldwide 3PL industry has grown at an annual rate of 10%. This is off annual highs of 18%-22% in 2000;
- The majority of firms have indicated satisfaction with their 3PL providers with an average satisfaction index higher than 80%;
- Warehousing remains the top outsourced activity within the supply chain followed by outbound distribution and then inbound transportation; and
- The 3PL market continuous to develop and is moving towards maturity.

2.2.1.3. The South African 3PL outlook

South Africa tracks international outsourcing trends but lags behind in terms of adoption. De Koker (2003) cited the relative small market place and narrow focus on tactical drivers (cost being the most important) as key reasons for this.

The South African market was currently undergoing an education process around the new generation of outsourcing services and the following demand and supply side drivers were evident in South Africa (De Koker, 2003):

- South African companies were starting to consider more strategic objectives for outsourcing their logistics functions;
- Adoption of logistics BPO services continued to expand, with new demand coming from the expanded scope of existing contracts as well as from companies that had never outsourced before;
- Companies were continuing to streamline their logistics BPO relationships. This was to achieve overall business flexibility, speed, cost reduction and to gain more control over the relationship;
- There was growing emphasis on the integration of disparate components in outsourcing contracts; and
- Access to technology had become an important driver of logistics BPO adoption.

Two South African research papers (De Koker, 2003; Kujawa, 2003) went on to forecast the future BPO (logistics) outlook for South Africa. Their findings were:

- Increasing accelerated pace of industry consolidation and service convergence;
- Organisations faced with competitive and cost pressures would be compelled to focus on their core competencies and look for external help in non-core areas;
- BPO engagements would increasingly be leveraged as means of gaining access to technology (software and skills) with BPO adoption gaining momentum as industry leading players challenged peers to take similar steps;

- The well established BPO logistics segment would continue to grow strongly;
- Client expectations would increase around the business benefits they stood to gain from BPO engagements;
- A key differentiator amongst competitors would be the business value that the BPO service providers brought to the client;
- SLA's would be adapted to allow for the success of the BPO engagement to be evaluated against business objectives; and
- Change management issues were becoming more important.

2.2.2. Strategic capability

Hugo *et al.*, (2004) concluded that outsourcing can only really add value in the long run if it was carried out from a strategic perspective and integrated into the overall strategy of the firm.

From a client perspective, any outsourcing decisions needed to be strategic in nature and the strategic capabilities of 3PL providers required extensive evaluation. Lonsdale and Coz (1998) found that most companies did not even take outsourcing decisions from a strategic perspective. McIvor (2000) also warned potential clients on the strategic implications any outsourcing decision could have on future business performance. Hum (2000) confirmed this by adding that attempts by 3PL providers to provide the strategic benefits and capabilities required by clients had not been well documented.

Hayes, Wheelwright and Clark (1988) described the strategic role that manufacturing played in any business and proposed the Hayes-Wheelwright (H-W) framework in order

to explain this strategic role. Hum (2000) adapted the (H-W) framework and extended it in order to assess the strategic management ability of 3PL providers. Companies outsourcing logistics expected 3PL providers to strategically manage their logistics. The implication for 3PL's was the need to build and possess logistics capabilities which were able to enhance the strategic effectiveness of the logistics function. The H-W framework emphasised the internal, in-house, ongoing improvement and the need to develop and build strategic capabilities using internal resources.

The extended H-W framework (Hum, 2000) provides two uses. First, it assists 3PL providers in understanding the strategic provision of logistics services to clients in order to unlock value to the client. Secondly, clients can operationalise it as an audit system to evaluate the strategic logistics effectiveness of 3PL providers.

The extended H-W framework consists of four stages (Hum, 2000).

Stage 1 implies a 3PL provider that is neither proactive nor locked into any particular technology. There is no strategic role between 3PL provider and client and the logistics effectiveness is focused internally within the 3PL (Hum, 2000).

In Stage 2 the 3PL provider adopts and follows industry practices which at best has the 3PL provider on par with the industry. The logistics effectiveness has now become externally focused to other 3PL's, still with no strategic role between 3PL provider and client (Hum, 2000).

In Stage 3 the 3PL provider is now internally supportive of the clients overall business strategy. All decisions are consistent in support of that strategy, requiring a reliance on the support of outside vendors with limited internal resources and capabilities (Hum, 2000).

Stage 4 has the 3PL provider taking on a strategic role externally supportive of the client's competitive positioning. This stage is marked by the continuous seeking for capabilities in anticipation of needs and to stay ahead of the competition. The 3PL provider acknowledges the cumulative value of continual enhancements in processes and technologies. This results in the nurturing and development of internal resources and capabilities and a focus on internal reliance. The effective integration of measurement systems, planning and workforce capacity is critical (Hum, 2000).

2.2.3. The outsource relationship

Current literature underpins the importance or reliance on a strong relationship between the 3PL provider and client (Halldórsson and Skjøtt-Larsen, 2004; Prahalad and Ramaswamy, 2004; Langlely *et al.*, 2003; Langlely *et al.*, 2004). To date however, not much research has been undertaken in understanding the exact nature of the required relationship.

Relationship management is a key performance area from an SCM perspective. Vogt *et al.*, (2005) mentions that SCM includes the co-ordination and collaboration with channel partners – 3PL providers being one such party. Hugo *et al.*, (2004) stated that that alliances and partnering are better suited to a 3PL provider – client relationship.

Hugo *et al.*, (2004) describes various types of relationships (depicted in Figure 2.3) that could be involved when outsourcing logistics to 3PL's. The diagram shows the broad spectrum of interaction levels and relationship progression involved. Traditional approaches have focused on the adversarial type of relationship where the focus is mainly on price (Franceschini *et al.*, 2003; Sahay and Mohan, 2006). Recent literature is indicating a greater need for partnerships where there is co-operation, co-ordination and collaboration between the 3PL provider and client (Halldórsson and Skjøtt-Larsen, 2004; Langley *et al.*, 2003; Langley *et al.*, 2004; Prahalad and Ramaswamy, 2004).

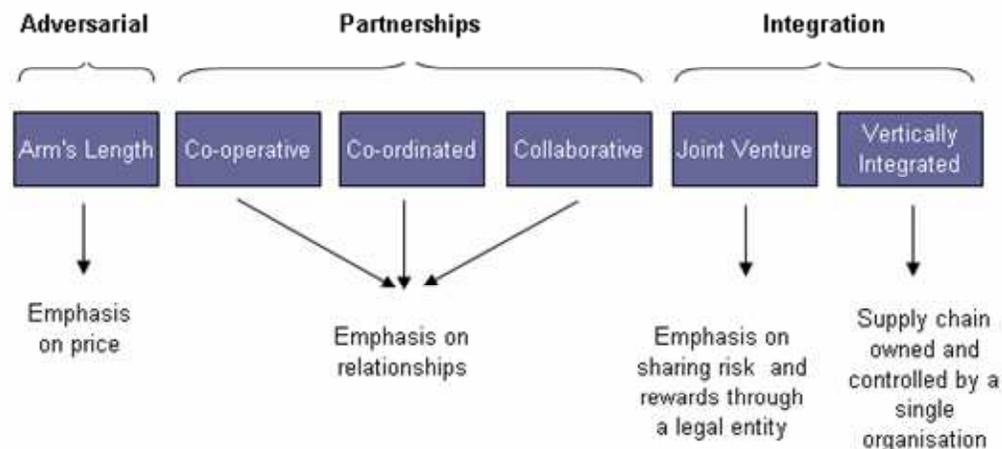


Figure 2.3: Relationship Model (Hugo, *et al.*, 2004)

Hines (2004) describes co-operative, coordinated and collaborative relationships as having the following attributes: information sharing, trust, coordinated planning, shared risks, mutual benefits, recognition of independence, shared goals, integrated processes, shared culture, compatibility and understanding.

However, Hugo *et al.*, (2004) warns clients that establishing these alliances and partnerships with 3PL providers will undoubtedly require extraordinary skills from logistics managers within the organisation and 3PL providers.

Bhatnagar *et al.*, (1999) proposes that the length of the relationship between 3PL user and client defines the nature of that specific relationship. The longer the relationship, the higher the level of commitment from both sides and the more likely organisations would invest in contract logistics. The scope of the relationship between 3PL provider and client encompasses a variety of options ranging from narrow (specific activities) to broad (covers substantive activities in the entire supply chain). Outsourcing to 3PL's need not be an all or nothing proposition. A combination of internal and external logistics services provide better control and balance to ensure a comprehensive use of best practices and industry expertise.

2.3. Value Creation

Before understanding what value creation is and how it works, it is important to understand the meaning of value in the context of this research. "Value" is a complex and comprehensive topic and it is not in the interest of this paper to find out what value is, but rather on how it is created. It is still however important to define value in terms of logistics before exploring the various value creation frameworks.

2.3.1. Value defined within context of the research

The term "value" forms a key component of the research problem. A precise definition is difficult to determine as the term means different things to different people and depends

on the type of industry being analysed. It therefore becomes crucial to understand a proposed definition applicable to the logistics industry and to gain an understanding of what academic research has said about the role of value.

2.3.1.1. Definition of logistics value and value add

In their research, Langley and Rutner (2000) found that the logistics industry had struggled with a clear and tangible definition for the term “value” and more specifically “logistic value add”. They found a number of accepted definitions of logistics that focused on the time and place aspects of the value created by logistics. The most crucial component of logistics value was that of customer service.

Based on their findings, Langley and Rutner (2000, p.78) defined logistics value as “meeting customer service requirements while minimising supply chain costs and maximising partners’ profits”. Langley and Rutner (2000, p.79) then went on to define logistics value add as “either providing additional services or exceeding customer service requirements that further reduces the supply chain costs or increasing the partners profits and gains in competitive advantage in the marketplace”.

A framework in (Figure 2.4) was put forward by Langley and Rutner (2000) to explain these two definitions in context. Various attributes (in the form of timeliness, cost saving, cost sharing, communication, trust, credibility, responsiveness, effectiveness, transparency, credibility, capability, service quality, expertise and flexibility etc.) all had direct consequences in terms of customer service, service quality, profits generated,

relationship formation and the actual effectiveness of the supply chain. These consequences had in turn a direct bearing on logistics value.

Logistics value add was a far broader definition in that it took into account exceeding expectations, creating additional services and the creation of a competitive advantage for the partner (Langley and Rutner, 2000). The combination of these four outputs formed the logistics value add to the client / customer and this framework depicted certain characteristics with which to evaluate the value chain between 3PL provider and client

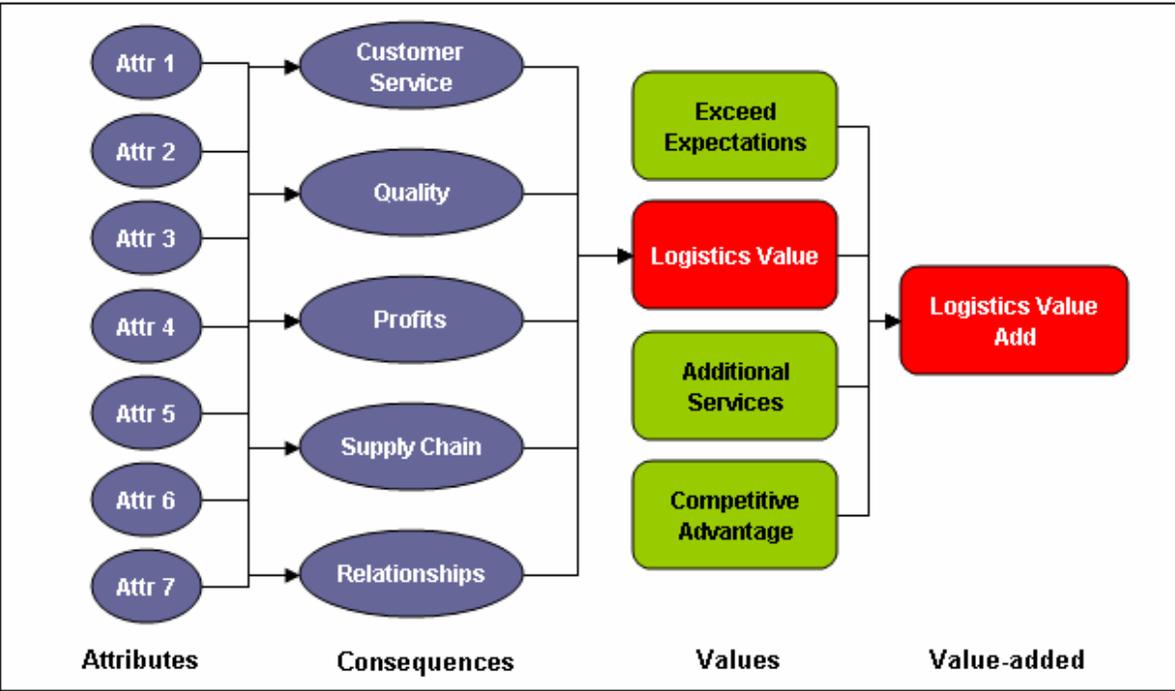


Figure 2.4: Value and Value Add Definition Framework (Langley and Rutner, 2000, p79)

2.3.1.2. Critical value expectations

In the 2003 annual 3PL survey, Langley *et al.*, (2003) used focus groups to gain a better perspective on the value requirements that clients expected from their 3PL providers. They found that 3PL providers were expected to continually drive value to maintain the 3PL provider-client relationship. This was imperative in justifying the cost of inserting another party (third party) in the overall supply chain.

The expectations however were not all one sided. For a 3PL provider-client relationship to develop, a financial win-win was essential (i.e. client satisfaction and 3PL provider's margin). In other words the 3PL provider's profit margins were evaluated against service levels required by the client. A situation where either party was losing out was not a sustainable one and the performance measurements used by both parties would need to be clear, transparent, relevant, reliable, consistent, easy to track and open to the possibility of being audited (Langley *et al.*, 2003).

2.3.2. A distinction between short term and long term value creation

Any 3PL provider-client relationship needs to make the distinction between short and long-term value creation. A company's compromise in short term decision making may hamper its ability to make progress in the long term (Langley *et al.*, 2006).

Hugo *et al.* (2004) found that outsourcing decisions were frequently made by default, with little consideration for the long run competitiveness of the organisation.

Value add in the short term was based on a single transaction or a number of transactions over a short period of time where value add in the longer term was based on a contractual relationship. The key aspect of value add, both short and long term, should result in both 3PL provider and client being better off than before (Langley and Rutner, 2000).

Langley *et al.*, (2004) proposed a framework (Figure 2.5) showing the relationship amongst several constructs in the short and long term decision making process.

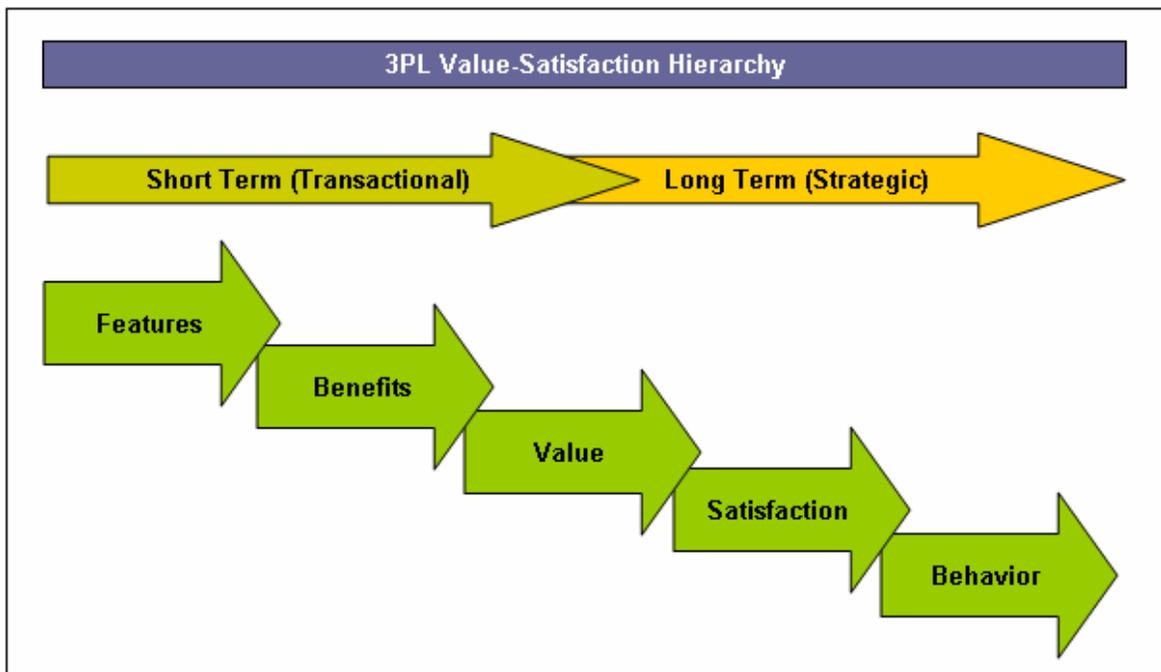


Figure 2.5: Client Value Framework (Langley *et al.*, 2004)

Features were the specific 3PL attributes and service offerings that created benefits for the client. The subsequent value for the client was created in relation to the benefits that

had been received. The existence of value lent to satisfaction and ultimately to behavior, which was reflected in subsequent decisions to purchase additional services from a 3PL provider.

It is important to realise that value can be created in the short term due to perceived and measurable short term benefits. However, Langley *et al.*, (2004) propose that client satisfaction can only be achieved through long term strategic input, which shows in the behavior of the client that seeks stronger relationships, co-operation and strategic partnering with the 3PL partner.

2.3.3. Two approaches to value creation

The literature describes two distinct approaches to value creation. These are described in greater detail below.

2.3.3.1. Value creation through resources and competencies

Many organisations consider outsourcing in order to concentrate all their efforts on their core activities or competencies and outsource all non core activities where the organisation lags behind. Only a few key activities performed by an organisation are considered core and it is these competencies that underpin the ability of the organisation to outperform the competition (Hugo *et al.*, 2004).

This research did not endeavor to study core competency theory but it is useful to understand the difference between core activities and competencies before dealing with value creation through resources and competencies. Hugo *et al.*, (2004) define core

activities as primary activities to create and deliver a product or service to the target customer. Core competencies on the other hand are the skills, knowledge and technologies that an organisation possesses on which its success depends.

Halldórsson and Skjøtt-Larsen (2004) argued the importance of value creation derived from outsourcing using a resource and competence-based perspective. It was crucial for the 3PL provider to build up internal core competencies which would not only contribute to their own competitiveness but also position them to deliver real value to the client. The development of competencies in 3PL relationships represented certain characteristics whereby a client could acquire a partner's skills and internalise them into one's own organisation.

Halldórsson and Skjøtt-Larsen (2004) applied three learning types to the interaction that took place between 3PL provider and client in the development of competencies.

These were:

- Experimental learning from one party;
- Using the experience and knowledge of the counterparty; and
- Joint learning between both parties based on knowledge and experimentation.

Halldórsson and Skjøtt-Larsen (2004) research had certain implications for managers. The first was that the objective of outsourcing needed to be understood. Two of the most important objectives taken from the research were to achieve an immediate service improvement and to focus on a company's own core competencies and acquire or

develop complimentary competencies - through outsourcing. The second implication was to match the chosen type of 3PL arrangement most appropriate to the stated objective. A customised logistics solution would be suitable for the cost savings and/or service improvement objective where a joint logistics solution was preferable for a new competence based approach. Third was that the client outsourcing needed to maintain internal logistics competence in relation to the outsourced activities and challenge the 3PL in terms of value creation through participation in joint teams. Lastly the outsourcing company needed to see outsourcing from a long term perspective. It took time to build up trust relationships and adapt and integrate information systems and organisations. When partners were changed, the “learning curve” had to be restored and all knowledge and competencies developed in the previous relationship disappeared.

The Halldórsson and Skjøtt-Larsen (2004) resource and competence based approach provided an alternative to the traditional transaction cost theory which focused more on the cost efficiency of the outsourcing decision. They emphasised a focus on the development of competencies in the relationship between the partners. A limitation of their study was that this approach needed to be operationalised and empirically tested in on-going 3PL arrangements. More in depth case studies of existing 3PL arrangements were needed to provide more evidence on how competencies were developed, what barriers and obstacles were involved and how these barriers were overcome. It was important to find out whether there was a mismatch between the 3PL promises and its actual capabilities and performance. Another reason was the fact that the organisations

capabilities and competencies were embedded as “tacit knowledge” in the company and consequently difficult to transfer to the 3PL.

Aktas and Ulengin (2005) maintained that the use of outsourcing for logistic activities other than transportation (i.e. warehousing) required extensive sharing of information and could only be successful when collaboration based on mutual confidence existed. 3PL's were to be seen as an extension of an organisation's own logistics department with performance evaluation held on a regular basis.

Jiang, Frazer and Prater (2006) offered further insight. According to the core competency theory, clients outsourcing invest their released resources or cost savings from outsourcing to enhance their core competitive competency. In the short term, outsourcing firms' productivity and profitability were not significantly improved.

2.3.3.2. Value creation through co-creation

Prahalad and Ramaswamy (2004) proposed an alternative frame of reference for value creation. They surmised that companies could no longer detach themselves from their clients as the client was becoming more informed and increasingly wanted to interact with the firms they were dealing with. The context applied from the framework refers to services as outsourced logistics services and firms as logistics providers.

Conventional value creation emphasises distinct roles for both logistics provider and client with the value inherent as part of the service offering. Prahalad and Ramaswamy (2004) stated that unique value creation between logistics provider and client was created

through a process of co-creation. The co-creation process consisted of four key building blocks known as D-A-R-T. These were:

- Dialogue referred to the interactivity, engagement and propensity to act from both parties.
- Access was the use and availability of tools and information.
- Risk assessment referred to the application of appropriate methodologies for assessing risk instead of just providing the data. The key was on joint risk taking.
- Transparency was becoming more important as information about services, technology and business systems became more accessible.

The value creation framework in terms of co-creation is summarised in Figure 2.6.

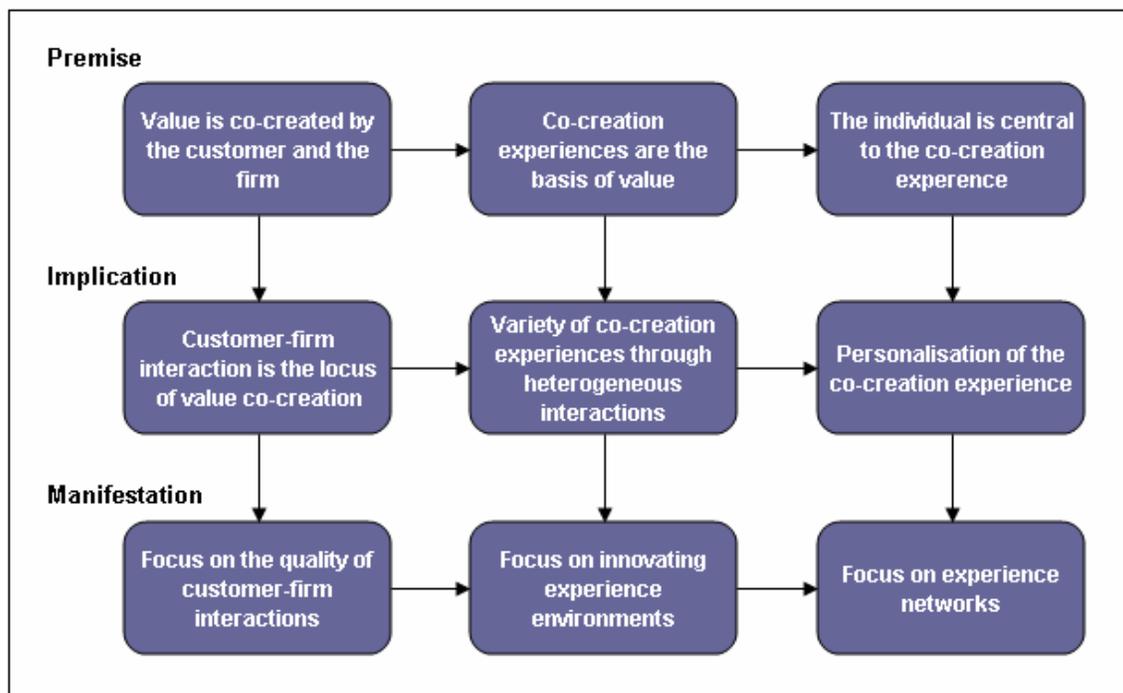


Figure 2.6: Value Creation Framework (Prahalad and Ramaswamy, 2004, p.5)

The combination of the various building blocks resulted in logistics providers engaging with their clients more as collaborators. Transparency would facilitate collaborative dialogue with clients. Constant experimentation, coupled with access and risk assessment on both sides could lead to the possibility of new business models and functionalities designed to enable compelling co-creation experiences. Interaction was crucial for co-creation with the process dependant on individuals and the uniqueness of individuals within the process. This resulted in the client engaged in the value creation process from the onset and in both defining and creating value (Prahalad and Ramaswamy, 2004).

The quality of the co-creation experience depended on the interaction between the logistics provider and client orientated around the ability to create a variety of experiences. By creating a diversity of creation experiences, the roles of the logistics provider and client eventually converged towards a unique co-creation experience. The emphasis in the co-creation of value was through personalised interactions that were meaningful and sensitive to a specific client. The experience and not the offering was the basis of unique value for each individual client (Prahalad and Ramaswamy, 2004).

Many companies are unable to embrace the new framework because it challenged the traditional roles of the logistics provider and client. The problem was the point of interaction between the client and logistics provider and this was precisely where the co-creation experience occurred and hence the value created. These points of interaction should rather be seen as opportunities for collaboration and negotiation (explicit or

implicit). The traditional system was becoming obsolete, with competition increasingly centered on personalised co-creation experiences, resulting in value that was truly unique to each individual (Prahalad and Ramaswamy, 2004).

Successful relationships between 3PL providers and clients required a sharing of vision, information and strategies. These were not short term objectives and the relationships emerging as successful over the long term were those that proved to be agile and flexible and that addressed end to end solutions. In the longer term, the creation of value in the 3PL provider - client relationship will lead to satisfaction and ultimately behavioral change (Langley *et al.*, 2005).

2.3.4. Key value creation determinants

In the 2004 annual 3PL survey (Langley *et al.*, 2004), focus groups concurred that the ability of 3PL's to create value was determined by several dimensions. Value in 3PL provider – client relationships could only be achieved if both parties worked together to design, implement and execute the key dimensions listed below. These were:

- A defined scope and service definition was a prerequisite;
- Both parties needed a clear management support structure;
- The goals and objectives of relationship needed to be well understood by a mutual expectation setting process and defining the business needs of both parties.
- The corporate compatibility between 3PL provider and client was critical. This depended on a strong cultural and organisational alignment with similar management philosophies.

- The ability to reach consensus on matters of importance was reliant on the trust, commitment, effective communication and willingness to share risk and reward.
- Effective measurements and measurement strategies should be in place, defining standard operating procedures, cost and service baseline development, common scorecard and data management and flexible financial structures with a rigorous measurement process.
- A “future” view must be in place towards more advanced services;
- A change management program was crucial; and a
- Clear exit strategy.

The responsibility for achieving value does not lie with one party alone. Value can only be achieved if both the 3PL provider and client work together in designing, implementing and executing these key factors.

Given the purpose and objectives stated in this research, the following issues have been highlighted from Chapter 2.

- Value is often used in a generic sense without specific application to the context in which it is used. In order to explore value creation and its characteristics, it is important to understand value from a logistics context first and foremost.
- The value chain and its various components provide an important framework to analyse and structure the value creation characteristics. One of these components is supply chain management (SCM) where the 3PL provider and client relationship

is present and it is in this relationship where value is formed and subsequently created or destroyed.

- The strength and dynamism of 3PL provider and client relationship is a critical determinant to the level of value created.
- Although some value can be created in the short term, value creation is a long term strategic intent from both parties.

CHAPTER 3 - RESEARCH PROPOSITIONS

The aim of this research has been to understand the value creation characteristics at play between the 3PL provider and client within the automotive sector of South Africa. The research then aimed to test these characteristics in outsource relationships (specific to specialised warehousing) currently taking place within South Africa.

This research has built on current practice and trends in the outsource relationships between 3PL providers and clients but with specific reference to the South African automotive sector. The expectation exists that both parties (the 3PL and client) can gain from understanding the characteristics driving the value created in any given outsource relationship and both parties can use the recommendations in chapter 7 towards improving their current outsource contracts, in order to unlock further value.

The problem has been defined and validated through a critical literature review in chapter 2. The research objectives have then been stated defining the overall purpose of the research and what is to be achieved. An assessment of an applicable theory base in support of the research problem and objectives has been reviewed from relevant academic literature. By linking the literature defining the problem, defining an applicable theory base and aligning these to the stated objectives of this research, the following three research propositions have been proposed and will be used as the basis for this research.

Research Proposition 1

Logistics value creation is created from long term strategic objectives rather than a short term transactional approach.

Research Proposition 2

Logistics value creation can only occur if the relationship between 3PL provider and client is collaborative.

Research Proposition 3

The resource and competencies inherent in a 3PL provider determine the level of value creation to the client.

CHAPTER 4 - RESEARCH METHODOLOGY

This chapter discusses the research methodology and the process that went into defining the research design; the unit of analysis, population, sample size; the sampling method chosen; the data collection methodology and subsequent data analysis performed. The limitations of the research are also discussed towards the end of this chapter.

4.1. Research method and design

Before a particular research methodology and design is chosen, a researcher needs to go through a structured process to ensure the correct choice has been made. There were a number of research considerations to take into account. The main considerations were:

Empirical / Non Empirical

Zikmund (2003, p.736) defines research at an empirical level as “a level of knowledge that is verifiable by experience or observation”. Non-empirical research on the other hand is applicable where there is an existing body of knowledge.

Qualitative / Quantitative

Qualitative (exploratory) research provides insights and understanding of the problem and seeks to find the underlying reasons and motivations as a starting point. A small number of cases are used and it is normally non-statistical by nature. Zikmund (2003, p. 737) defines exploratory research as “initial research conducted to clarify and define the nature of the problem”.

Quantitative research on the other hand, seeks to quantify the data and produce a result to a population of interest. It is usually conclusive and uses a larger number of representative cases and some form of statistical analysis. Quantitative research is further broken down into causal or descriptive research. Zikmund (2003, p. 734) defines causal research as “research conducted to identify cause-and-effect relationships amongst variables when the research problem has already been narrowly defined”. Zikmund (2003, p.736) defines descriptive research as “research designed to describe the characteristics of a population or sample”

The literature study in Chapter 2 formed the non-empirical part of this research as it made use of an existing body of knowledge. This allowed the researcher to understand the range of issues relating to the problem that had been researched to date. Based on a comprehensive understanding of the issues at hand, specific and relevant propositions to the research topic were then defined. This enabled progression to the next step in the research where these propositions were practically tested on a suitable and relevant population. This formed the empirical component of the research which was to verify or test a certain level of knowledge by experience or observation.

The empirical component followed a dual approach split into two distinct phases. These are discussed in further detail.

4.1.1. Phase One

A preliminary step was sometimes necessary in order to progressively narrow the scope of the research topic and define the exact boundaries of the problem (Zikmund, 2003). Although the nature of the problem had been broadly defined, this phase was seen as

essential in narrowing down the exact nature of the problem and to gain further insight into issues that may have been overlooked.

The approach took the form of experience surveys – a form of qualitative research. Zikmund (2003, p. 737) defined experience surveys as “an exploratory research technique in which individuals who are knowledgeable about a particular research problem are surveyed.” The experience surveys were informal discussions with knowledgeable individuals (key informants) experienced in the field of study (more specifically two industry experts / role players within the automotive industry).

The potentially large number of industry experts within the field of study proved difficult to determine and in order to narrow the population, only industry experts, involved with warehouse outsourcing in the automotive sector, confined to OEM’s, were considered. It was also critical to obtain inputs from both sides of the 3PL provider-client relationship.

Taking into account the time constraints at hand, only one expert from each side of the relationship was chosen. They were used to provide detail in narrowing down the boundaries of the problem, providing additional information for consideration and providing insight into specific South African related issues. Industry experts included senior supply chain managers, logistics consultants or directors involved either as the client or the 3PL. No independent parties were consulted outside of the 3PL.

The individuals that were interviewed were chosen based on set criteria. These were:

- Easy access to contacts within the industry;
- Practical working knowledge of the 3PL provider – client relationship and not just theoretical knowledge;
- Experience greater than five years in logistics outsourcing; and
- Individuals highly engaged and knowledgeable in the topic.

The first individual had the unique attributes of being on both sides of the 3PL provider – client relationship. The individual had extensive warehousing knowledge and had been actively involved with a 3PL provider in an outsource relationship. Subsequent to this, the individual was currently involved with a 3PL provider actively engaged in outsourcing warehousing to clients within South Africa. This allowed for unique and unbiased views covering the issues from both sides. The other individual was a client that had outsourced their warehouse function to a 3PL provider previously but was not currently involved with a specific contract. The attributes of these individuals were important in providing key information before proceeding to phase two.

As mentioned earlier, the experience surveys were done through interviews conducted on a personal, informal, face to face basis, directed by a discussion guide. The discussion guide (see Appendix B) was used to ensure that the topics relevant to the research propositions were covered in the interview, without imposing too much structure to the discussion. The reason for this type of interview was to enable interaction and probe further into more complex issues and to allow for greater and richer feedback. The data

was collected through notes and transcripts made during the informal expert interviews and these provided some level of input into phase two. The outcome was new insights gained into the problem not covered by the literature reviewed as well as obtaining clarity on some of the issues raised from the literature review.

4.1.2. Phase Two:

The literature review in chapters 1 and 2 of the research provided a significant existing body of knowledge into the nature of the problem. Furthermore, some insight was gained into the problem via phase one’s expert interviews. These were taken into account for phase two. Where phase one was qualitative (exploratory) research, phase two was quantitative research.

Selviaridis and Spring (2007) extensively analysed 114 existing 3PL research papers and found a range of research methodologies in use. The survey methodology (51%) was most often used, followed by case studies at only 15%. Table 4.1 provides a summary of the various methodologies employed.

Research Scope	Quantity Researched	Percentage
Surveys	58	51%
Case Studies	17	15%
Other secondary data (i.e. internet research)	13	12%
Literature Review	10	9%
Multi-method research	9	8%
Other	7	6%
	114	100%

Source: (Selviaridis and Spring, 2007, p. 127)

Table 4.1: Existing 3PL Research Methodology Studies

Jiang and Prater (2006) confirmed this when they found that the case study method (39%) and survey method (28%) were most often chosen (Table 4.2).

Research Scope	Determinant	Process	Result	Total	Percentage
Case Study	34	54	15	103	39%
Survey	31	28	14	73	28%
Conceptual framework	24	19	8	51	19%
Mathematical modelling	7	13	11	31	12%
Archival data analysis	1	0	4	5	2%
	97	114	52	263	

Source: (Jiang and Qureshi, 2006, p. 46)

Table 4.2: Existing 3PL Research Methodology Studies

Given the research methodologies used extensively in 3PL research papers (Selviaridis and Spring, 2007; Jiang and Prater, 2006), it is evident that the survey method would be the most suited. Zikmund (2003, p. 175) stated that survey investigations were an “attempt to describe what is happening or to learn the reasons for a particular business activity. Most survey research is therefore descriptive research”. Zikmund (2003, p. 175) concluded further that the “purpose of survey research is to collect primary data – data gathered and assembled specifically for the research project at hand”.

The survey methodology was therefore chosen as the best method in obtaining the research data required to test the research propositions, as surveys were structured and allowed respondents to answer a standard set of questions. The quantitative research in phase two was not causal but rather descriptive research by definition.

Zikmund (2003) classified surveys as either temporal (exact point in time) or longitudinal (numerous points in time). Janes (1999) also found that surveys were generally used either to obtain snapshots at a particular period of time or to obtain information over a longer period of time. The survey method chosen was thus temporal, due to tight time constraints and the limited sample size. Furthermore, the survey took the form of a questionnaire (see Appendix C) to gather the primary information. Janes (2003) and Zikmund (2003) listed the three main survey options available to a researcher. These were the self-administered, telephone or face to face (personal) survey. Due to cost implications, convenience and geographical flexibility to name a few reasons, the self administered survey was chosen.

As mentioned in phase one, the information gathered from the expert interviews (in phase one) and the existing literature reviewed (in chapter 2), was utilised to produce the survey / questionnaire in order to quantify the issues that had been raised with the research propositions.

Questionnaire design was crucial and the following guidelines were used in setting up of the questionnaire (Zikmund, 2003; Janes, 1999):

- The quality of the questions in terms of relevancy, phrasing and accuracy;
- The order of the questions; and
- The instructions provided in answering the questions.

The questionnaire commenced with a general section pertaining to background information. This information was useful in determining some level of demographic analysis in order to

assess the respondent's background and experience in the field of logistics and would provide a degree of insight into how he / she would answer the remaining sections. The remainder of the questionnaire was grouped into the three main themes obtained from the literature review. These were 1) Strategy 2) Relationship / Collaboration and 3) Value Creation.

A combination of open ended and fixed alternative questions were used dependent on the information required. Open ended questions were used to obtain information in the respondents own words and it was not possible to predict how respondents would answer. To circumvent this, some guidelines were provided in terms of number of words (by limiting the answer box size) etc.

The fixed alternative questions forced respondents to answer in the same manner and the following fixed alternative questions were used (Zikmund, 2003):

- Simple-dichotomy (a simple yes / no was required);
- Determinant choice (the choice of one and only one amongst many);
- Frequency determinant (similar to the determinant except that was based on a general frequency of occurrence);
- Attitude rating scales (Likert scale); and
- Checklist (in order to obtain multiple answers to a single question).

The questionnaire was administered through individuals who were directly or indirectly responsible for client relationships in their respective roles at 3PL companies, in order to

obtain a high response rate. A covering letter was provided with the questionnaire outlining the reason for the research as well as the required consent to participate in the research. It was important to consider the importance of a pretest. Zikmund (2003, p.227) defined pretests as “trial runs with a group of respondents for the purpose of detecting problems in the questionnaire’s instructions or design”. A pretest was undertaken before the actual questionnaire was sent out. However, due to the relative small population and expected sample, a large number of pretest respondents were not possible. Instead, although not ideal, the questionnaire was screened by another research professional and/or industry expert. Once the pretests had been completed, the questionnaires were delivered by hand or emailed for completion.

4.1.2.1. Definition of the unit of analysis

The unit of analysis was automotive outsourced logistics operations in South Africa. An outsourced operation was defined as an Original Equipment Manufacturer (OEM) manufacturing in South Africa, who had outsourced or was currently outsourcing the warehousing component of the supply chain to a 3PL. It was important to note that an OEM did not necessarily have to be manufacturing in South Africa - it also included the direct sourcing of original parts from OEM source.

4.1.2.2. Population

Zikmund (2003, p. 369) defined the population as “the complete group of entities sharing some common set of characteristics”. It was crucial to define the exact population further in terms of the primary, secondary and target populations.

Primary Population

The primary population consisted of automotive clients limited to OEM's within South Africa but not restricted to any geographical location. A list of all OEM's operating within the borders of South Africa was obtained from the National Association of Automobile Manufacturers of South Africa (NAAMSA, 2008). The OEM's included both vehicle assembly and after sales support (See Appendix A for further detail).

Target Population

Once the primary population was defined, it was necessary to narrow the primary population down to the target population. Zikmund (2003, p. 373) defined the target population as "the complete group of specific population elements relevant to the research project".

The target population only concerned those OEM's that had outsourced all or part of their operations to 3PL's - more specifically the warehousing component of the entire supply chain. The automotive industry was quite unique in the fact that a lot of consolidation had taken place and was taking place all the time. An example was the Ford Motor Corporation consisting not only of Ford, but Mazda and Volvo - who sold off Landrover and Jaguar to Tata in April 2008. Taking this into account, it was important to differentiate between the OEM brands and the OEM holding companies. A holding company for example was Ford Motor Corporation consisting of the following OEM brands: Ford, Mazda and Volvo. In total, there were 75 OEM brands and 31 OEM holding companies in South Africa (see Appendix A) as at June 2008. This was changing all the time with new

Asian brands entering the South African market and continual industry consolidation (De Koker, 2003). The fact that the brand and not the holding company had a say in the decision to outsource focused the attention on the OEM brands. The target population was thus the OEM brand and not the OEM holding company.

This list of OEM brands formed the research sample frame. Zikmund (2003, p. 373) defined a sampling frame as “a list of elements from which the sample may be drawn”. It was important to be aware of any possible sampling frame errors that could have occurred when certain sample elements were excluded or when the entire population was not accurately represented in the sampling frame.

Secondary Population

The secondary population concerned the collection of data with specific reference to the supply chain, warehouse and logistics managers, consultants and/or directors within the logistics divisions of automotive OEM's.

4.1.2.3. Sample size

The sample size was devised from the sample frame described in section 4.1.2.2. It only looked at OEM brands that had outsourced the warehousing function of the supply chain to a 3PL within South Africa. This covered 23 brands (as at June 2008) and these were Mini, BMW, Mercedes Benz, Daimler, Alfa Romeo, Fiat, Ford, Volvo, Mazda, Geely, Opel, Isuzu, Hummer, John Deere, Man Truck and Bus, Nissan, Renault, Landrover, Jaguar, Toyota, Lexus, VWSA and Audi. Table 4.3 shows the total population and specific sample used for this research.

OEM HOLDING COMPANIES IN SOUTH AFRICA		OUTSOURCED WAREHOUSING	TARGETED IN SURVEY	BRANDS OUTSOURCED
1				
2				
3		Yes	✓	Mini, BMW
4		Yes	✓	Mercedes Benz, Daimler
5				
6				
7				
8				
9				
10		Yes	✓	Alfa Romeo, Fiat
11		Yes	✓	Ford, Volvo, Mazda
12				
13		Yes	✓	Geely
14		Yes	✓	Opel, Isuzu, Hummer
15				
16				
17		Yes	x	
18		Yes	✓	John Deere
19				
20				
21		Yes	✓	Man Truck and Bus
22				
23		Yes	✓	Nissan, Renault
24				
25				
26				
27				
28		Yes	✓	Landrover, Jaguar
29		Yes	✓	Toyota
30		Yes	✓	VWSA, Audi, Seat
31		No	x	
		14	12	23

Table 4.3: Population and Sample List

As mentioned before, the sample size was 23 out of a possible 75 brands. Due to the small size of the sample population, it was decided that instead of targeting one individual (secondary population) from each brand, it was better to target as many as two individuals depending on the brand. For some brands it was possible to target only one individual due to the size of its market share, while other bigger brands allowed for up to three individuals.

The sample represented a comprehensive coverage of OEM holding companies and brands that had outsourced or were currently outsourcing within South Africa. From the 31 OEM Holding companies, 14 had outsourced the warehouse and of these 14 holding companies, 24 brands had outsourced. The sample thus represented 12 of these OEM holding companies (85% representivity) and 23 brands (95% representivity). Due to the small sample size, a high level of representivity was essential to provide credibility to the research.

A total of 30 questionnaires were sent out to 12 brands providing 19 individual responses. An individual response rate of 63% was thus achieved. From these questionnaires, an overall OEM Holding company response rate of 75% (10 out of the 12 OEM Holding companies responded) and 87% from the brands (20 out of 23 brands) was achieved. The high response rate was due to strong relationships being built up within the industry. Certain brands responded positively to the questionnaire with a high number of individuals responding, while other brands that were expected to answer, chose not to participate at all. Table 4.4 represents a summary of the overall results.

BRANDS PARTICIPATING IN THE SURVEY IN SOUTH AFRICA		BRANDS	SURVEYS SENT	RESPONSES RECEIVED	INDIVIDUAL RESPONSE RATE
1	 BMW and Mini	2	3	2	67%
2	 Daimler Chrysler	1	1	0	0%
3	 FIAT and Alfa Romeo	2	3	2	67%
4	 Ford, Mazda and Volvo	3	6	4	67%
5	 Geely	1	1	0	0%
6	 GMSA (Opel, Izuzu) and Hummer	4	4	3	75%
7	 John Deere	1	1	1	100%
8	 MAN Truck and Bus	1	2	0	0%
9	 Nissan and Renault	2	3	2	67%
10	 Land Rover and Jaguar	2	2	2	100%
11	 Toyota and Lexus	2	2	1	50%
12	 VWSA and Audi	2	2	2	100%
		23	30	19	
Total OEM Response Rate					75%
Total Brand Response Rate					87%
Total Individual Response Rate					63%

Table 4.4: Sample Response Rate

4.1.2.4. Sampling method

The researcher had to rely on individuals (known personally) who were directly responsible for client relationships in their respective roles at 3PL companies with automotive OEM companies. Hence the researcher primarily relied on snowball sampling as an effective sampling method to target the required target population. Zikmund (2003, p. 384) describes

snowball sampling as “a variety of procedures in which initial respondents are selected by probability methods and additional respondents are then obtained from information provided by initial respondents”.

In this case, the individuals directly responsible for client relationships were chosen by the researcher to gain access to the target population. These individuals then targeted the respondents using the non-probability sampling technique of judgmental sampling. Zikmund (2003, p. 380) defined judgmental sampling as “a non-probability technique whereby an experienced individual selects the sample based on his or her judgment about some appropriate characteristic required of the sample members”. The appropriate characteristic in this case was the accessibility to the brand and individual in order to gain the necessary information. Due to the small population and sample size, this required a measure of judgment from the individual.

4.1.2.5. Data collection and analysis

Data was collected in the form of a questionnaire. During the literature review, no existing questionnaires, applicable to the stated research topic, were found. Through extensive research and building on the work of the various academics that have been referenced in this research, a questionnaire was formulated. Due to this fact, it was deemed necessary to send out a pretest questionnaire that preceded the final questionnaire. This was sent to selected respondents to gauge whether it was suitable in terms of the objectives of the research. Where applicable, the questionnaire was reworked and then submitted to the target population.

Access to information

Access to information was never considered a problem due to strong industry relationships that had been formed with the OEM's in South Africa. Before attempting the research, preliminary discussions had been held with key individuals in order to ascertain access to relevant information. Initial indications had been positive.

Data analysis

Zikmund (2003, p. 73) described analysis as “the application of reasoning to understand and interpret the data that has been collected”. The combination of descriptive and inferential statistics was used in order to obtain the necessary information from the data collected (through surveys) to support the research propositions. It must be noted that the type of research did not lend itself to complex multivariate analysis. Zikmund (2003) states that the appropriate analytical technique for data analysis will be determined by the characteristics of the research design and the nature of the data collected. The research proposal was a quantitative study by design and the questionnaire was used as the primary tool to gather the information needed for the data analysis.

The data obtained from the questionnaire was collected and the close ended questions were tabulated into a spreadsheet for use in further statistical analysis. Zikmund (2003, p. 474) described tabulation as “the orderly arrangement of data in a table or other summary format”. In tabulating the responses, the ten point scales (Ratings of 1-10) used in the questionnaire were converted to category scales (Very important, Important, Neutral, Unimportant and Very unimportant) in order to run statistical analyses. Descriptive

statistics included frequency analysis on the nominal questions to give proportions and on the ordinal (scale) questions to provide categories and rank order. Central tendency statistics (mean, median, mode, range, variance, standard deviation etc.) were also applied. Zikmund (2003, p. 473) defines descriptive analysis as “the transformation of raw data into a form that will make them easy to understand and interpret”.

Inferential statistics were also run on relevant sections of the data and methods used included:

- Cronbach Alpha test - tested the reliability and internal consistency of responses;
- Correlation tests - tested the strength of various attribute relationships; and
- T-tests - tested for difference in opinions to questions posed against an additional variable.

The open ended questions were analysed using thematic content analysis which meant listing all the individual responses and then obtaining relevant themes if any at all.

4.2. Research limitations and future research opportunities

Possible limitations to this study could be:

- The scope of the research was narrowed down to OEM's outsourcing only the warehouse function to 3PL's. Research had shown that warehousing remained the top outsourced activity within the supply chain, followed closely by outbound and then inbound transportation (Langley *et al.*, 2001-2007). This limited the sample size within South Africa. Future research could include inbound and outbound transportation.

- Only clients outsourcing the warehousing component of the supply chain, confined to the automotive industry, were interviewed (more specifically OEM's). The application of strategic value creation characteristics to the automotive industry, with its inherent and specific challenges, could skew the findings. Future research could be applied to other industries and components of the supply chain.
- Data was collected at an inopportune time, with the automotive market in South Africa in distress. Automotive sales were significantly off the highs of 2007 and some OEM's had begun cost cutting and downsizing staff. It must be noted though, that the automotive market was not the only sector affected by the slowdown in the South African economy but possible bias could exist in the responses received.
- The relative small sample size remains a concern, although the sample coverage was comprehensive.
- The research concentrated on the viewpoint of value creation from the perspective of the client and not the 3PL provider. Although the views of a 3PL provider was gathered in phase one during the expert interviews, it was somewhat limited and future research could analyse the value creation characteristics from the 3PL provider's viewpoint.

Given the research methodology described in chapter 4, the data was collected through questionnaires and the applicable results have been summarised in chapter 5.

CHAPTER 5 – RESULTS

5.1. Introduction

The data collected from the questionnaires was assessed in terms of the responses from the OEM brands and collated to answer the research propositions presented in this research dissertation. For purposes of analysis, the responses were aggregated to reflect an overall assessment. It is important to remember that the responses are from the client's perspective only and did not include any responses from the 3PL.

5.2. Sample Background

This section seeks to defend the quality and credibility of the information obtained from the sample by presenting the expertise and experience of participants participating in the survey. This is done in order to nullify any doubt existing on the representivity of the data collected, given the relative small population and the subsequent size of the eventual sample achieved (see section 4.1.2.3).

The participants taking part in the survey were from various disciplines within the contract logistics (warehousing) field. Participation was diverse covering the views of supply chain directors, logistics managers, project managers, account managers, supply chain consultants, strategic implementation managers, a customer service manager and a global procurement manager. Every element in the outsourcing process was covered from the decision making process through to implementation and finally the running of a stable operational platform. This allowed the research to cover a broad and diverse set of views. Table 5.1 provides a detailed breakdown of the participants.

Respondent Position / Title	Individuals
Parts Supply and Logistics Director	2
Parts Supply and Logistic Manager	4
Warehousing and Distribution Manager	1
Supply Chain Consultant	1
Supply Chain Manager	1
Global Procurement Supply Chain Manager	1
Distribution and Contract Manager	1
Strategic Implementation Manager	1
Parts Supply and Logistics Project Manager	3
Account Manager	1
Customer Services Manager	1
General Manager: Parts	2
Total	19

Table 5.1: Participant Profile

The respondents represented a large pool of experience when considering the number of personal involvements in warehouse outsourcing. Four respondents had no warehouse experience. Eight respondents had experience with warehouse outsourcing between 1 and 3 years. A further four respondents had 4-7 years experience, with three individuals with more than 8 years experience. The total numbers of warehouse outsource experiences amongst all the respondents amounted to 75 times or an average of 4 per respondent. A detailed breakdown is shown in Table 5.2.

Respondents Experience in Warehouse Outsourcing	Number	Percentage
0 Years	4	21.05%
1-3 Years	8	42.11%
4 – 7 Years	4	21.05%
8 Years and more	3	15.79%
Total	19	100%

Table 5.2: Warehouse Outsource Experience

Five out of the nineteen respondents had been involved in failed outsourcing ventures. This represented almost a quarter of the respondents and the reasons for failure are worth citing. These were:

- Over reliance on the 3PL;
- The operational solution specified by the 3PL did not fit the client's business model or requirements;
- The 3PL did not listen to the clients requests but rather provided a solution which suited the 3PL;
- Non-prioritisation of the client's products versus the other products in the shared facility leading to low CSI ratings;
- The relationship and engagement between the parties did not facilitate the 3PL to affect value; and
- The 3PL behaviour profile was reactive rather than proactive.

The respondents were asked to give their perceptions on the maturity of warehouse outsourcing in South Africa in comparison to the rest of the world. More than half of the participants (53%-57%) were undecided on the maturity of the outsource market from both a global and South African perspective. The global perception showed a higher maturity level (42%) in comparison to South Africa (11%) and a significant difference was evident in the immaturity of the South African market at 32% compared to the 5% of the global market. The results are shown graphically in Figure 5.1.

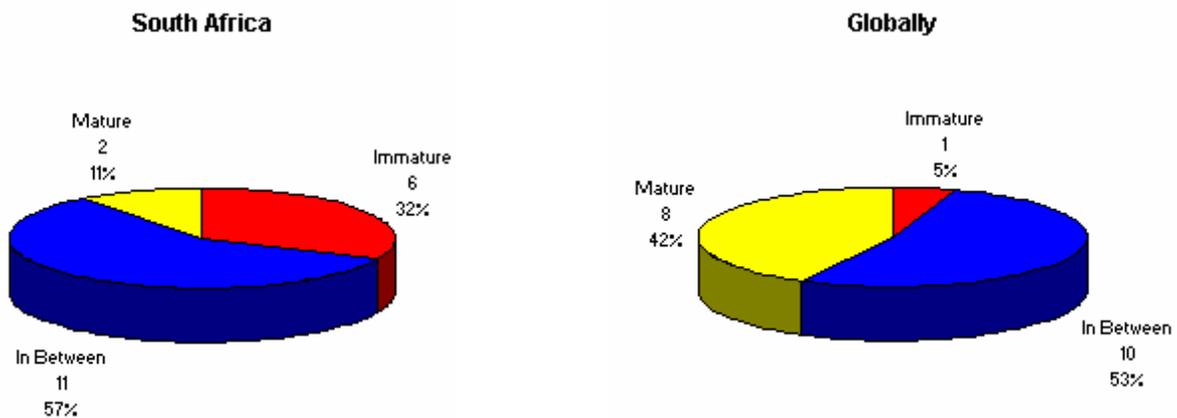


Figure 5.1: Perception of Outsourced Warehousing

The respondents participated in various roles in the warehouse outsource process. Many individuals played more than one role in the process while others played only a single role. The percentage of respondents playing only one specific role was 16%; the respondents between 2 and 5 roles was 52%, the respondents playing more than 5 roles was 32%. The results are shown graphically in Figure 5.2.

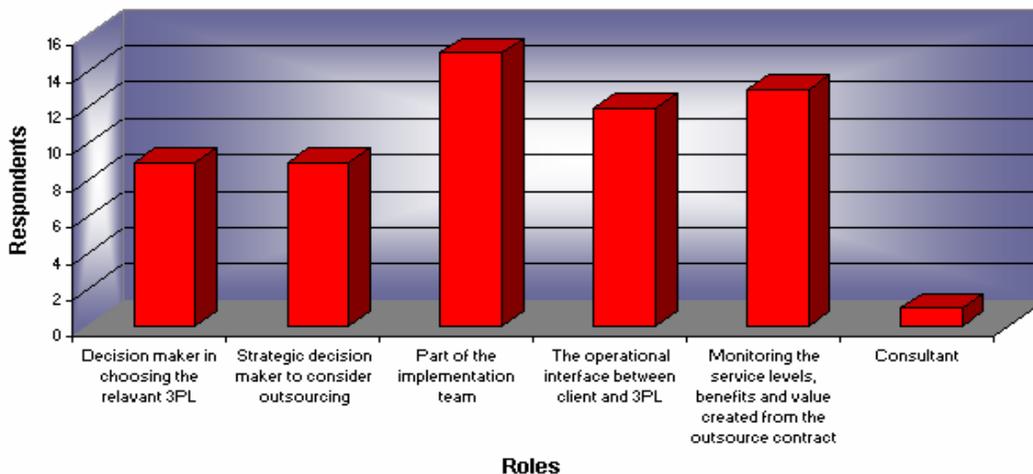


Figure 5.2: Roles in the Outsourcing Process

With the clarification on the credibility of the sample being proven, a statistical analysis was completed on the data. The data has been clustered around the three main propositions of this research to facilitate a clear and concise presentation of the information at hand.

5.3. Research Propositions

5.3.1. Research Proposition 1

Logistics value creation is created from long term strategic objectives rather than a short term transactional approach.

All the respondents indicated that outsourcing formed part of their company's long term strategy. In addition, all respondents (barring one) were able to evaluate the strategic effectiveness of their 3PL service provider and 84% of respondents foresaw the strategic implications outsourcing would have on their business. The questionnaire did not ask the respondents to provide an explanation of what these strategic implications were.

The major reason for outsourcing remained cost savings at 68% of all responses. This was followed by the ability to obtain best in class services (knowledge and expertise) at 57.9%. The need to gain a competitive advantage (47.7%) and the need to form strategic alliances (36.8%) followed as the other major reasons for outsourcing. Of the respondents indicating that outsourcing formed part of their company's long term strategy, only 36.8% of respondents indicated that the reason for outsourcing was to form strategic alliances.

74% of respondents involved their 3PL provider in their strategic planning and all the respondents believed that the incumbent 3PL had the strategic attributes to implement their strategic plans.

The strategic attributes of the 3PL were then evaluated and of those displayed in Figure 5.3, the following was noted:

- Skilled resources were rated the lowest requirements out of the three attributes listed but still important at 58% while 37% of respondents had neutral opinions.
- Logistics competencies were next in importance with 58% of respondents considering it important and 32% of respondents considering it very important.
- The possession of the required technology was considered the most important with 42% of respondents considering it very important and 37% of respondents considering it important. Of interest is the neutral responses at 21%

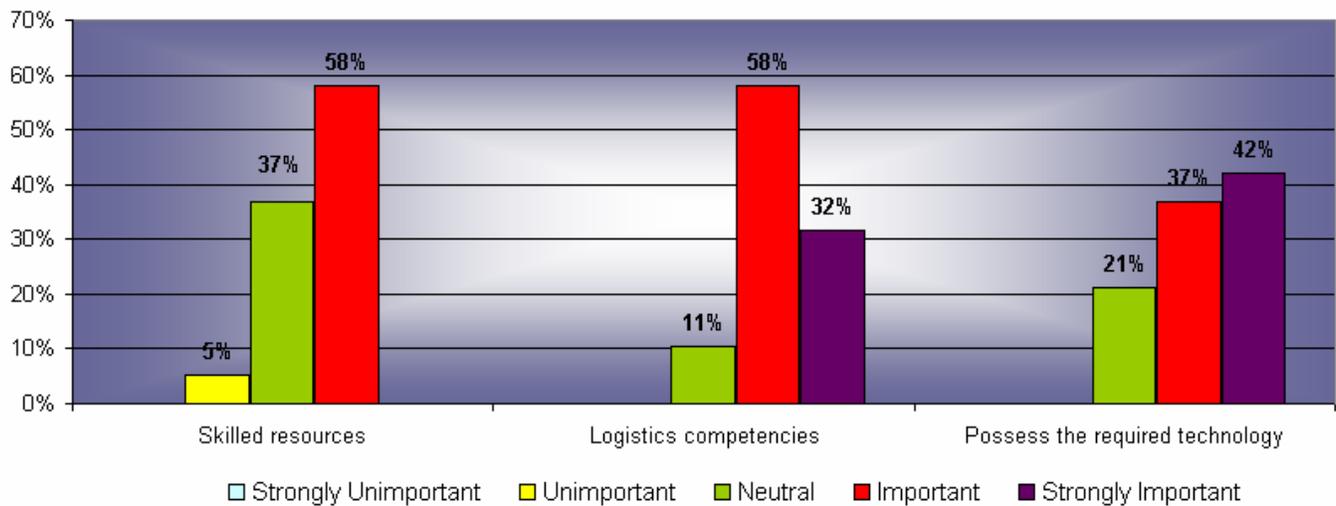


Figure 5.3: Strategic Attributes Required from a 3PL

48% of strategic planning took place on a quarterly or semi-annual basis between client and 3PL provider. 21% of strategic planning took place more regularly on a monthly basis. No strategic planning or ad hoc (seldom) strategic planning accounted for 16% of all respondents. The detailed breakdown is shown in Figure 5.4.

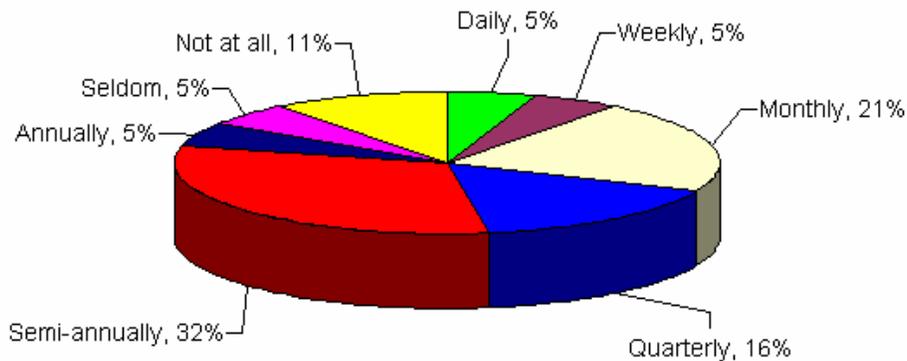


Figure 5.4: Frequency of Strategic Planning between Client and 3PL

95% of respondents had a long term approach in the fact that their outlook was based on a contractual agreement rather than a transactional approach. 10.5% of the 19 contracts under review were of one year in duration (this is indicated by the red bar graph in Figure 5.5 below). The area graph (orange area graph) shows a declining cumulative effect of the percentage of contracts decreasing the longer the contract duration is. 84% of contracts are 5 years in duration with 63% of contracts up to 10 years.

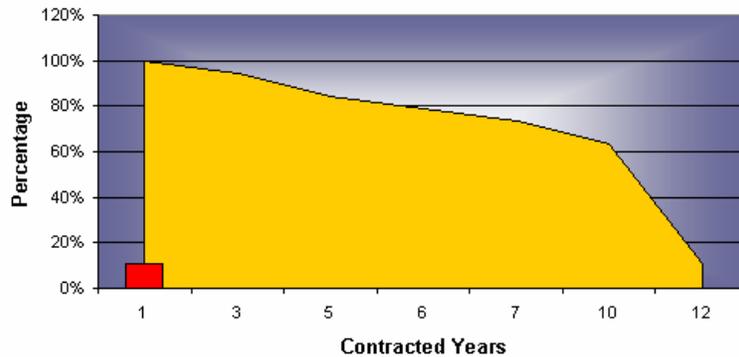


Figure 5.5: Contract Duration in Years

Figure 5.6 shows that 63% of respondents concluded that their 3PL supported their overall business strategy while still relying on outside assistance in supporting that strategy due to the lack of internal resources and capabilities. Only 37% concluded that the 3PL had moved to the next level in taking on a strategic role and anticipating the client’s needs to stay ahead of the competition. No respondents indicated that the 3PL played no strategic role.

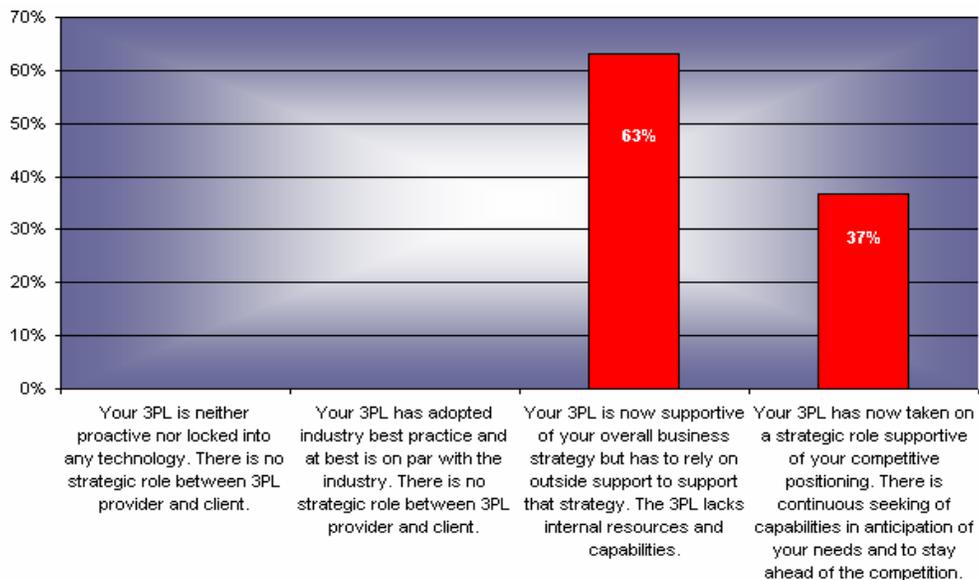


Figure 5.6: The Strategic Value Creation Role of the 3PL

5.3.2. Research Proposition 2

Logistics value creation can only occur if the relationship between 3PL provider and client is collaborative.

The respondents were asked to rate a list of factors (in terms of importance) that had an influence on the relationship between the client and 3PL. Seven out of the twelve attributes had important / very important ratings of more than 80%. These were:

- Financial stability of the service provider (and user) (100%);
- Frequent communications and information exchange (100%);
- Top management support from both sides (100%);
- Joint planning, management and control of the relationship (95%);
- The compatibility of interests and having common goals (90%);
- Service level improvement / reduction of costs (90%);
- Risk and reward sharing (89%); and

The five factors having important / very important ratings in the 60-70% range were found to be:

- Joint investment for achieving relationship objectives (79%).
- Compatibility of organisational culture and routines (68%);
- Mechanisms in place for dispute resolution (63%);
- Compatibility of information systems (63%); and
- Must be a power balance between contracting parties (58%).

The comprehensive results have been plotted graphically in Figure 5.7.

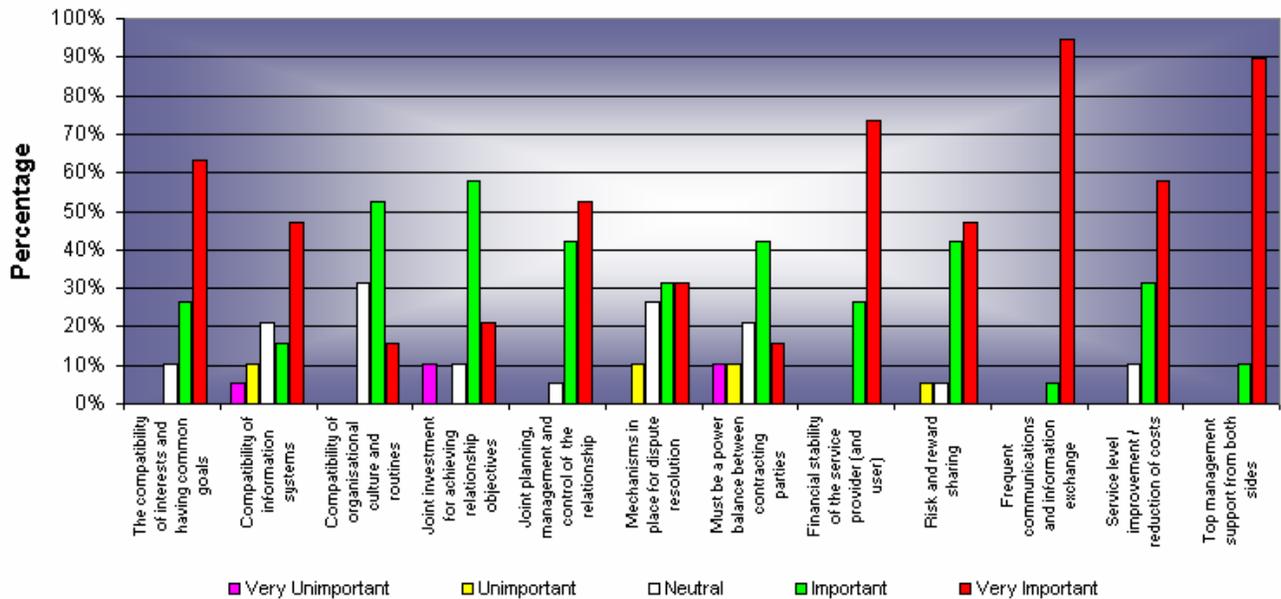


Figure 5.7: Critical Factors Influencing the Relationship between Client and 3PL

A Cronbach alpha test was run on these attributes to check for adequate internal consistency and reliability. A Cronbach alpha value between 0.7 and 1.0 indicates high or good internal consistency and reliability, while a value of between 0.4 and 0.7 indicates medium internal consistency and reliability (Pallant, 2005).

The resultant Cronbach alpha was 0.586 indicating medium internal consistency and reliability. It was noted that the statements: (1) Compatibility of information systems; (2) Mechanisms in place for dispute resolution; (3) Financial stability of the service provider; and (4) Service Level improvement / reduction of costs, were creating negative alpha values (closer to zero) and together were causing the variation, resulting in a lower reliability. By

removing these statements, this resulted in a Cronbach alpha value of 0.733, indicating a high or good internal consistency and reliability (Pallant, 2005).

The respondents were then asked to rate a list of attributes (in terms of importance) that a client expected from a 3PL provider in order to support any given relationship. The following attributes were all listed as important to very important:

- The 3PL needed to have a customer orientation;
- The 3PL needed expert knowledge in specific markets / products / processes;
- The 3PL was required to stay updated with respect to new technologies;
- The 3PL's needed the ability to be flexible and responsive;
- The 3PL must understand the clients' supply chain needs; and
- The 3PL must deliver value.

The comprehensive results are shown graphically in Figure 5.8.

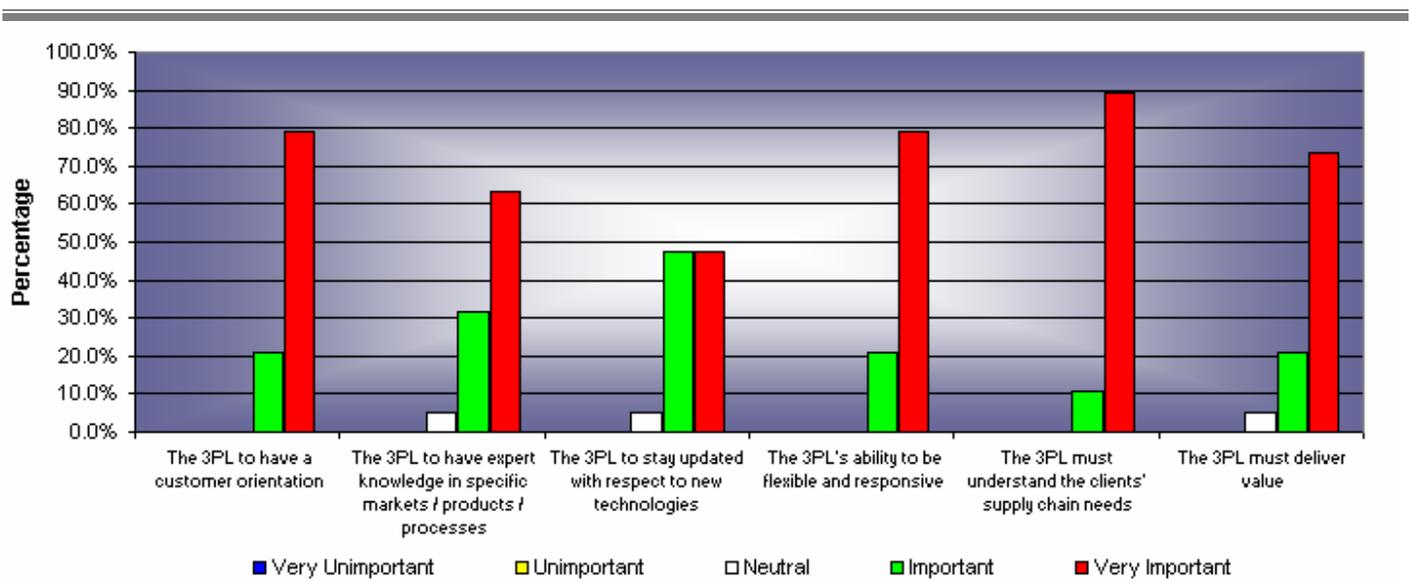


Figure 5.8: Critical Attributes Required by 3PL's to Support Relationships

A Cronbach alpha test was run on these attributes to check for adequate internal consistency and reliability. The resultant Cronbach alpha was 0.744 indicating high internal consistency and reliability (Pallant, 2005).

The respondents were then asked to force rank a number of attributes (in order of importance) they considered imperative for a successful relationship with a 3PL provider. A mixed range of responses were received and the results are shown graphically in Figure 5.9. Vision is clearly shown to be the least important, followed closely by transparency. Competencies and expertise were considered most important with credibility and trust somewhere in the middle.

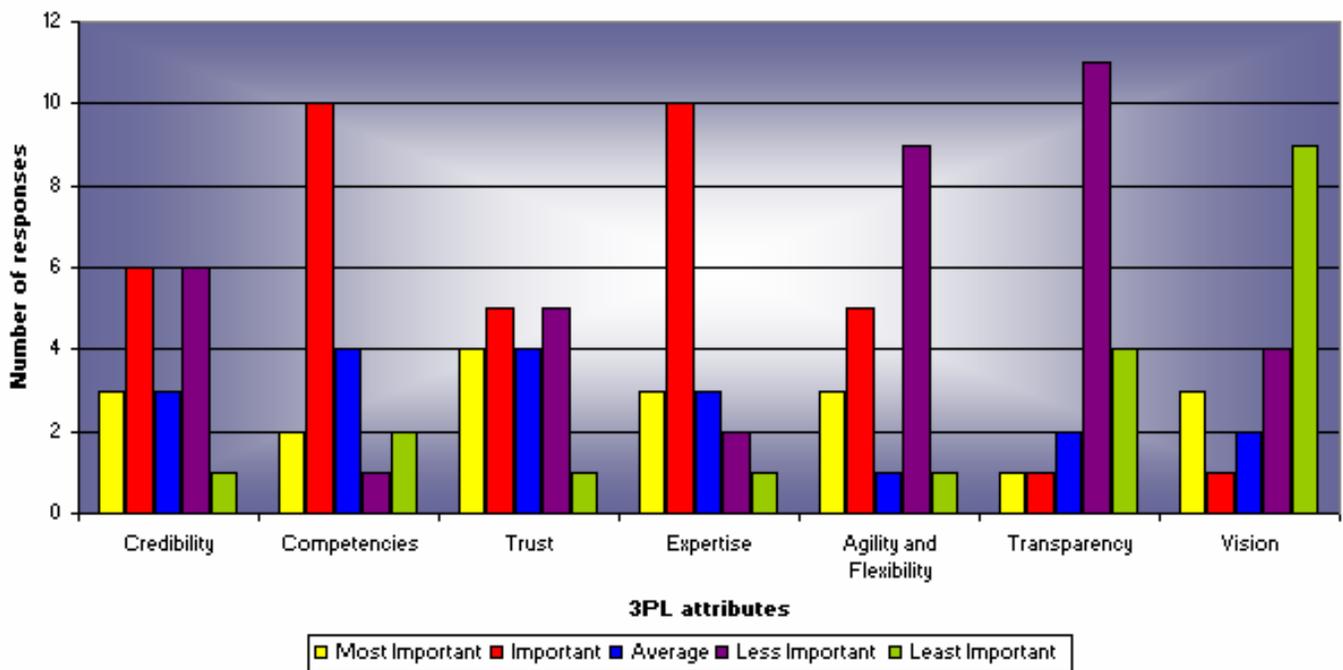


Figure 5.9: Ranked Attributes Supportive of Relationships

The learning taking place between the client and 3PL was based predominantly on two types of relationships. These were:

- 54% of respondents used the experience and knowledge of the counterparty;
- 32% of respondents indicated joint learning based on experimentation and knowledge between both parties; and
- 5% of respondents indicated learning from the one party only and a further 9% considered other types of learning.

The results are shown graphically in Figure 5.10.

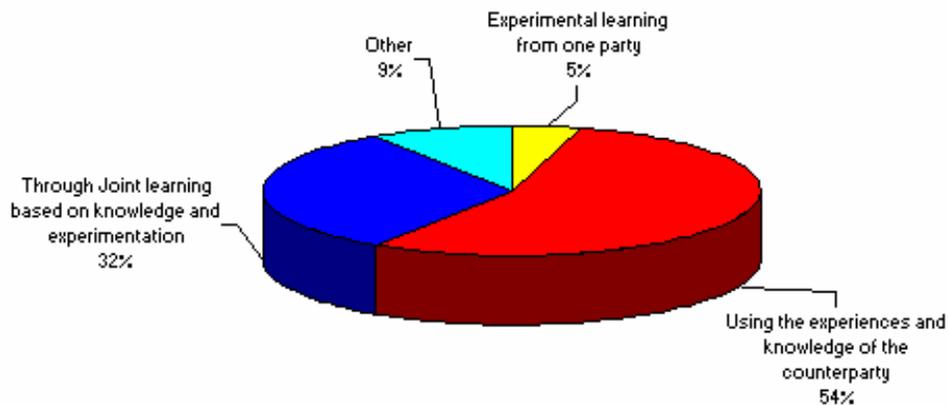


Figure 5.10: The Learning Mechanism between 3PL and Client

Respondents also confirmed a high expectation of sharing risk and reward with 89% of respondents indicating this.

Correlation scales were run on responses in order to ascertain any association between any two attributes that had a direct bearing on the specific research proposition. Only those results that showed statistically significant p-values were taken into account (where

p < 0.05). In addition the Pearson Correlation (r) shows the strength of these relationships. An r-value between 0.3 to 0.49 indicates a medium correlation while an r-value between 0.5 to 1.0 shows a strong correlation (Pallant, 2005). Table 5.3 summarise these correlations:

Attribute 1	Attribute 2	Statistical significant p-value (2-tailed)	Pearson Correlation (r)	Correlation Strength
Risk and reward sharing	Co-creation	0.031*	0.496	Medium
Frequent communication and information exchange	Exceeding customer service	0.06**	0.604	High
	Relationships	0.007**	0.593	High
Top management support from both sides	Relationships	0.003**	0.647	High
	Exceeding customer service	0.08**	0.591	High
Service level improvement / Cost reduction	Collaboration	0.011*	0.596	High
	Co-creation	0.016*	0.544	High

Note: * Correlation is significant at the 0.05 level (2 tailed)
 ** Correlation is significant at the 0.01 level (2 tailed)

Table 5.3: Research Proposition 2 - Correlation Analysis

5.3.3. Research Proposition 3

The resource and competencies inherent in a 3PL provider determine the level of value creation to the client.

The respondents were asked to provide their definition of value creation using their own words. A wide range of responses was provided and all of the responses were captured in Table 5.4. These responses have been restated in a concise and clear manner in order to correct grammatical and spelling errors and to make them easily understandable to the reader.

TABLE 5.4: RESPONDENT DEFINITION OF VALUE CREATION
Provide superior service levels at a highly competitive price.
Expertise should exceed our own capability with cost down.
Doing more with less and outperforming the expectations.
Execution of activities that we may be able to do ourselves but in a manner that we would not have been able to do, using the same resource base. This may be achieved by more effective processes or more efficient delivery.
Achievement of the client's requirements at minimum cost with maximum quality.
Adding competencies and experiences.
The sharing of risk and reward to ensure long term sustainability and profitability for both parties. It is also the understanding that market share and growth are dependant on the fundamental principles of business that can only achieved through collaboration in a highly competitive market place.

TABLE 5.4: RESPONDENT DEFINITION OF VALUE CREATION (Continued)

Customer service, problem free warehousing, competent staff and cost efficient contracts.

Best price for the best value.

Develop robust and stable solutions towards improving the reliability and predictability of the supply chain, with a visible improvement in customer service at reasonable cost.

Solutions which increase customer satisfaction at a cost which is less than the profit improvements generated from improved levels of satisfaction.

The ability for a 3PL to add value is defined by the client allowing the partner to add value from a strategic to operational level. Value creation is truly created when the supply chain has the most optimum cost associated to it in adapting to business change while maintaining basic service levels. The ability to move a product from A to B is a qualifier to the industry while the ability to enhance strategic execution is true value creation.

Exceed delivery expectations at a reasonable cost i.e. a Win-Win for both parties.

Creating a competitive advantage through innovation, partnerships and best practice.

Change that is made in the best interests of both parties.

Performing activities that result in an increase in net value or return on the service provided.

Delivering excellence / best in class within reasonable costs.

To deliver over and above agreed SLA's through innovation and cost reductions.

The respondents were asked to rate a list of attributes (in terms of importance) required for value creation. All of the attributes had important / very important ratings of more than 90% barring three. They were:

- Responsiveness to change (94.7%);
- Understanding strategic objectives (94.7%);
- Alignment between measurements and objectives (94.7%);
- Service quality (94.7%);
- Creating a competitive advantage for the partner (94.7%);
- Exceeding customer service (94.7%);
- The use of skilled resources (94.7%);
- Maximising profits (89.5%);
- Collaboration (89.4%);
- Co-creation (value creation through collaboration) (89.4%); and
- Cost saving (89.4%).

The three attributes having important / very important ratings in the 60-85% range were found to be:

- Acquiring or developing competencies (84.2%)
- Relationships (78.9%)
- Providing additional services (63.1%)

The comprehensive results are shown graphically in Figure 5.11.

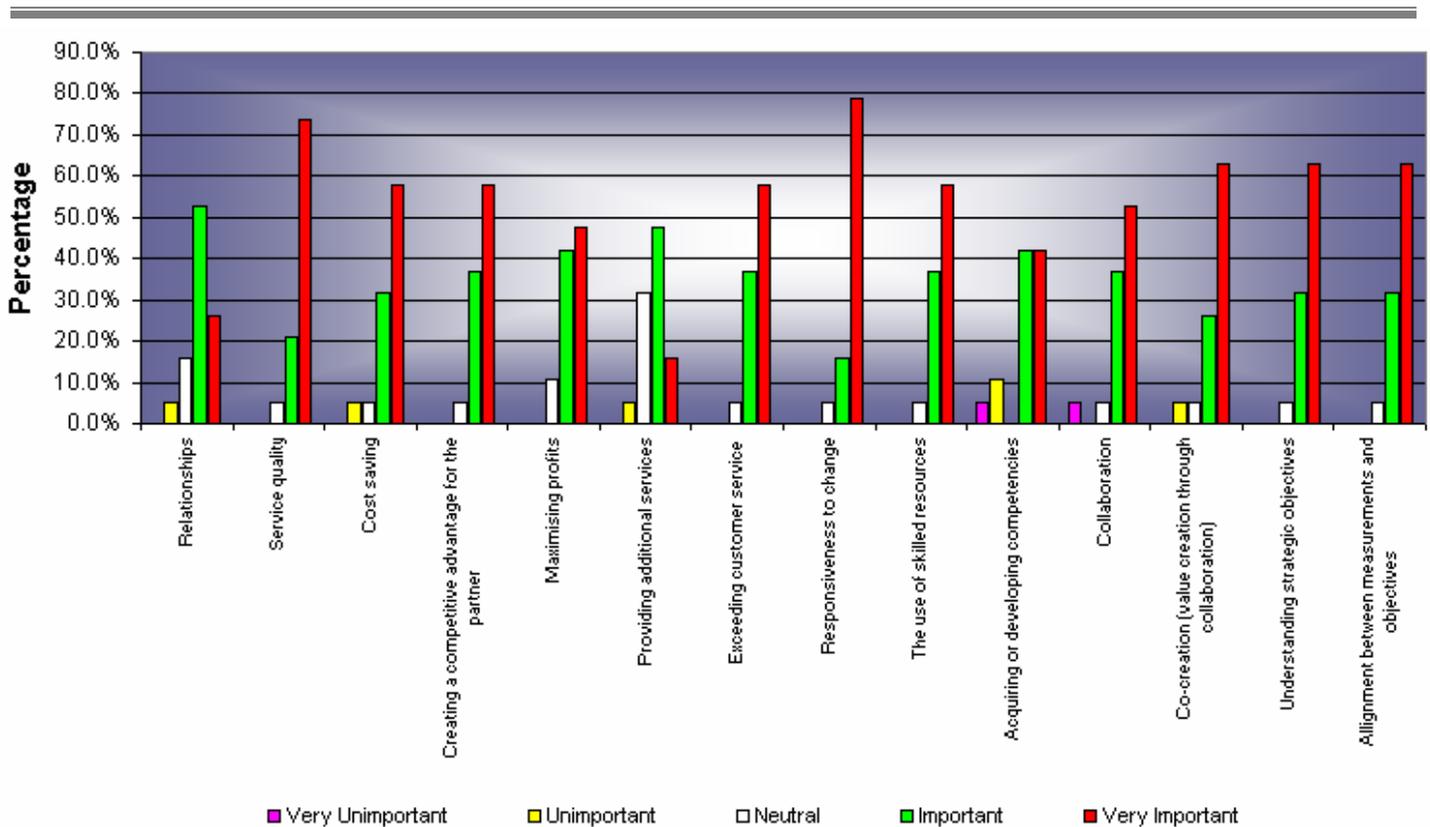


Figure 5.11: Critical Attributes Supportive of Value Creation

A Cronbach alpha test was run on these attributes to check for adequate internal consistency and reliability. A Cronbach alpha value between 0.7 and 1.0 indicates high or good internal consistency and reliability, while a value of between 0.4 and 0.7 indicates medium internal consistency and reliability (Pallant, 2005).

The resultant Cronbach alpha was 0.867 indicating very high internal consistency and reliability (Pallant, 2005).

The respondents were then asked to comment on the 3PL's value proposition, ability to add value and the ability to provide the client with a competitive edge. The results were:

- 79% of respondents believed that their 3PL had a viable value proposition;
- 63% of respondents concluded that their 3PL had provided additional value to the original contracted scope; and
- 68% of respondents believed that the 3PL had given them a competitive edge.

These results are shown graphically in Figure 5.12.

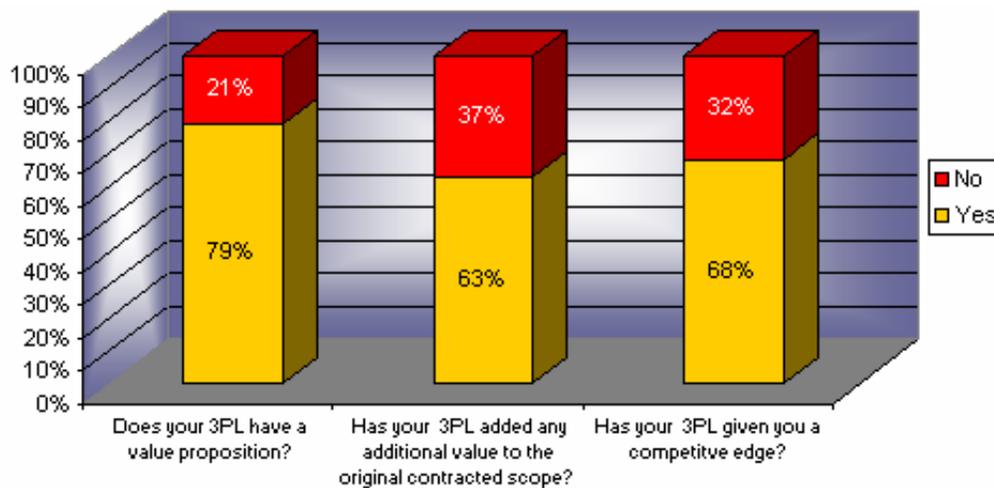


Figure 5.12: 3PL Value Concepts

A T-test was run on the following questions (see below) against the various 3PL attributes deemed necessary to provide value creation:

- Does your 3PL have a value proposition?
- Has your 3PL added any additional value to the original contracted scope?
- Has your 3PL given you a competitive edge?

All the T-test's run provided no significant differences to the questions posed against the attributes listed except the one shown in Table 5.5. The result shows a statistically significant difference between the question posed (Has your 3PL added any additional value to the original contracted scope?) against the value creation attribute (Understanding strategic objectives).

Question: Has your 3PL added any additional value to the original contracted scope? (Yes or No)			
Attribute: Understanding strategic objectives	t	df	p-value Sig.(2-tailed)
Equal variances assumed	2.814	17	0.012
Equal variances not assumed	2.431	8.278	0.040

Note: A p-value ≤ 0.05 indicates statistically a significant difference between group opinions

Table 5.5: T-test Analysis

Correlation scales were run on responses in order to ascertain any association between any two attributes that had a direct bearing on the specific research proposition. Only those results that showed statistically significant p-values were taken into account (where $p < 0.05$). In addition the Pearson Correlation (r) shows the strength of these relationships. An r-value between 0.3 to 0.49 indicates a medium correlation while an r-value between 0.5 to 1.0 shows a strong correlation (Pallant, 2005). Table 5.6 summarise these correlations:

Attribute 1	Attribute 2	Statistical significant p-value (2-tailed)	Pearson Correlation (r)	Correlation Strength
Service level improvement / Cost reduction	The use of skilled resources	0.07**	0.598	High
	Acquiring or developing competencies	0.23*	0.517	High

Note: * Correlation is significant at the 0.05 level (2 tailed)
 ** Correlation is significant at the 0.01 level (2 tailed)

Table 5.6: Research Proposition 3 – Correlation Analysis

In conclusion, the data from the survey has been gathered from the questionnaires and chapter 5 is a summary of the applicable analysis of this data, grouped into the three propositions as stated in chapter 3 of this research. In chapter 6, these results have been analysed per proposition, in order to ascertain whether the propositions have been proven factual or not.

CHAPTER 6 – DISCUSSION OF RESULTS

6.1. Research Proposition 1

Logistics value creation is created from long term strategic objectives rather than a short term transactional approach.

6.1.1. Strategic consideration

All respondents confirmed that outsourcing formed part of their company's long term strategy and this supported the recent study by Hugo *et al.*, (2004) indicating the importance of the outsourcing decision being given more focus due to the strategic impact it could play in determining profitability. The finding also showed a progression away from the Lonsdale and Cox (1998) study which showed that the outsourcing decision did not consider the strategic implications thereof and were short term in nature. De Koker (2003) in his research report supported this in stating that South African companies were starting to consider the strategic objectives for outsourcing their logistics functions.

6.1.2. Contract duration and strategic planning

The duration of the contract as well as the willingness of the client to allow the 3PL into their strategic planning was crucial in order to realise logistics value creation. One aspect was the nature and duration of that contract. 95% of respondents indicated they had entered into a contractual rather than a transactional agreement. Of these contracts, 10.9% were less than one year, 84% were 5 years in duration and 63% of contracts were 10 years in duration. The other aspect was the willingness of the OEM to allow the 3PL to form part of their strategic planning. 74% of respondents involved their 3PL provider in their strategic planning. 48% of these strategic planning sessions took place quarterly or semi annually, with 21% taking

place more often on a monthly basis. Together these accounted for 69% of all responses. Hugo et al., (2004) supported this in concluding that outsourcing could only add value if it was long term in nature and was carried out from a strategic perspective integrated into the overall strategy of the firm. Halldórsson and Skjøtt-Larsen (2004) spoke of company's needing to see outsourcing from a long term perspective as it took time to build up trust relationships and adapt and integrate information systems and organisations. The information overwhelmingly supports the long term commitment of South African automotive OEM's to outsourcing and indicates that they are regularly including their 3PL's in strategic planning sessions.

6.1.3. Strategic effectiveness and attributes

All respondents, barring one, indicated the ability to evaluate the strategic effectiveness of their 3PL service provider. Hum (2000) proposed the extended Hayes-Wheelwright (H-W) framework for clients to use in gauging the strategic management ability of 3PL providers (in effect evaluating the strategic logistics effectiveness of their 3PL providers). 63% of respondents concluded that their 3PL supported their overall business strategy while still relying on outside assistance in supporting that strategy due to the lack of internal resources and capabilities. The remaining 37% concluded that the 3PL had moved to the next level in taking on a strategic role and anticipating the client's needs to stay ahead of the competition.

Hum (2000) stated that an attempt by 3PL's to provide strategic benefits and capabilities required by clients had not been well documented. The results obtained from the survey indicated that all the respondents believed that the incumbent 3PL had the strategic attributes to implement their strategic plans. The attribute considered most important was

possession of the required technology followed closely by the possession of logistics competencies.

6.1.4. Strategic impact of outsourcing

Franceschini *et al.*, (2003) stated that most companies were not aware of the strategic impact outsourcing could have on certain aspects of their business. This study found to the contrary, that 84% of respondents foresaw the strategic implications outsourcing would have on their business.

Cost savings still accounted for the major reason to outsource at 68% and this supports the findings of De Koker (2003), Jiang and Qureshi (2005) and Langley *et al.*, (2000-2007). The need to form strategic alliances was the least important accounting for only 36.8% of the responses. The fact that only 36.8% of respondents saw the need for strategic alliances when all had indicated that outsourcing formed part of their company's long term strategy is somewhat concerning and can only be justified when looking at the maturity of outsourced warehousing in South Africa. 32% of respondents said the South African market was immature and 11% indicated a mature market (57% were undecided). In contrast, 42% of respondents indicated a mature global environment. As South Africa's outsourced warehousing progresses to more mature levels (De Koker, 2003; Kujawa, 2003) it would be expected that strategic alliances will become more important. The Added Value Chain model developed by (McPhee and Wheeler, 2006) and an extension of Michael Porter's Value Chain model included the importance of firms taking a broader view of the environment within which it interacts. Of those activities added was the growing importance on external networks

and SCM both of which cover the formation of strategic alliances with external parties like 3PL's.

An interesting finding was the fact that decision makers outside of procurement had played a significant part in the decision to outsource. Of the 19 respondents, only one was from procurement. The other respondents all had interaction with the 3PL on a regular basis (throughout the life of the contract) and would have to live with the strategic consequences of the decision to outsource. This contrasted to McIvor (2000) who found a high proportion of outsource decisions to have been handled solely by the purchasing department.

6.1.5. Conclusion

All the OEM's taking part in this survey considered outsourcing forming part of their long term plans. This was validated by the existence of long term contractual agreements implying significant commitment by both parties. As a consequence, most OEM's saw a growing need to include their 3PL's into their strategic planning sessions. Some were taking place on an ad hoc basis, while most occurred more frequently. Strategy without action and results is dead and most OEM's realised the importance of evaluating the strategic effectiveness of their 3PL. They also overwhelmingly determined that their 3PL had the strategic attributes to implement there strategy.

The information gathered supports the proposition that logistics value creation is created from long term strategic objectives rather than a short term transactional approach.

6.2. Research Proposition 2

Logistics value creation can only occur if the relationship between 3PL provider and client is collaborative.

Harland (1996) pointed out the growing importance of the inter-firm relationship between the 3PL provider and client, with Sahay and Maini (2002a) later concluding in their study that these inter-firm relationships were still an unknown. Sahay and Mohan (2006) indicated more recently that there was a growing trend to move away from traditional transactional relationships to one of collaboration between both parties. This sets the scene to ascertain the current situation amongst South African automotive OEM's.

6.2.1. Factors required for inter-firm relationships

Certain factors had direct influence on the relationship between client and the 3PL provider. The following factors (based on results from the survey) are considered crucial to any relationship between a client and 3PL.

- Financial stability of the service provider (and user);
- Frequent communications and information exchange;
- Top management support from both sides;
- Joint planning, management and control of the relationship;
- The compatibility of interests and having common goals;
- Service level improvement / reduction of costs; and
- Risk and reward sharing.

There are clear similarities between the co-operative, collaborative and coordinated relationship attributes of Hines (2004) to the views expressed by the respondents taking part in the survey. Hines (2004) described co-operative, coordinated and collaborative relationships as having the following attributes: information sharing, trust, coordinated planning, shared risks, mutual benefits, recognition of independence, shared goals, integrated processes, shared culture, compatibility and understanding.

The similarities between Hines (2004) and the survey respondents are indicated as follows:

Relationship Factor 1

- Respondents: Frequent communications and information exchange.
- Hines (2004): Information sharing.

Relationship Factor 2

- Respondents: Top management support from both sides.
- Hines (2004): Shared culture, compatibility, understanding and trust.

Relationship Factor 3

- Respondents: Joint planning, management and control of the relationship.
- Hines (2004): Coordinated planning and integrated processes.

Relationship Factor 4

- Respondents: The compatibility of interests and having common goals.
- Hines (2004): Shared goals. Shared culture, compatibility and understanding.

Relationship Factor 5

- Respondents: Risk and reward sharing.
- Hines (2004): Shared risks and mutual benefits.

Based on similarities between Hines (2004) and the results of the survey, it can be stated that the respondents realise the importance of collaboration, coordination and cooperation in client (OEM) – 3PL relationships (refer to Figure 5.7).

Risk and reward

A high percentage of respondents (89%) had high expectations of sharing in the risk and reward with their 3PL. From the literature, this is only possible where there is collaboration, co-operation and coordination. Hugo *et al.*, (2004) found this willingness to share in the risks, benefits and rewards was an important component of SCM which in turn implied long term cooperation and trust between partners and called for joint planning and mutual exchange of information across all links in the supply chain. The survey results indicate a strong correlation between co-creation and the level of risk and reward sharing. By implication, you cannot have the one without the other. Langley *et al.*, (2004) also confirmed the willingness to share in both risk and reward.

Communication and information exchange

Frequent communication and information exchange with the addition of top management support from both sides in the relationship between 3PL and client were strongly correlated to exceeding customer service. Aktas and Ulengin (2005) maintained that outsourcing required extensive sharing of information and could only be successful when collaboration based on mutual confidence existed. This result proves the fact that relationships do have an effect on the value creation as seen through the eyes of the client.

Service level improvement

Langley and Rutner (2000) differentiated logistics value as meeting customer service requirements and logistics value add as exceeding customer service requirements. Service level improvement and cost reduction were strongly correlated to both co-creation and collaboration. Co-creation and collaboration are therefore key factors in determining successful relationships. The strong correlation indicates that value creation (i.t.o. service level improvement and cost reduction) is dependent on relationships that have co-creation and collaboration as key drivers.

Highly skilled management

Hugo *et al.*, (2004) stated that forming collaborative relationships by partnering or strategic alliances required highly skilled management from logistics managers within the organisation and 3PL's. It was noted that the survey respondents did agree with this when they rated the support from top management of both sides (rated third) as crucial to any given relationship. In addition, joint planning, management and control of the relationship (rated fourth) featured strongly. Lacity and Willcocks (2001) supported this in stating that the benefits from outsourcing were not an automatic outcome and took considerable management time and support from both sides to realise the benefits.

Attributes required for successful relationships

The forced ranking of attributes considered necessary for successful relationships to form between a client and 3PL provided a wide range of responses. From the responses it is difficult to ascertain a clear outcome from the graph. One can allude to the fact that

competencies and expertise were considered most important followed closely by credibility and trust. Trust is interesting in that it shows the most even response amongst all the attributes indicating that respondents had some difficulty in ranking trust as an important attribute to successful relationships. Hines (2004) on the other hand considered trust an important attribute towards co-operative, coordinated and collaborative relationships.

The degree of relationship formation

The survey indicated a strong correlation with the frequency of communication and information exchange to the level of relationship formation achieved. There was also a strong correlation between the level of support given by the top management of both parties to the level of relationship formation between 3PL and client. Hines (2004) describes co-operative, coordinated and collaborative relationships as having information sharing, coordinated planning and shared culture, compatibility and understanding as strong supporting attributes to successful relationships.

Length of the relationship

Bhatnagar *et al.*, (1999) proposed that the length of the relationship between 3PL provider and client defines the nature of that specific relationship. The longer the relationship, the higher the level of commitment from both sides and the more likely organisations would invest in contract logistics. From the survey, 95% of respondents indicated they had entered into a contractual rather than a transactional agreement. And of these contracts, 10.9% were less than one year, 84% were 5 years in duration and 63% of contracts were 10 years in

duration. This would imply a higher level of commitment from both parties and a greater outcome for a successful relationship.

6.2.2. Value creation through learning

According to Halldórsson and Skjøtt-Larsen (2004), in order for value creation to occur, some level of learning has to take place between the client and the 3PL. Assuming that some relationship exists, then these learnings center on the development of competencies in any given relationship. The survey indicated that there were two major learnings taking place between client and 3PL. One was through the knowledge and experiences of the other party (54% of respondents confirming this) while the other was in the form of joint learning based on experimentation and knowledge between both parties (32% of respondents chose this option). The other learning types were considered largely negligible.

At first glance, the two types of learnings seem to be quite similar. Using the Hugo *et al.*, (2004) relationship model, both have attributes that closely resemble a partnership where there is co-operation, co-ordination and collaboration. However there are subtle differences between the two and these will be discussed in further detail.

Knowledge and experiences of the other party do not always imply the willing sharing of information but can be based on learnings through simple observation. The relationship is one sided with each party focusing on their own interests. A given party has the discretion to take what they want out of the relationship and determine the level of risk they are

prepared to take or share with their partner. This type of learning does not necessarily imply collaboration, co-ordination and co-operation.

On the other hand, joint learning based on experimentation and knowledge between both parties show an active trusting partnership whereby both parties are prepared to share information willingly in the best interests of both parties. This implies co-operation, coordination and collaboration between both parties in the relationship and once again reference is made to Hines (2004) where he describes the successful attributes of these types of relationships. From the survey it is noted that only 32% of respondents indicated this type of relationship existed between them and their 3PL.

6.2.3. Conclusion

Current literature has underpinned the importance or reliance on a strong relationship between the 3PL provider and client (Halldórsson and Skjøtt-Larsen, 2004; Prahalad and Ramaswamy, 2004; Langley *et al.*, 2004; Langley *et al.*, 2003). Vogt *et al.*, (2005) mentions that SCM includes the co-ordination and collaboration with channel partners – 3PL providers being one such party. Finally, Langley *et al.*, (2004) propose that client satisfaction can only be achieved through long term strategic input, which shows in the behavior of the client that seeks stronger relationships, co-operation and strategic partnering with the 3PL partner.

It is evident from the survey results that relationships are taking a more prominent role in 3PL – client interactions. Although most respondents would allude to collaborative, co-coordinated and co-operative relationships, only a third of respondents have reached that

stage. However there is a strong understanding (Figure 5.7) from the respondents in what is required for a successful relationship with their 3PL but is not clear why this is not materialising in reality. The link between value creation and the strength of the given relationship has been established.

6.3. Research Proposition 3

The resource and competencies inherent in a 3PL provider determine the level of value creation to the client.

6.3.1. Value creation defined

Survey respondents were asked to provide a definition of what they thought value creation to be. A wide range of responses were provided with some common threads amongst the various definitions. Applying the Langley and Rutner (2000) value and value add framework, the responses were grouped into the three main framework categories: attributes, consequences and value as per the model. According to Langley and Rutner (2000), the framework allows a mechanism within which to evaluate the value chain between the client and the 3PL provider. More specifically value creation in terms of logistics value add. The aim was to see how closely the responses resembled the framework and if this would be sufficient to begin to define value creation.

- The definitions consisted of the following attributes
 - Maximise quality;
 - Share in both the risk and the reward;
 - The provision of services at a minimum or reduced cost;
 - Reduce cost;

- Increasing the reliability and predictability of the supply chain (i.e. visibility and transparency);
 - The 3PL needed to add competencies and experience;
 - The creation of effective processes and delivery;
 - Providing robust and stable solutions; and
 - The 3PL capability needed to exceed that of the client.
- Consequences
 - Providing superior service levels of customer service;
 - Relationship management - joint change management;
 - Long term sustainability and profitability of both parties; and
 - Improvements in services at a cost that was less than the profit improvements generated from those services.
 - Values
 - Outperforming expectations;
 - Providing a competitive advantage through innovation, partnership and best practice; and
 - The 3PL needed to do more with less resources (additional services);

It can be seen that the value and value add framework has been used to structure the responses into a meaningful manner and can be used to start defining value creation specific to logistics.

The value expectations from the respondents were not all one sided and Langley *et al.*, (2003) stated that a financial win-win was essential to both parties. One respondent clearly stated the need for a financial win-win for both parties in order to obtain the benefits from value creation.

The application of the framework is important because it contrasts Langley and Rutner (2000) who found that the logistics industry had struggled with a clear and tangible definition of value and more specifically value add. It is still evident that a true definition for value creation still does not exist, but participants in the industry are starting to piece one together and the evidence is clear in the application of the value and value add framework with the respondents definitions of value creation.

6.3.2. Value creation attributes

The survey aimed to validate the main attributes that were very important in terms of value creation and the following can be considered crucial in determining value creation:

- Responsiveness to change;
- Understanding strategic objectives;
- Alignment between measurements and objectives;
- Service quality;
- Creating a competitive advantage for the partner;
- Exceeding customer service;
- The use of skilled resources;
- Maximising profits;
- Collaboration;

- Co-creation (value creation through collaboration); and
- Cost saving.

Of interest is the importance ratings of several of the attributes with strong parallels to the Langley and Rutner (2000) value and value add framework. An interesting attribute is that of co-creation (i.e. value creation through collaboration). Prahalad and Ramaswamy (2004) stated that unique value creation was created between client and 3PL through a process called co-creation. The quality of the value creation experience depended on the interaction between 3PL and client. Prahalad and Ramaswamy (2004) found that companies were unable to use the co-creation framework due to challenges in changing mindsets from traditional approaches. Although no conclusive facts are known whether co-creation is actively being used by South African automotive OEM's, it is encouraging that co-creation was rated as very important.

Some attributes of the Langley and Rutner (2000) value and value add framework, were rated quite low. These were relationships at 78.9% and the provision of additional services at 63.1%. No explanation could be found for this result.

6.3.3. Value proposition, additional value and competitive edge

The respondents were then asked to evaluate their 3PL's against certain value creation constructs. The following responses were obtained from the survey regarding the measurement of their 3PL's:

- 79% of respondents believed that their 3PL had a viable value proposition;

- 63% of respondents concluded that their 3PL had provided additional value to the original contracted scope; and
- 68% of respondents believed that the 3PL had given them a competitive edge.

The ability to provide a competitive edge and provide additional services are key drivers in logistics value add (Langley and Rutner, 2000). As a consequence, almost two thirds of the sample believed that value was being created by their 3PL. Of interest is the high percentage related to the 3PL's value proposition. The conclusion from this is that the 3PL has value to offer the client in terms of what they are requiring. These may be as simple as cost reduction or more complex relating to strategic input.

The number of respondents answering whether their 3PL had provided additional value revealed significant differences in the understanding of strategic objectives. One can deduce that the ability to engage in additional value creation is determined on clear, concise and communicated strategic objectives.

The survey further indicated a strong correlation of service level improvement / cost reduction against the use of skilled resources and the acquisition or development of skills. Halldórsson and Skjøtt-Larsen (2004) argued that it was crucial for the 3PL to build up internal core competencies which would position them to deliver real value to the client. They also made mention of the fact that the development of competencies within a 3PL relationship allowed the client the opportunity to acquire the partner's skills and internalise them into their own company.

6.3.4. Conclusion

Automotive OEM's in South Africa see the use of skilled resources by a 3PL as a crucial attribute of value creation. In addition, the need to add competencies and experiences are also important. It can therefore be safely stated that the resource and competencies inherent in a 3PL provider determines the level of value creation to the client. However, it is not the only attributes determining the level of value creation. The list is extensive and has been covered in detail in this section. Value creation is far more complex than initially thought and is made up of many attributes that are intertwined. A 3PL would need to appraise these attributes against their current profile to determine the level of value creation possible to an existing or prospective client.

The relatively high levels of additional value provided, the provision of a viable value proposition and the fact that 3PL's have been able to provide their clients with a competitive edge, bodes well for future value creation between client and provider.

6.4. Have the research objectives been met?

The main objective was to explore the various characteristics at play between client and 3PL providers that influence value creation and this objective was to be achieved via four focus areas. These focus areas were:

- To role of a collaborative relationship between 3PL provider and client;
- The strategic implications when outsourcing to a 3PL provider;
- The effect that time has on value creation in the long and short term; and
- The inherent attributes that the 3PL provider must have in order to determine / influence the level of value creation created for the client.

To role of a collaborative relationship between 3PL provider and client

The survey results show that relationships are no longer transactional by nature but rather relationships based on collaboration, co-ordination and cooperation. Although two thirds of the respondents are not at this stage yet, there is an understanding of the requirements needed to get there (see figure 5.7).

The strategic implications when outsourcing to a 3PL provider

All the OEM's considered outsourcing as part of their long term strategic plans and the survey confirms that the strategic implications were considered when deciding to outsource. With the renewed focus on the strategic decisions, OEM's understood the importance of being able to evaluate the strategic effectiveness of there 3PL provider. Not only was it becoming important to evaluate the 3PL on this basis, but also the ability of the 3PL to support the OEM's overall business strategy. All the OEM's taking part in this survey confirmed that their 3PL had the strategic attributes to implement their strategic plans.

The affect that time has on value creation in the long and short term

The majority of OEM's were found to have entered into long term contractual agreements rather than short term transactional contracts. This indicated the long term commitment of OEM's to their relationships with their 3PL's. 63% of respondents concluded that their 3PL had provided additional value to the original contracted scope and 68% of respondents believed that the 3PL had given them a competitive edge. The literature points to the fact that outsourcing can only add value in the long term.

The inherent attributes that the 3PL provider must have in order to determine / influence the level of value creation created for the client.

Skilled resources in the South African automotive sector are seen as a crucial attribute of value creation. In addition, the need to add competencies and experiences are also important. These are resources that can readily be brought in by a 3PL through outsourcing. The resources and competencies inherent in a 3PL provider ultimately determine the level of value creation to the client. However, it is not the only attributes determining the level of value creation. The list is extensive and has been covered in detail.

6.5. Summary of the Research Findings

The research topic stated three propositions and the data collected through the survey and subsequent statistical analyses performed, have confirmed the propositions to be valid. The research has sought to describe the main value creation characteristics required in strategically outsourcing to 3PL providers and the following characteristics of value creation are summarised in the subsequent pages.

Relationships form the basis of any value creation occurring between two parties. It is important to see the value creating relationship as a partnership rather than a one sided affair. The essential components of a partnership are that of collaboration, cooperation and coordination. Collaboration is working together in an environment in order to achieve desired results. Cooperation is ensuring the different parties are working together to achieve the desired result in a co-ordinated manner. This is no easy task and takes the support of top management from both sides to ensure this works. Central to this as well is the ability to trust each other and this is made easier if there are common interest and goals (no hidden

agendas). Finally the ability to share information and communicate frequently is essential in the maintenance and growth of the said relationship.

The survey and literature have shown that the value creation process does not occur suddenly. Relationships take time to form and the real benefits occur over a longer period than over shorter periods of time. Most of the respondents have sought longer term contractual agreements with their 3PL's and have shown considerable commitment to realising the desired outcomes. An understanding of the requirements exists but the execution has proven more difficult.

It is important for the 3PL provider to strategically align with its client to unlock the value creation process once the long term relationship has been set up. Failure on the part of the client to allow the 3PL provider into their strategic planning nullifies any chance of value creation benefits that could occur. The majority of respondents did include their 3PL's into their strategic planning sessions. The client also has the responsibility to realise the strategic implications of outsourcing on its business and it therefore becomes important for the client to be able to measure the strategic effectiveness of its 3PL provider. To do this, the client needs to have an intimate understanding of the attributes sought from a 3PL provider. The 3PL on the other hand needs to show a strategic capability to its client in order for value to be created.

The maturity of the outsource market in South Africa is still immature. An initial expectation from this study was some probability of irrational behaviour and the lack of focus on the

characteristics leading to value creation within the automotive sector in South Africa. On the contrary, the study found that given the immature market, the automotive OEM's understood the characteristics of value creation, but struggled in the execution of this.

The long term nature of the respondents contractual obligation, the understanding of the need for collaborative relationships and the inclusion into strategic planning sessions have ultimately led to the following value creation results:

- 79% of respondents believed that their 3PL had a viable value proposition;
- 63% of respondents concluded that their 3PL had provided additional value to the original contracted scope; and
- 68% of respondents believed that the 3PL had given them a competitive edge.

This is supportive of the global annual 3PL survey (Langley et al., 2000-2007), where it was found that the majority of firms indicated satisfaction with their 3PL providers (average satisfaction index higher than 85%)

CHAPTER 7 – CONCLUSION

The findings from this research have described and defined the characteristics for value creation between client and 3PL provider. South African 3PL providers and clients have the opportunity to harness these value creation characteristics to gain a comprehensive strategic understanding of the dynamics at play in order to execute and realise the value creation benefits that can be accrued to both parties in the long term. South African companies thus have a chance to learn from the mistakes made in the past and timorously change local strategy to avoid costly mistakes. This is seen as an imperative in order not only to survive but compete in today's competitive global economy.

7.1. Recommendations

The recommendations (based directly from the research findings) are aimed at 3PL's and automotive OEM's who have outsourced or are considering outsourcing their logistics (specifically contract logistics). Although these two parties form the main stakeholders of this research, it does not limit any additional parties (considering outsource arrangements) to reflect on these recommendations. The recommendations have been ranked in order of importance and the following apply:

Ensure strategic alignment between both parties

Strategic alignment is crucial in order to unlock potential value creation between the two parties. The implications for not allowing strategic alignment will nullify any potential for value creation to occur and the strategic implications for the business will not be reached. Alignment implies both parties structure their objectives and expectations around a common

goal and understanding. The strategic alignment starts with the client's including their 3PL's in their strategic planning. On the other hand, 3PL's need to ensure that they have the strategic capability to create the value the client expects. Strategic alignment will ultimately be measured on the strategic effectiveness of both parties in attaining their goals and objectives.

Both parties need to spend a large percentage of their time on relationships, exchanging information and communicating regularly

The importance of relationships are one of the most critical drivers of value creation and the literature review and survey results attest to this. The level of information exchange and communication rests primarily on mutual trust and confidence and this requires top management support in order to drive this forward.

Get top management buy in to support the outsource process from both sides

The literature review and survey results confirm the high importance placed on the impact that top management support (from both sides) has on the type of relationship formed and ultimately the value created. Due to the strategic implications of contractual outsourcing, it is imperative that the top management from both sides of the outsource relationship realise their part in the value creation process. Top management support set the strategic direction and provide commitment in making the outsource process work. Without this support, strong relationships will not be formed, a lack of strategic direction will result and value creation will be mediocre at best.

Think long term relationships in terms of partnerships

Strategic value creation is a long term process that requires both parties undergo a “learning curve”. This does not occur over night. It takes time to build up trust relationships and adapt and integrate information systems and organisations. When partners are constantly changed, the “learning curve” has to be restored and all knowledge and competencies developed in the previous relationship disappeared. The value creation process effectively needs to start again.

Both parties need to work towards a win-win financial situation in order for value to be created

Just as clients expect 3PL's to deliver to promise and constantly strive to drive down costs and create value, so too the expectation from the 3PL to undertake the business at reasonable profits. A relationship is not one sided and takes two parties to interact. Each party has certain expectations and needs something from the other party in order for there to be a relationship. Without this expectation and need, there is little need for the relationship in the first place. The literature review and survey respondents refer to the importance of a financial win-win for both parties in order for a 3PL provider- client relationship to develop. From the findings we know that without a strong relationship, value creation is limited. A one-sided approach disadvantages both parties in the long run and the relationship is not sustainable in the long term.

Apply joint learning through experiences, knowledge and experimentation

The strength of the relationship between 3PL and client determine the level of value creation. This strength is determined by the degree of co-operation, coordination and collaboration between both parties. By actively pursuing joint learning initiatives through experimentation, experiences and knowledge shows an active trusting partnership whereby both parties are prepared to share information willingly in the best interests of each other. This implies a level of risk but this is mitigated as both parties are prepared to share in the risk and rewards.

3PL's need to enhance their strategic attributes to stay ahead of the game in terms of client expectations (logistics expertise, skilled resources, required technology)

With clients increasingly questioning the value being created by their 3PL's, it becomes important for 3PL's to keep up to date with latest industry trends, processes and technology. The South African outsourcing market, although immature at the moment, is rapidly progressing towards maturity. Given that, clients are becoming more demanding in their expectations from 3PL's and a better informed client will increasingly start to measure the strategic effectiveness and impact of their 3PL on their business. 3PL's are advised to constantly assess their strategic attributes and their ability to meet growing customer expectations.

Investigate and embrace co-creation as an alternative value creation process

Co-creation is a relatively unknown concept and the mindset changes required from both parties are a stumbling block for this process to unlock further value creation. Its key attribute

relies on unique personalised experiences between both parties allowing value creation that is distinctive to each individual. By implication, co-creation places a huge emphasis on trust and strong relationships between both parties. Outsource parties involved in contractual (long term) partnerships are urged to apply the Prahalad and Ramaswamy (2004) framework in order to increase interaction between client and 3PL and in so doing create value that is unique.

7.2. Future Research Ideas

The following ideas have come to the fore during the course of this research and could form the basis for any future academic research.

- The characteristics required to measure the value creation between 3PL and clients have been determined in this research. These characteristics could be used to measure the actual value being created by 3PL's for their South African clients (not limited to automotive OEM's). Jiang *et al.*, (2006) reported a lack of financial measurement (quantitative or qualitative) to evaluate the impact of outsourcing on a company's performance metrics.
- Value creation through co-creation was briefly discussed as an alternative approach to value creation. The topic of this research did not allow a full in depth discussion on the topic. The application of the Prahalad and Ramaswamy (2006) value creation framework on companies outsourcing to 3PL's provides an opportunity to apply this model.
- The opportunity exists to study the value created between 3PL's and clients across a broader spectrum of industry sectors other than automotive. A potential outcome

could be the analysis of the similarities as well as distinct differences occurring between the various sectors.

- The relationship is crucial in determining value creation between client and 3PL. While only a third of all respondents were achieving collaborative relationships, the rest were striving towards this but simply not attaining it yet. The reasons for this are not well understood or documented and an in depth study on the reasons for this, could be worthwhile.
- While the anticipated benefits of outsourcing have been well documented, the unanticipated impact of outsourcing is still an unknown entity. Companies having been involved in failed outsource partnerships as well as companies currently engaged in outsourcing, could provide valuable insight into the negative and often unspoken side of outsourcing.
- Halldórsson and Skjøtt-Larsen (2004) found in their research that more in depth case studies of existing 3PL arrangements were needed to provide more evidence on how competencies were developed, what barriers and obstacles were involved and how these barriers were overcome. They proposed the importance of finding whether there was a mismatch between the 3PL promises and its actual capabilities and performance.

In summary, the value of this research is for both client and 3PL to understand the characteristics driving value creation. Once these characteristics are clearly understood, participants involved in outsource contracts should evaluate these characteristics and the effect that they are having on their own business. Once this critical assessment has been

completed and the resulting gaps understood, both parties should get together to chart a way forward in order to unlock value creation and create a win-win situation for both parties.

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APPENDIX A – CURRENT LIST OF OEM’S IN SOUTH AFRICA

(as at June 2008)

1		AMH Group (Daihatsu, MG, Hyundai, Kia, Lotus, Rover, Proton, Bentley and Ssangyong)
2		Aston Martin
3		BMW (includes Mini and Rolls Royce)
4		DaimlerChrysler (includes Jeep, Dodge, Chrysler, Freightliner, Maybach, Fuso, Canter, Mitsubishi, Smart and Mercedes-Benz)
5		Chana
6		Chery
7		DAF Trucks
8		ERF Trucks
9		FAW Trucks
10		Fiat Auto (includes Alfa Romeo, Iveco, Iribus, Ferrari and Maserati)
11		Ford Motor Company (includes Mazda and Volvo Car, * has recently sold Land Rover and Jaguar to Tata)
12		Gaz Motor Corporation
13		TJM Holdings (Geely)
14		General Motors (includes Chevrolet, Saab, Suzuki, Opel, Isuzu, Cadillac and Hummer)
15		Great Wall Motors (GWM)
16		Honda
17		International Trucks (Navistar) <i>(Have just been awarded the tender - hence N/A)</i>
18		John Deere
19		Lamborghini
20		Marcopolo
21		MAN Truck and Bus
22		Mahindra
23		Nissan (includes Renault)
24		Porsche
25		Peugeot South Africa (includes Citroen)
26		Scania
27		Subaru
28		Tata (* has just bought Landrover and Jaguar from Ford Motor Company)- <i>(Tata have subsequently insourced)</i>
29		Toyota (includes Lexus, Dyna, Hino and Peterbilt Trucks)
30		Volkswagen (includes Audi and Seat)
31		Volvo Truck (includes Mack Truck and Nissan Diesel) - <i>(Have subsequently insourced)</i>

Source: National Association of Automobile Manufactures of South Africa (2008)

APPENDIX B –COPY OF INTERVIEW DISCUSSION GUIDE

Introduction

- Explain the purpose of the research
- Obtain consent via a signed consent form

Question 1 (open ended)

- What is your viewpoint on logistics outsourcing in South African with specific reference to warehousing?

Question 2 (open ended)

- What does logistics value mean to you?
-and logistics value add?
-and value creation?

Question 3 (open ended)

- What are the expectations (from either party) in the outsource agreement?

Question 4 (open ended)

- How in your mind is value created in an outsource partnership?
- How is this value then measured?

Question 5 (open ended)

- How important is the relationship in an outsource agreement?
- Is the South African market mature enough for both parties to collaborate in an outsource agreement in order to create a win-win situation for everyone?

Question 6 (open ended)

- Where do you see strategy fitting into the broader picture in an outsource agreement?
- Do you consider strategy (from either party) as critical to a long term relationship?

Question 7 (open ended)

- Can you give your personal view on your experience to date with logistics outsourcing (specific reference to warehousing)?

APPENDIX C –COPY OF QUESTIONNAIRE

RESEARCH QUESTIONNAIRE		 
CONSENT FORM		
<p>I am completing my research thesis through the University of Pretoria's – Gordon Institute of Business Science (GIBS) and the topic of my research is on the <u>THE VALUE CREATION MECHANISM REQUISITE IN THE STRATEGIC OUTSOURCE TO THIRD PARTY LOGISTIC PROVIDERS WITHIN THE AUTOMOTIVE INDUSTRY.</u></p> <p>More specific objectives are:</p> <ul style="list-style-type: none"> <input type="checkbox"/> To understand the role that a collaborative relationship has on value creation between 3PL provider and client; <input type="checkbox"/> Understand the strategic implications on value creation when outsourcing to a 3PL provider; <input type="checkbox"/> To understand the affect that time has on value creation in the long and short term; and <input type="checkbox"/> To understand the inherent attributes that the 3PL provider must have in order to determine / influence the level of value creation created for the client. <p>As a member involved in the industry, you have unique insights into the issues at hand. The information that you provide will assist in assessing the perceptions and opinions of stakeholders and allow a better understanding between all participants in the outsource relationship. This questionnaire further aims to get a broad outsourcing or has just started to outsource. Your participation is voluntary and any data obtained in this questionnaire will be kept confidential and will only be used in the aggregate with other respondents. The outcome of this research report will be available on request. If there are any concerns, please contact me or my supervisor. Our details are provided below:</p>		
Researcher:	Guy Andrew Meredith	Contact Number: 084 240 9848
Research Supervisor	Dr Peter Tobin	Email: tobinp@gibs.co.za
<p>I voluntary accept to participate in the research survey. <input type="checkbox"/> Yes <input type="checkbox"/> No</p>		
Thank you for participating in this survey		
Question 1 - Background information		
1.1. Current position (please indicate your title)	<input style="width: 100%;" type="text"/>	
1.2. Years of service in that position	<input style="width: 100px;" type="text"/> yrs	
1.3. Have you been involved in outsourcing before? (please mark with an "X")	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.1. If yes, was it specific to logistics?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.2. If yes, was it specific to warehousing?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.3.3. If you answered yes to any of the questions above, please state on how many occasions have you been involved in outsourcing.	<input style="width: 100px;" type="text"/> occasions	
1.4. What was your role in the outsource process (please mark with an "X" on one or more roles)		
a) Decision maker in choosing the relevant 3PL	<input type="checkbox"/>	
b) Strategic decision maker to consider outsourcing	<input type="checkbox"/>	
c) Part of the implementation team	<input type="checkbox"/>	
d) The operational interface between client and 3PL	<input type="checkbox"/>	
e) Monitoring the service levels, benefits and value created from the outsource contract	<input type="checkbox"/>	
f) None at all	<input type="checkbox"/>	
g) Other (specify)	<input style="width: 100px;" type="text"/>	
1.5. What is your perception of the outsource market in: (please mark with an "X")	South Africa	<input type="checkbox"/> Mature <input type="checkbox"/> In between <input type="checkbox"/> Immature
	Globally	<input type="checkbox"/> Mature <input type="checkbox"/> In between <input type="checkbox"/> Immature
1.6. Have you been involved in a failed outsource partnership? (please mark with an "X")	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1.6.1. If yes, please explain the reasons for the failure?	<input style="width: 100%;" type="text"/>	

Continued /

Question 2 - Strategy

2.1. What was the primary reason(s) in your company deciding to outsource? (please mark with an "X" and you may tick as many as are applicable)

- a) Cost saving
- b) To form strategic alliances and /or partnerships
- c) Obtain best in class service in terms of knowledge and expertise
- d) To gain a competitive advantage
- e) Other (specify)

2.2. Does outsourcing form part of your companies long term strategy? (please mark with an "X")

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

2.3. Are you able to evaluate the strategic effectiveness of your company's 3PL service provider?(please mark with an "X")

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

2.4. In hindsight, did your company foresee the strategic implications that outsourcing would have on their business?(please mark with an "X")

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

2.5. Do you involve your company's 3PL service provider in your strategic planning?(please mark with an "X")

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

2.6. In your view, does your company's 3PL service provider possess the attributes to implement your logistics strategic plans? (please mark with an "X")

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

2.6.1. If yes, please rate each of the following attributes on the scale provided (please mark with an "X" using only one opinion per attrib

- a) Skilled resources
- b) Logistics competencies
- c) Possess the required technology
- d) Other (please specify)

	1	2	3	4	5	6	7	8	9	10	
Strongly disagree											Strongly agree
Strongly disagree											Strongly agree
Strongly disagree											Strongly agree
Strongly disagree											Strongly agree
Strongly disagree											Strongly agree

2.7. How often does your company interact with your 3PL service provider?(please mark with an "X" using only one opinion per interaction):

- a) Operationally
- b) Tactically
- c) Strategically

	Daily	Weekly	Monthly	Quarterly	Semi-annually	Annually	Seidom	Not at all

Continued /

Question 3 - Relationship / Collaboration

3.1 The following lists are factors critical to the success of a 3PL provider - client relationship.

(Please rate each statement with an "X" in terms of the degree of importance or lack of importance to you. Please ensure only one "X" per factor).

3.1.1.

The relationship

- a) The compatibility of interests and having common goals
- b) Compatibility of information systems
- c) Compatibility of organisational culture and routines
- d) Joint investment for achieving relationship objectives
- e) Joint planning, management and control of the relationship
- f) Mechanisms in place for dispute resolution
- g) Must be a power balance between contracting parties
- h) Financial stability of the service provider (and user)
- i) Risk and reward sharing
- j) Frequent communications and information exchange
- k) Service level improvement / reduction of costs
- l) Top management support from both sides

	1	2	3	4	5	6	7	8	9	10	
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important

3.1.2.

The 3PL

- a) The 3PL to have a customer orientation
- b) The 3PL to have expert knowledge in specific markets / products / processes
- c) The 3PL to stay updated with respect to new technologies
- d) The 3PL's ability to be flexible and responsive
- e) The 3PL must understand the clients' supply chain needs
- f) The 3PL must deliver value

	1	2	3	4	5	6	7	8	9	10	
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important

3.2 Please rank all the attributes listed below that you would look for in a 3PL provider

(Use a number between 1 and 7 with 1 being the most important and 7 the least important)

- a) Credibility
- b) Competencies
- c) Trust
- d) Expertise
- e) Agility and Flexibility
- f) Transparency
- g) Vision

rank
 rank
 rank
 rank
 rank
 rank
 rank

3.3 How does learning take place between you (the client) and your 3PL provider (please choose only one and mark with an "X")

- a) Experimental learning from one party
- b) Using the experiences and knowledge of the counterparty
- c) Through Joint learning based on knowledge and experimentation
- d) Other (please specify)

3.4 Is there an expectation to share in both risks and rewards?(please choose one and mark with an "X").

Yes No

3.5 What is the viewpoint (in relation to time) of your company's outsource partnership (please choose one and mark with an "X").

- a) Transactional (short term)
- b) Contractual (long term)

Also indicate how long that time frame is (in years) against the choice made.

- a) Transactional (short term)
- b) Contractual (long term)

years
 years

Continued /

Question 4 - Value Creation

4.1. What is your definition of value creation?

4.2. Rate the importance of the following list in terms of value creation?

(Please rate each statement with an "X" in terms of the degree of importance or lack of importance to you. Please ensure only one "X" per attribute).

- a) Relationships
- b) Service quality
- c) Cost saving
- d) Creating a competitive advantage for the partner
- e) Maximising profits
- f) Providing additional services
- g) Exceeding customer service
- h) Responsiveness to change
- i) The use of skilled resources
- j) Acquiring or developing competencies
- k) Collaboration
- l) Co-creation (value creation through collaboration)
- m) Understanding strategic objectives
- n) Alignment between measurements and objectives

	1	2	3	4	5	6	7	8	9	10	
Not important											Very important
Not important											Very important
Not important											Very important
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Not important											Very important
Not important											Very important
Not important											Very important
Not important											Very important

4.3. Does your 3PL have a value proposition

Yes No

4.4. Has your 3PL added any additional value to the original contracted scope? (please mark with an "X")

Yes No

4.5. Has your 3PL given you a competitive edge? (please mark with an "X")

Yes No

4.6. Where would you place your company's 3PL? (please choose the statement most relevant to you and mark with an "X")

- a) Your 3PL is neither proactive nor locked into any technology. There is no strategic role between 3PL provider and client.
- b) Your 3PL has adopted industry best practice and at best is on par with the industry. There is no strategic role between 3PL provider and client.
- c) Your 3PL is now supportive of your overall business strategy but has to rely on outside support to support that strategy. The 3PL lacks internal resources and capabilities.
- d) Your 3PL has now taken on a strategic role supportive of your competitive positioning. There is continuous seeking of capabilities in anticipation of your needs and to stay ahead of the competition.